Chapter 3

NATIONAL LEGAL REGIME

3.1 Introduction

The previous Chapter has examined the evolution of international legal regimes pertaining to the management and handling of Bio-Medical Wastes and detailed the relevant laws prevalent in different parts of the world, namely USA, Great Britain, Europe, Australia, South Africa and the Asian countries, especially South Asian, they being neighbours to the Indian sub-continent. Having done so, this Chapter focuses on the scenario pertaining to Indian legal regime governing Bio-Medical Waste Management tracing the same historically from the ancient period to the present-day law governing the subject.
Environment has always been a matter of concern from time immemorial and the legal regimes of the times sought to protect the environment wherever necessary. However there was no specific legal regime to control Bio-Medical Wastes since technological progress had not brought us to the level of ‘dispose after use’ culture that we are in today. Most of the problems associated with Bio-Medical Waste Management have arisen since solutions sought to be provided to a problem have themselves become another problem, leading to a vicious circle.

The problem of environmental pollution is as old as the evolution of *homo sapiens* on this planet. The ambition of mankind for limitless enjoyment and comfort has led towards the exploitation of nature's wealth so indiscriminately that it has reduced nature's capacity to provide for the future. The voracious appetite of humankind for resources and the desire to conquer nature has ended on a collision course with the environment. The demand for an explosive technological society imposes intense stress on the state of the equilibrium with the environment.

The relationship between human beings and the environment has varied from time to time and it has also been varying from place to place at a given point of time. This statement is quite legitimate as far as India and its environment protection policy is concerned. It was a statement of one of the

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111 Humans commonly refers to the species *Homo sapiens* (Latin: "wise man" or "knowing man")
great personalities in the field of law, Prof. Upendra Baxi, who once said that in India, Environment protection and management started only after 1972 i.e. after the Stockholm Conference and that the Constitution of India was environmentally blind prior to 1976. However, many other personalities later disagreed.\(^\text{112}\)

The concept of environmental jurisprudence in India is not new. The age-old environmental jurisprudence in Indian civilization - to live in harmony with nature is almost forgotten. Worshipping nature as deity and recognizing Earth as Mother shows a kind of conservation ethics that comes through history, culture, religion and Vedic Philosophy. In order to understand the concept of environmental jurisprudence in Indian society, the discussion needs to address the aspects in different periods like the Ancient Period and Pre-Historic Period, Historic Period, British Period and Post-Independence era. Therefore, from Ancient Times and through Medieval Times and British concerns we today have the latest relevant legislations and specific rules to assist and control the management and handling of Bio-Medical Wastes.

\(^{112}\) Budholai Bharat; *Environment Protection laws in the British Era.*
3.2 Environment Protection in Ancient and Pre-Historic Period

Protection of environment was prevalent in our Ancient Indian Society and the concept of environment was best explained by the word *Paryavaranā*.113 In the earliest stages of human history in India, human beings considered the environment as very dominant and that was why, they worshipped different aspects like trees, forest, animals, mountains, rivers etc. All of these held a special place of reverence in Hindu mythology. The *Vedas*, *Puranas*, *Upanishads*, and other scriptures of the Hindu religion gave a detailed description of trees, plants and wildlife and their importance to the people. The *Rig Veda* highlighted the potentialities of nature in controlling the climate, increasing fertility and improvement of human life emphasizing on intimate kinship with nature. *Atharva Veda* considered trees as abode of various gods and goddesses. *Yajur Veda* emphasized that the relationship with nature and the animals should not be that of dominion and subjugation but of mutual respect and kindness. Many animals and plants were associated with gods and goddesses so that they were preserved for the future generations. As they were associated with supernatural powers, no one dared to misuse the resources and therefore there was a check on the excess utilization of resources.

113 Which in Sanskrit means something that envelopes us.
Respect for nature, environmental harmony and conservation through trees, animals, hills, mountains and rivers, worshipped as symbols of gods and goddesses, representing nature, has been emphasized in ancient scriptures like Vedas, Upanishads, Smritis, Puranas, Mahabharata, Geeta, Bible & the Holy Quran, Gurugranth Sahib and mythological literature. These are full of revelations of the idea of harmony with nature and respect for nature.

Sages, Saints and great thinkers and teachers of India lived in forests. As a result, people dared not destroy the forest. Protection of nature was considered to be the duty of everyone. Rig Veda, Manu Smriti and Charak Samhita have emphasized the purity, healing and medicinal value of water. Because of this, a system of or a code of conduct developed in Indian society to keep the water clean and wholesome.

Hindu society, in Vedic era was conscious of adverse pollution effects of indiscriminate destruction of plants and forests. They gave respect and consideration for the natural world including animals and birds. Yajurva Veda emphasizes the relationship with nature and animals; it should not be that of dominion and subjugation but of mutual respect and kindness.

Most of the mythologies have adequately conveyed the importance of environment in Pre-Historic Time too. Religions all over the world have much to say about the relationship between human life and nature. The world
is green and beautiful, and human beings the stewards to protect it. One can observe that most of the religious texts i.e. from Islam, Christianity, Sikhism, Buddhism, Jainism and Hinduism emphasise the importance of environment in some way or the other.

All the religious texts preach the importance of the natural world. In Islam there is close harmony between man and nature. The Holy Quran declares that Allah created heaven and earth. From clouds he released water. On earth he made rivers and raised mountains. According to Islam every thing is created from water. Thus there is significance of purity of water. Mankind is the trustee of nature, whereas the other living creatures are considered to be the beneficiaries. Destruction of nature is the destruction of life. Christians are baptized in water as a sign of purification. It also gave importance for the protection and preservation of the natural environment. In Sikh religion also the concern for environment is evident from the fact that it considers every creature to be the incarnation of God and hence conservation and preservation are essential principles.

Ancient jurisprudence in relation to the environment had close proximity with Pre-Historic Era. Gautam Buddha the greatest rationalist, humanist and environmentalist of the era derived enlightenment while meditating under the Bodhi tree. The basic tenets of Buddhism are simplicity and ahimsa or non-violence. The principles of simplicity teach us that man
should not overexploit the natural resources. Buddhism preaches the norms of respect of ecology. It believes in non separable relationship of man with trees and forests. In Buddhism the tree is a potential source of food and shelter for human beings and animals. Buddha preached compassion towards every living creature.

Jainism condemns sacrifice of animals to the sacred fire. It disapproved captivity, whipping, overloading or depriving animals of adequate food and drink. Jainism is also based on the principle, which is in close harmony with nature and helps in protecting and preserving the nature. *Mahavira Swami* proclaimed a profound ecological truth saying that one who neglects or disregards the existence earth, air, fire, water and vegetation, disregards one’s own existence. Lord Mahaveer thus explained that man has no existence exclusive of nature.

### 3.3 Environment Protection in Historic Period

During historical period before Maurya's regime there was no precise idea of environmental conservation. Maurya period was perhaps the most glorious chapter in the Indian history for environmental protection. The concern for environmental protection in India in the medieval times can be traced back to the period between 321 and 300 B.C. since devices and rules for protecting environment are clearly discernible from then. The rules for the
city administration pronounced by Chanakya⁹⁴ testify that the rulers were keen on maintaining hygiene and cleanliness. The civic responsibility and municipal regulations were verses relating to hygiene and damage to property. He dealt in detail and meticulously explicated the various rules for the protection and upgradation of environment. Rules made by Kautilya made it mandatory for the rulers to protect forest and animals. They also prohibited killing or injuring animals and birds. Service penalty was prescribed for the offenders. The Arthasastra⁹⁵ provided for punishments against the citizens for violating norms of hygiene as under:⁹⁶

(a) For throwing dirt on the road, the fine shall be one-eighth of a pana⁹⁷ and for blocking the same with mud or water the fine shall be one-quarter of a pana. {2.36.26}

(b) For the same cause, on the royal highway, such fine shall be double. {2.36.27}

(c) For using a holy place as an urinal, the fine shall be one-half of a pana, as a latrine, one pana; for using a water reservoir as an urinal, the fine shall be one pana, as a latrine, two panas; for using a temple as an urinal, the fine shall be one and one half of a pana, as a latrine, three pana and for using

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⁹⁴ He was an adviser and prime minister to the first Mauryan Emperor Chandragupta (c. 340-293 BC), and was the chief architect of his rise to power. Kautilya and Vishnugupta, the names by which the ancient Indian political treatise called the Arthasastra identifies its author, are traditionally identified with Chanakya.

⁹⁵ This is an ancient Indian Hindu treatise on statecraft, economic policy and military strategy which identifies its author by the names Kautilya and Viṣṇugupta, who are traditionally identified with Chanakya.


⁹⁷ Mauryan Dynasty introduced silver punch marked coins, amongst which was a ‘pana’.
a royal building as an urinal, the fine shall be two pana, as a latrine four panas. {2.36.28}

(d) For throwing dead bodies of animals like cat, dog or serpent inside the city, the fine shall be three panas, and for other animals like donkey, camel, mule, horse or a cattle, the fine imposed shall be six panas and for human dead bodies the fine shall be 50 panas. {2.36.30}

In Historic Period most of the temples or shrines were situated in remote places in forests and mountains. This originated from the belief that God has nearness with nature. Therefore, people have not dared to interfere with the surroundings of temple or shrines. This promoted the conservation of forests and wildlife in many places. Environmental protection existed during Mauryan Period and continued till the end of Gupta Empire in 673 A.D. Other Hindu Kings also prohibited killing of animals and destruction of forest.

King Ashoka of the Mauryan Empire did as much as he could to protect environment. He made several laws for the preservation of the ecology of India. King Ashoka expressed his view about the welfare of creatures in his State. He gave orders for planting of trees by the roadside for the benefit of travellers. He also issued Adnvapatra\textsuperscript{118} to preserve forests and natural water resources. He prescribed various pecuniary punishments for

\textsuperscript{118} In Sanskrit meaning command of the king.
killings animals that include even ants, squirrels, parrots, pigeon, lizards and rats.

3.4 Medieval Period Environment Protection

The same trend continued even at the time of medieval India when Mughals ruled India. During the Moghul period (1526-1858) environmental conservation emphasized more on aesthetic parameters. They were great lovers of nature spending their time in the lap of natural environment. They also made significant contribution by establishing magnificent gardens, fruit orchards and parks and foliage at different places. To some extent, the religion of complete tolerance practiced by Akbar\textsuperscript{119} deals with concern for protection of birds and beasts. Different regimes had different rules, but they have shown their common concern for the preservation and enrichment of the environment. In the course of time, however, human beings did not distil the obvious logic in various mythological commands and this resulted into a gradually drifting loss of concern for nature and the environment.

3.5 Lack of British Environmental Concerns

It has been seen through literature review that the British did not have any specific concerns for India on healthcare and hospital hygiene. Although

\textsuperscript{119} Also known as Shahanshah Akbar-E-Azam or Akbar the Great (23 November 1542 – 27 October 1605) was the third Mughal Emperor of India/Hindustan.
they did legislate on some issues of environmental importance, they chanced upon some subjects which are close to the area of civic cleanliness, but the regulations did not reach anywhere close to handling hospital based hazards.

The British and their rule in India showed some destruction of natural resources too. The early British rulers in India were totally indifferent to the needs of forest conservation. The British set foot on the Indian sub-continent around the year 1600, with the mission of trading goods from India in the form of East India Company. But, after seeing the immense amount of natural resources and plunders of opportunity to exploit the resources present here, they changed their game plan and started applying coercion so as to complete their aim of exploiting natural resources in India. The early days of British rule in India were days of plunder of natural resources. They started exploiting the rich resources present in India by employing the policy of imperialism.

It was observed that there was fierce onslaught on Indian forest. This onslaught was due to increasing demands for business and military purposes. Royal Navy, ship building, supply of teak and sandalwood for exports and trade purpose and some programs such as development of railway networks were given precedence at the cost of the environment.
However on a positive note, apart from forest enactments, the British government also made attempts to regulate various kinds of pollution in India, namely water, air and wild life. Some of the Acts were The Shore Nuisance (Bombay & Kolaba) Act, 1853,\textsuperscript{120} which was one of the earliest laws concerning water pollution. The Oriental Gas Company Act, 1857,\textsuperscript{121} was enacted to regulate pollution produced by Oriental Gas Company by imposing fines.

The next and most important enactment was The Indian Penal Code, 1860,\textsuperscript{122} and it was enacted to be a complete Criminal Code. A polluter of the environment could be punished if he does any act which causes any common injury, danger or annoyance to the public or to the people in general then the act may be treated as public nuisance as defined under Sec. 268 IPC\textsuperscript{123} and the offender may be punished under Secs. 290 or 291 of the code.\textsuperscript{124} Similarly a person who unlawfully or negligently does any work which is or which he knows or has reason to believe to be likely to spread infection of any disease dangerous to life, may be punished under Sec. 269 IPC. There are also penal provisions under a situation which either causes or destroys or

\begin{itemize}
\item \textsuperscript{120} Act No. 11 of 1853
\item \textsuperscript{121} Act No. 5 of 1857
\item \textsuperscript{122} Act No. 45 of 1860. It stands as a tribute to the genius of Lord Macaulay who was the President of the First Indian Law Commission constituted in 1834.
\item \textsuperscript{123} Section 268 of Indian Penal Code, which has provisions relating to offences affecting the public health, safety, convenience, decency and morals under Chapter XIV, defined public nuisance imposed penal liability. It says that "a person is guilty of public nuisance who does any act or is guilty of an illegal omission which causes any common injury, danger or annoyance to the people in general who dwell or occupy property in the vicinity or must necessarily cause injury, obstruction, danger or annoyance to persons who may have occasion to use any public right. A common nuisance is not excused on the ground that it causes some convenience or advantage".
\item \textsuperscript{124} These sections took into account those types of nuisance that are not defined in the Code and in respect of their continuance after injunction to discontinue, respectively.
\end{itemize}
diminishes the value or utility or any property injurious as provided under Secs. 426, 430, 431 and 432 IPC. This means that any person who generates, collects, receives, stores, transports, treats, disposes or handles Bio-Medical Waste in any form shall be treated as the contravener of the above penal provisions. However, this Penal Code prescribes punishments in various kinds of pollution which do not have a deterrent effect in the present society. In addition, The Police Act, 1861 prevents and controls the slaughtering of animals, cleaning of carcass, throwing dirt into streets and also prescribes punishments for the offenders in the nature of fines.

The Indian Easement Act, 1882 protected the riparian owner against unreasonable pollution by upstream user. The Indian Fisheries Act, 1897 penalized the killing of fish by poisoning water by using explosives. The earliest enactments during British rule to control air pollution were the Bengal Smoke Nuisance Act, 1905 and Bombay Smoke Nuisance Act, 1912.

In the field of wildlife protection the early legislation was limited to wildlife statute for the protection of wild elephants. The Elephants’

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125 All these are aggravated forms of the offence of ‘mischief’ defined under Sec 425 IPC.
127 Highest form of punishment is imprisonment of either description or fine of both.
128 Act No. 5 of 1861.
129 Act No. 5 of 1882.
130 Act No. 4 of 1897.
131 Act No. 3 of 1905.
132 Act No. 7 of 1912.
Preservation Act, 1879\textsuperscript{133}; The Northern India Canal and Drainage Act, 1873\textsuperscript{134}; The Obstruction in Fairways Act, 1881\textsuperscript{135}; The Forest Act of 1878\textsuperscript{136} and Wild Birds and Animals Protection Act, 1912\textsuperscript{137} were legislations that introduced regulatory measures on hunting. The first comprehensive law for the protection of wildlife and its habitat was for the Hailey National Park, which was established in Uttar Pradesh.\textsuperscript{138} However, the objective of environment policy during this period was different i.e. was not directed at the conservation of the nature but it was directed at exploitation of common resources with a primary objective of earning revenue.

### 3.6 India's Independence and Environment Scenario

Once India became independent from the British rule, during the early years of Indian independence there was no precise environmental policy. The Constitution of India came into force in the year 1950 and the judiciary contributed to expansion of the concept of Fundamental Rights that had a bearing on environmental protection\textsuperscript{139}. Simultaneously, Government was making enactments from time to time to protect environment as per the needs in the society.

\textsuperscript{133} Act No. 6 of 1879.
\textsuperscript{134} Act No. 8 of 1873.
\textsuperscript{135} Act No. 16 of 1881.
\textsuperscript{136} Act No. 7 of 1878.
\textsuperscript{137} Act No. 8 of 1912.
\textsuperscript{138} Now Corbett National Park.
\textsuperscript{139} See para 3.6.2 at p. 89.
3.6.1 Legislative Enactments and Environmental Protection

Two early post-independence laws touched water pollution and other legislations were introduced later. The Factories Act, 1948\textsuperscript{140} mentions the effective arrangements for waste disposal and empowered State Government to frame rules to implement these directives. With the River Boards Act, 1956\textsuperscript{141} for the regulation and development of Inter-State Rivers and river valleys, the Government was empowered to prevent water pollution.

There were also other important enactments regarding environmental protection. Prevention of Cruelty to Animals Act, 1960\textsuperscript{142} deals with protection of animals, The Atomic Energy Act, 1962\textsuperscript{143} was passed to regulate nuclear energy and radioactive elements in India, The Insecticides Act, 1968\textsuperscript{144} provides regulation regarding manufacture and distribution of insecticides. In most of these other statutes that have some bearing on environmental pollution, the environmental concern is incidental to the principal objective of the law. All the statutes are scattered and piecemeal.

During the period of 1970 the Central Government changed its direction from environmental indifference to environmental concern and made different environmental legislations. This period saw the beginning of

\textsuperscript{140} Act No. 63 of 1948.
\textsuperscript{141} Act No. 49 of 1956.
\textsuperscript{142} Act No. 59 of 1960.
\textsuperscript{143} Act No. 33 of 1962.
\textsuperscript{144} Act No. 46 of 1968.
environmental policy in India. Developments during this decade gave a new
dimension and direction to the policy concern in the field of environmental
protection.

Parliament enacted nation wide comprehensive laws. They are The
Wildlife Protection Act, 1972\textsuperscript{145} and Water (Prevention and Control of
pollution) Act, 1974\textsuperscript{146} in the field of wildlife protection and water pollution
respectively. There was also the enactment of the Water (Prevention and
Control of Pollution) Cess Act, 1977\textsuperscript{147} in the area of water pollution. In the
early 1980s nation wide forest conservation and air pollution laws were
passed. They were the Forest Conservation Act, 1980\textsuperscript{148} and the Air
(Prevention and Control of Pollution) Act, 1981\textsuperscript{149} for the conservation of
forest and control of air pollution respectively.

3.6.2 Environmental Protection through Constitutional Law

With independent India having the Constitution coming into force,
several fundamental rights were bestowed through Part III amongst which
Art. 21 confers on all persons the right to life. The scope and access of
environmental justice finds place in the right to life and an activist judiciary

\begin{footnotes}
\item Act No. 53 of 1972.  
\item Act No. 6 of 1974.  
\item Act No. 36 of 1977.  
\item Act no. 69 of 1980.  
\item Act No. 14 of 1981. 
\end{footnotes}
was wholly instrumental for expanding the horizon of the spirit of Art. 21.\textsuperscript{150} After independence, there is also constitutional sympathy for environmental preservation.

The year 1972 actually marks a distinct turning point in the history of environmental management in India. It was the year in which a Conference on Human Environment was held at Stockholm at the initiative of United Nations. India being a Member of this Conference influenced the process of environmental Management in the following year.\textsuperscript{151}

To implement the decision taken at the United Nations Conference on the Human Environment the Indian Parliament made tremendous changes in the field of environmental management. It was in this decade that environmental protection was accorded a Constitutional status by the Constitution (Forty-second Amendment) Act, 1976 which incorporated Article 48A\textsuperscript{152} and Chapter IVA which included Article 51(A) (g).\textsuperscript{153} After this amendment, it has become obligatory duty on the part of the State and every citizen to protect and improve the environment. Article 47 of the Directive Principles of State Policy lays down that the improvement of the public health is one of the primary duties of the State. Similarly Article 48A envisages that the State shall endeavour to protect and improve the

\textsuperscript{150} “No person shall be deprived of his life and personal liberty except according to procedure established by law”.

\textsuperscript{151} Jain, M. P. Indian Constitutional Law. 5\textsuperscript{th} ed. (Nagpur : Wadhwa and Company, 2007).

\textsuperscript{152} Protection and improvement of environment and safeguards of forests and wild life.

\textsuperscript{153} It shall be the duty of every citizen of India to protect and improve the natural environment including forests, likes, rivers and wild life and to have compassion for living creatures.
environment and Article 51A (g) made it a fundamental duty on every citizen of India to protect and improve the natural environment.

In India, the Judiciary has played a very substantive role in giving impetus to the environment protection activities. Initially, it was mainly through litigation between individuals over some kind of environmental nuisance. Over a period of time, the environmental litigation has transformed from individuals seeking legal remedies to a state where resolution of disputes centred on large scale impact of environmental policy perspectives and also the time tested conflict between Fundamental Rights.

By and large, the Indian Judiciary was approached to decide on environmental issues in the light of certain derived Fundamental Rights enshrined in the Indian Constitution. The environmental jurisprudence thus created was in the context of The Right to Wholesome Environment and Right to Livelihood. Notable judicial decisions relating to these aspects have been discussed by the researcher.

In Subhash Kumar v. State of Bihar, a writ by way of Public Interest Litigation (PIL) was filed in the Supreme Court seeking direction to the Director of Collieries to stop the discharge of slurry from its washeries into the Bokaro river. It was alleged that, the slurry which gets deposited on the

154 AIR 1991 SC 420
agricultural land affects its fertility. Moreover, the effluent in the form of slurry pollutes the river, making it unfit for drinking and irrigation. One of the main issues of the case was, whether the right to life included the right to wholesome environment. Justice Singh, in his judgment held that Right to life is a Fundamental Right under Art. 21 of the Constitution and it includes the right of enjoyment of pollution free water and air for full enjoyment of life.

In *Kinkri Devi v. State*, a writ was filed under Art. 226, 51A (g) and 48A in the Himachal Pradesh High Court, in order to protect and preserve the Shivalik Hills. For this purpose, a lease for the excavation of limestone required to be cancelled. The Court observed the importance of issues relating to environment and ecological balance.

Also, under Articles 51A and 48A, a Constitutional pointer exists towards the State and a Constitutional duty of the citizens, not only to protect but also to improve the environment and to preserve and safeguard the forests, flora and fauna. Since this case was decided by the H.P. High Court, before the Supreme Court’s decision in *Subhash Kumar’s case*, a right under Art. 21 remained without being recognized, even though rights under Art. 51A(g) and 48A were upheld.

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155 AIR 1988 HP 4
156 Supra note 154 at p.91.
In *T. Damodar Rao v. S.O., Municipal Corporation, Hyderabad*\(^{157}\) the case broadly deals with whether the LIC of India and the Income Tax Department, Hyderabad, can legally use the land owned by them in a recreational zone for residential purposes, thereby contradicting the development plan. A writ of *mandamus* was issued by the Court forbidding these departments from constructing anything for residential purposes. One of the reasons for the writ being issued was the environmental imbalance that could be caused by such type of constructions. The court held that such constructions would be contrary to law and to Art. 21, as the enjoyment of life and its attainment and fulfilment embraces the protection and preservation of nature’s gifts, without which life cannot be enjoyed.

In *Hamid Khan v. State*,\(^{158}\) a PIL was filed by a public-spirited advocate pointing towards the State Government in not taking proper measures before supplying drinking water from hand pumps, which resulted in colossal damage to the health of the population of Mandla District. Samples were sent to various labs in the State. All results showed high fluoride content. The Court held that Art. 21 conferred the right upon the people to have pollution free air and pure water. Therefore, the State was responsible for not taking precautionary steps to provide proper drinking water and was required to compensate the suffering ailing people.

\(^{157}\) AIR 1987 AP 171

\(^{158}\) AIR 1997 MP 191
In *Banwasi Seva Ashram v. State of U.P.*,\(^{159}\) a writ was filed by *adivasis*, under Article 32, with regard to their rights over certain forestlands. This was their habitat. After a part of the jungle became a ‘reserved forest’ under the Forest Act, forest officer began interfering with the *adivasis* operations in those areas, thereby obstructing their free movement. In the meanwhile some part of the same forest was allotted to NTPC (National Thermal Power Corporations Limited) for setting up of a power plant and this allotment also was challenged. The Court upheld the allotment of forest land to NTPC on the reasoning that there is a great demand in this country for energy such as electricity and specific parts of our country have suffered tremendous set-backs in industrial activity for want of energy. The Court, however, granted certain rights and facilities to the *adivasis* in the reserved forest.

In *B.T. Ingle v. State of Maharashtra*,\(^{160}\) land was to be acquired by the State Government to construct a dam. A Writ petition was filed under Art. 32 for the vacation of an interim stay order. In the process of doing so, the Court insisted that the interests of backward/tribal people be looked into. The Court also held various specific measures to be taken by the State Government before construction such as providing an alternate employment for a person whose occupation is being affected by the construction of the dam.

\(^{159}\) AIR 1987 SC 374

\(^{160}\) AIR 1987 SC 532
In *Abhilash Textiles v. Rajkot Municipal Corporation*, the case basically deals with whether a right to carry on a business or trade in an unregulated manner and cause harm to the society is provided by the Constitution. Abhilash Textile contended that they are carrying on the business for the last 25 years, thereby employing 20,000 to 25,000 people. The effluents of the petitioners were causing serious health disorders to the local people. The Court taking a pro-environment stand did not accept any of the petitioner’s contentions and thereby discharged the petition, asking Municipal Commissioner to give the petitioner some more time to try and prevent the nuisance.

In *K.C. Malhotra v. State*, a PIL was filed by a doctor with relation to the spread of epidemic cholera (which resulted in death of 12 children) due to open drain, filthy water, heaps of dirt, contaminated water and rubbish. This state was arrived at clearly by the negligence of various State bodies/authorities. The Court held that Right to life also included the bare necessaries of life such as right to adequate nutrition, clothing, shelter, facilities of reading and writing. Right to life meant something more than just physical survival. The people of that area have a right under Art. 21 to ensure that the Government takes steps for the improvement of public health as the same is among its primary duties. The Court ultimately issued a set of directions in order to keep up the health of the inhabitants of the locality.

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161 AIR 1988 Guj 57
162 AIR 1994 MP 548
In *Law Society of India v. Fertilizers and Chemicals Travancore Limited*, a PIL was filed alleging that high potency danger is involved to human life in the vicinity, in allowing continuing the operation of an ammonia storage tank. The Court held that the guarantee to life is more than immunity from annihilation of life. Right to environment is a part of Right to Life. The Court after going through the material on record, directed to decommission the ammonia tank in order to protect Wellington island and Cochin.

In *Sushila Saw Mill v. State of Orissa*, a notice under the Orissa Saw Mills and Saw Pit Control Act, 1991 was issued to the petitioner to close down his operations. The petitioner, having felt that his Fundamental Right under Art. 19 was violated, filed a petition at the Orissa High Court. To protect forest wealth and environment the Act imposes a total ban on sawing operations in prohibited areas. The Court held that preservation of forests was a great matter of public interest and therefore the Act was not violative of Fundamental Rights, as the restriction would fall under the reasonable exceptions.

Incidentally, the growth of environmental jurisprudence in India was slow but steady. The pioneer amongst the cases, which is still the

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163 AIR 1994 Ker 309  
164 AIR 1995 SC 2484
Magnacarta of the environmental jurisprudence for recognition of public right to decent living was treatised in Municipal Council, Ratlam v. Vardhichand\textsuperscript{165} where Justice V. R. Krishna Iyer in his inimitable style, affirmed the trial Court’s order directing under Sec 133\textsuperscript{166} CrPC, 1973 to abate the nuisance of a foul drain flowing in between the city with the filth and stink and discharge from an alcohol plant. The recognition and growth of Public Interest Litigation (PIL) has become a catalyst for environmental justice. While in Rural Litigation and Entitlement Kendra v. State of Uttar Pradesh\textsuperscript{167}, the Supreme Court recognized the imbalance of the ecology and hazard to healthy environment due to working of lime-stone quarries, in Sachinand Pandey v. State of West Bengal\textsuperscript{168}, the court recognized society’s interaction with nature and the environmental question affecting humanity. Likewise there are a host of decisions whereby the judiciary has expanded the ambit of Art. 21\textsuperscript{169}. However, more recently the Supreme Court invoked the ‘public trust doctrine’ evolving methods for arriving at ‘net present value’ to be paid by the State for diversion of forest land to non-forest use,\textsuperscript{170} rationalized the meat export promotion policy and regulation of abattoirs\textsuperscript{171} and intervened in town planning, providing for conversion of large open lands

\textsuperscript{165} AIR 1980 SC 1622
\textsuperscript{166} Conditional order for removal of nuisance.
\textsuperscript{167} Supra note 46 at p. 22.
\textsuperscript{168} AIR 1987 SC 1109
\textsuperscript{169} M. C. Mehta v. Union of India AIR 1987 SC 965 also called the oleum gas leak case; Vellore Citizens Welfare Forum v. Union of India AIR 1996 SC 2715, called the Tanneries case where the principle of ‘sustainable development’ was stressed.
\textsuperscript{170} T. N. Godavarman Thirumulpad v. Union of India AIR 2005 SC 4256
\textsuperscript{171} Akhil Bharat Goseva Sangh v. State of A.P. 2006 (4) SCC 162
of cotton mills in Mumbai. All these decisions show that Art. 21 has grown in leaps and bounds.

The High Courts and the Supreme Court of India imposed a duty on individuals and the State to protect the environment holding that the right to life under Article 21 includes right to live in an unpolluted environment also. ‘Strict Liability’ for hazardous activity as laid down in the celebrated case of Rylands v. Fletcher, imposed a strict liability on the persons for the damage caused by escape of a thing collected for extra-ordinary usage. However the rule permitted some defences and exceptions. The scope of this rule and right to life was further extended by the Supreme Court in Shriram Gas Leak case and Bhopal Gas tragedy hearings by creating a new principle of ‘Absolute Liability’. According to this principle, the industry would be absolutely liable for the loss caused by the hazardous and inherently dangerous activity.

A law which is not in consonance with the fast-developed technological hazards, cannot deal with dangerous consequences of accidents with abnormal and extraordinary prepositions. The law needs to undergo a process of reform and rethinking to race with fast changing technological applications in multinational industrial activities. However, the judges rightly

173 See supra note 157 at p. 93.
174 (1868), L.R. 3 H.L.
175 M. C. Mehta V. Shriram Food and Fertilizer Industries and Union of India AIR 1987 SC 1965 (Oleum Gas Leak Case -I)
176 Union Carbide v. Union of India, AIR 1992 SC 248
imposed an absolute and non-delegable duty to ensure that no harm results to any one, on an enterprise engaged in Hazardous or Inherently Dangerous Activity (HOIDA) posing a potential threat to the health and safety of the persons working in the factory and residing in the surrounding areas.

The Supreme Court rightly of India used the opportunity to create landmark judgment imposing absolute liability for a noble cause of protecting humanity and environment. The principle in Mehta’s case was reiterated in simple terms in Indian Council for Enviro-Legal Action v. Union of India. The apex court called it a rule of ‘Polluter Pays’ which gained global appreciation and acceptance. ‘Generator is responsible’ is the universal principle holding the healthcare establishments legally accountable for damage caused by waste management processes. The enterprise should not be able to an excuse that it had taken all reasonable care and that the harm occurred without any negligence on its part and it is reasonable and justified to impose strict liability to pay the social cost of the tragedy.

3.6.3 Criminal Procedure Code and Environment Protection

The Hospitals and other healthcare institutions dump their wastes, containing human tissues, blood soaked items, excreta, drugs, swabs, disposable syringes and needles, bandages, etc., in the municipal garbage

177 Sapra note 165 at p. 97
178 AIR 1996 SC 1466
dumps. These dumping sites are regularly visited by the ‘Rag-pickers’ who scan and sort out the plastics, disposable syringes, etc., so that they can be resold at various places for re-cycling. The problems of waste disposal in the hospitals and other health-care institutions have become issues of increasing concern.

Almost all types of pollution can be controlled or removed by the District and Sub Divisional Magistrates or by Magistrates specially empowered for the purpose, by exercising powers under Section 133 which provides for issuance of a conditional injunction order against a particular person, under Section 143 which provides for issuance of an absolute order against general public nor to repeat or continue a public nuisance and under Section 144 which provides for issuance of an order in urgent cases of nuisance or apprehended danger of the Criminal Procedure Code, 1973.

3.7 Specific Legislations

One of the most important environmental legislations that deal with all aspects of environmental pollution was the Environment (Protection) Act, 1986\textsuperscript{179}. All these comprehensive enactments made by the Parliament tried to protect environment in one way or the other, to deal with various aspects

\textsuperscript{179} Act No. 29 of 1986.
environmental protection and established different authorities to regulate and control the pollution.

3.7.1 The Environment (Protection) Act, 1986

With a view to protect and improve the environment and for matters connected therewith the Environment (Protection) Act, 1986 was enacted. India made an international commitment at the United Nations Conference on the Human Environment held at Stockholm in June 1972, to protect and improve the human environment in order to prevent hazards to human life and other living creatures, plants and property and hence India had to take steps in that direction and made this legislation applicable to the whole of India.\textsuperscript{180}

Several important aspects of the environment are contained in Sec. 8 of Environment (Protection) Act, 1986 which imposes a liability to comply with procedural safeguards in disposal of Bio-Medical Waste. The Supreme Court of India held that it had power to award compensation. It has implicit power to issue whatever direction, order or \textit{writ} to enforce the fundamental right. The power of the Court is not only injunctive in ambit, which is, preventing infringement of a fundamental right. It also provides remedial relief against breach of the fundamental right already committed.\textsuperscript{181} However, Sec. 15

\textsuperscript{180} Art. 51(c) says that the State shall endeavour to foster respect for international law and treaty obligations in the dealings of organised peoples with one another. See also the enabling provision, Art. 253 of the Constitution of India.

\textsuperscript{181} Bandhua Mukti Morcha v. Union of India \textit{AIR} 1984 SC 802
provides for imposing a penalty of Rs. one lakh and an imprisonment up to five years or both for any violation of the provisions. It also provides for higher penalty in case of continuous violation. But the Environment (Protection) Act, 1986, does not provide any measure or liability to pay compensation to the victims of the violations of the provisions.

3.7.2 **Public Liability Insurance Act, 1991**

This is an Act to provide for public liability insurance for the purpose of providing immediate relief to the persons affected by accidents occurring while handling any hazardous substance and for matters connected therewith or incidental thereto. This Act made it mandatory for Occupiers of hazardous activity to do public liability insurance to provide minimum relief to the victims. Sec. 3 of the Act imposes a duty and liability for providing relief specified in schedule for such death, injury or damage. However, it is also the duty of the state to provide for effective remedies against the environmental hazards. The Public Liability Insurance Act, 1991 is a step towards fulfilling such an obligation to some extent.

This law enables the District Collector to determine immediate relief up to a maximum of Rs 37,500. For larger compensation, the affected person has to seek remedies under other laws or common law developed by the

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182 Act No. 6 of 1991.
courts. However this law does not specifically cater to the management and handling of hospital wastes

3.7.3 National Environment Tribunal Act, 1995\textsuperscript{183}

National Environment Tribunal Act, 1995 provides for strict liability for damages arising out of any accident occurring while handling any hazardous substance and for the establishment of a National Environment Tribunal for effective and expeditious disposal of cases arising from such accident, with a view to giving relief and compensation for damages to persons, property and the environment and for matters connected therewith or incidental thereto. This legislation creates tribunals to enforce the absolute liability principle.

3.8 Specific Rules for Bio-Medical Waste Management

The Environment (Protection) Act, 1986 makes possible the issuance of many rules and notifications.\textsuperscript{184} Incidentally, in 1989 the Government of India, in exercise of powers conferred under sections 6, 8 and 25 of the Environmental (Protection) Act, 1986 formulated the Hazardous Waste (Management & Handling) Rules, 1989 which were amended in 2000. But

\textsuperscript{183} Act No. 27 of 1995.
these rules did not cover hospital wastes, despite of the fact that India was a party to Basel Convention trans-boundary movement on hazardous Waste Management and therefore the same were bound to be notified. In consonance with the same a draft notification on Bio-Medical Wastes (Management and Handling) Rules, 1995 was issued on 24th April, 1995 vide S.O. 378(E) II 3(ii) Gazette of India Extra., Sl. No. 19 and objections were invited from public. After duly considering necessary amendment in the Draft Rules, the Bio-Medical Waste (Management & Handling) Rules 1998 finally came into operation with effect from 20th July, 1998 vide S.O. 630 (E) II 3(ii), Gazette of India, Extra, Sl. No. 460. These Rules are applicable to all persons who generate, collect, receive, store, transplant, dispose or handle Bio-Medical Waste in any form.\textsuperscript{185}

Having taken three years to amend the draft rules, the Bio-Medical (Management and Handling) Rules, 1998 did enumerate the institutions generating Bio-Medical Wastes including hospital, nursing homes, clinics, dispensaries, veterinary institutions, animal houses, pathological laboratories and blood banks. These also specifically mention the duty of Occupier, categories of Bio-Medical Wastes and various standards for treatment and disposal of Bio-Medical Wastes.

\textsuperscript{185} See detailed notification at Annexure-2.
The highlights of the notification, popularly called Bio-Medical Waste Management rules are as follows. These rules apply to all persons who generate, collect, receive, store, transport, treat, dispose, or handle Bio-Medical Waste in any form. Akin to all typical enactments, these rules at the outset define several entities that need to be understood in the context of management and handling of Bio-Medical Waste. These terms would be interpreted in the manner they are described, unless the context means otherwise.

The following important terms have been defined in this legislation:

1. Act means the Environment (Protection) Act, 1986 (29 of 1986);

2. Animal House means a place where animals are reared/kept for experiments or testing purposes;

3. Authorisation means permission granted by the prescribed authority for the generation, collection, reception, storage, transportation, treatment, disposal and/or any other form of handling of Bio-Medical Waste in accordance with these rules and any guidelines issued by the Central Government.

4. Authorised person means an Occupier or Operator authorised by the prescribed authority to generate, collect, receive, store, transport, treat, dispose and / or handle Bio-Medical Waste in accordance with these rules and any guidelines issued by the Central Government.
5. **Bio-Medical Waste** means any waste, which is generated during the diagnosis, treatment or immunisation of human beings or animals or in research activities pertaining thereto or in the production or testing of biologicals, and including categories mentioned in Schedule I.

6. **Biologica**ls means any preparation made from organisms or micro-organisms or product of metabolism and biochemical reactions intended for use in the diagnosis, immunisation or the treatment of human beings or animals or in research activities pertaining thereto;

7. **Bio-Medical Waste treatment facility** means any facility wherein treatment disposal of Bio-Medical Waste or processes incidental to such treatment or disposal is carried out and includes common treatment facilities.

8. **Form** means Form appended to these rules;

9. **Occupier** in relation to any institution generating Bio-Medical Waste, animal house, pathological laboratory, blood bank by whatever name called, means a person who has control over that institution and/or its premises;

10. **Operator of a Bio-Medical Waste Treatment facility** means a person who owns or controls or operates a facility for the collection, reception, storage, transport, treatment, disposal or any other form of handling of Bio-Medical Waste.
Further, these rules specify that it shall be the duty of every Occupier of an institution generating Bio-Medical Waste which includes a hospital, nursing home, clinic, dispensary, veterinary institution, animal house, pathological laboratory, blood bank by whatever name called to take all steps to ensure that such waste is handled without any adverse effect to human health and the environment.\textsuperscript{186}

The treatment and disposal of Bio-Medical Waste shall be treated and disposed of in accordance with Schedule I, and in compliance with the standards prescribed in Schedule V. Besides, every Occupier, where required, shall set up in accordance with the time-schedule in Schedule VI, requisite Bio-Medical Waste treatment facilities like incinerator, autoclave, microwave system for the treatment of waste, or, ensure requisite treatment of waste at a common waste treatment facility or any other waste treatment facility.

Specific directions are given in these rules with regard to the segregation of Bio-Medical Wastes at the point of generation into containers or bags in accordance with Schedule II (of these Rules) prior to its storage, transportation, treatment and disposal. These containers shall be labelled according to Schedule III (of these Rules). It has been laid down that Bio-Medical Wastes shall not be mixed with other wastes. If a container is

\textsuperscript{186} Sec 3, BWM Rules 1998.
transported from the premises where Bio-Medical Waste is generated to any waste treatment facility outside the premises, the container shall, apart from the label prescribed in Schedule III, also carry information prescribed in Schedule IV.\textsuperscript{187}

Notwithstanding anything contained in the Motor Vehicles Act, 1988, or rules thereunder, untreated Bio-Medical Waste shall be transported only in such vehicle as may be authorised for the purpose by the competent authority as specified by the Government. With regards to storage, untreated Bio-Medical Waste shall not be kept stored beyond a period of 48 hours, unless, if for any reason it becomes necessary to store the waste beyond such period, the authorised person must take permission of the prescribed authority and take measures to ensure that the waste does not adversely affect human health and the environment.\textsuperscript{188}

The role of municipal bodies of the relevant areas insofar as they shall continue to pick up and transport segregated non Bio-Medical Waste generated in hospitals and nursing homes, as well as duly treated Bio-Medical Wastes for disposal at municipal dump site is provided in the Rules. Therefore they would be failing in their duty if they fail to carry out such transportation as specified.

\textsuperscript{187} See Rule 6, BWM Rules 1998.  
\textsuperscript{188} Ibid.
Except otherwise provided, the prescribed authority for enforcement of the provisions of these rules shall be the State Pollution Control Boards in respect of States and the Pollution Control Committees in respect of the Union Territories and all pending cases with a prescribed authority appointed earlier shall stand transferred to the concerned State Pollution Control Board, or as the case may be, the Pollution Control Committees.

It has been laid down in the rules that the prescribed authority for enforcement of the provisions of these rules in respect of all healthcare establishments including hospitals, nursing homes, clinics, dispensaries, veterinary institutions, animal houses, pathological laboratories and blood banks of the Armed Forces under the Ministry of Defence shall be the Director General, Armed Forces Medical Services shall be appointed by the State or Union territory government, within one month from the coming into force of these rules. The prescribed authority shall on receipt of Form I make such enquiry as it deems fit and if it is satisfied that the applicant possesses the necessary capacity to handle Bio-Medical Waste in accordance with these rules, grant or renew an authorization, as the case may be.

An authorisation shall be granted for a period of three years, including an initial trial period of one year from the date of issue. Thereafter, an application shall be made by the Occupier/Operator for renewal. All such subsequent authorisation shall be for a period of three years. A provisional
authorisation will be granted for the trial period, to enable the Occupier/Operator to demonstrate the capacity of the facility. The prescribed authority may after giving reasonable opportunity of being heard to the applicant and for reasons thereof to be recorded in writing, refuse to grant or renew authorisation. Every application for authorisation shall be disposed of by the prescribed authority within ninety days from the date of receipt of the application. The prescribed authority may cancel or suspend an authorisation, if for reasons, to be recorded in writing, the Occupier/Operator has failed to comply with any provision of the Act or these rules. However, no such authorisation shall be cancelled or suspended without giving a reasonable opportunity to the Occupier/Operator of being heard.

Every Occupier of an institution generating, collecting, receiving, storing, transporting, treating, disposing and/or handling Bio-Medical Waste in any other manner, except such Occupier of clinics, dispensaries, pathological laboratories, blood banks providing treatment/service to less than 1000 (one thousand) patients per month, shall make an application in Form I\textsuperscript{189} to the prescribed authority for grant of authorisation. Every Operator of a Bio-Medical Waste facility shall make an application in Form I to the prescribed authority for grant of authorisation. Every application in Form I for grant of authorisation shall be accompanied by a fee as may be prescribed

\textsuperscript{189} See Annexure-2.
by the Government of the State or Union Territory.\textsuperscript{190} The authorisation to operate a facility shall be issued in Form IV,\textsuperscript{191} subject to conditions laid therein and such other condition, as the prescribed authority, may consider it necessary.

The Government of every State/Union Territory shall constitute an Advisory Committee. The Committee will include experts in the field of medical and health, animal husbandry and veterinary sciences, environmental management, municipal administration, and any other related department or organisation including non-governmental organisations. As and when required, the committee shall advise the Government of the State/Union Territory and the prescribed authority on matters related to the implementation of these rules.

Notwithstanding anything contained in sub-rule (1), the Ministry of Defence shall constitute in that Ministry, an Advisory Committee consisting of the following in respect of all healthcare establishments including hospitals, nursing homes, clinics, dispensaries, veterinary institutions, animal houses, pathological laboratories and blood banks of the Armed Forces under the Ministry of Defence, to advise the Director General, Armed Forces

\textsuperscript{190} This provision, Sub-rule 3 of Rule 6, BWM Rules 1998, has been struck down by the Karnataka High Court in the case of Fr. Mueller’s v. The Member Secretary and others AIR 2004 Kant 342 and held as ultra vires the parent Act in view of Art. 265, which mandates about no levy of tax without authority of law. There is no express provision in the Act enabling the framing of Rules to levying of a fee and levy of a fee is part of a taxing power that can be exercised only by legislature. Also see St. Philomena’s hospital vs. The Member Secretary, Prescribed Authority for Bio-medical waste and others decided by the Karnataka High Court in January 2000.

\textsuperscript{191} See Annexure-2.
Medical Services and the Ministry of Defence in matters relating to implementation of these rules, namely:-

(1) Additional Director General of Armed Forces Medical Services ……… Chairman

(2) A representative of the Ministry of Defence not below the rank of Deputy Secretary, to be nominated by that Ministry ……… Member

(3) A representative of the Ministry of Environment and Forests not below the rank of Deputy Secretary To be nominated by that Ministry. ……… Member

(4) A representative of the Indian Society of Hospitals Waste Management, Pune ……… Member

The Central Pollution Control Board shall monitor the implementation of these Rules in respect of all the Armed Forces healthcare establishments under the Ministry of Defence. After giving prior notice to the Director General Armed Forces Medical Services, the Central Pollution Control Board along with one or more representatives of the Advisory Committee
constituted under sub-rule (2) of rule 9 may, if it considers it necessary, inspect any Armed Forces healthcare establishments.

Every Occupier/Operator shall submit an annual report to the prescribed authority in Form II by 31 January every year, to include information about the categories and quantities of Bio-Medical Wastes handled during the preceding year. The prescribed authority shall send this information in a compiled form to the Central Pollution Control Board by 31 March every year.

Every authorised person shall maintain records related to the generation, collection, reception, storage, transportation, treatment, disposal and/or any form of handling of Bio-Medical Waste in accordance with these rules and any guidelines issued. All records shall be subject to inspection and verification by the prescribed authority at any time.

When any accident occurs at any institution or facility or any other site where Bio-Medical Waste is handled or during transportation of such waste, the authorised person shall report the accident in Form III to the prescribed authority forthwith.

Except as otherwise provided in sub-rule (2), any person aggrieved by an order made by the prescribed authority under these rules may, within thirty
days from the date on which the order is communicated to him, prefer an appeal in Form V, to such authority as the Government of State/Union Territory may think fit to constitute. Provided that the authority may entertain the appeal after the expiry of the said period of thirty days if it is satisfied that the appellant was prevented by sufficient cause from filing the appeal in time.

Any person aggrieved by an order of the Director General, Armed Forces Medical Services under these rules may, within thirty days from the date on which the order is communicated to him prefer an appeal to the Central Government in the Ministry of Environment and Forests.

Without prejudice to Rule 5 of these rules, the Municipal Corporations, Municipal Boards or Urban Local Bodies, as the case may be, shall be responsible for providing suitable common disposal/incineration sites for the Bio-Medical Wastes generated in the area under their jurisdiction and in areas outside the jurisdiction of any municipal body, it shall be the responsibility of the Occupier generating Bio-Medical Waste/Operator of a Bio-Medical Waste treatment facility to arrange for suitable sites individually or in association, so as to comply with the provisions of these rules.

There are 10 categories of Bio-Medical Waste types in all and each of them has a specified mode of treatment and disposal option for effectively rendering the said waste free from risk. Table 3.1 outlines the various
categories of Bio-Medical Waste that are contained in Schedule I of the BWM Rules. 192

WASTE CATEGORY TYPES AND THEIR TREATMENT

<table>
<thead>
<tr>
<th>Waste Category No.</th>
<th>Waste Category Type</th>
<th>Treatment and Disposal [Option +]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Category No.1</td>
<td>Human Anatomical Waste (human tissues, organs, body parts)</td>
<td>Incineration*/ deep burial*</td>
</tr>
<tr>
<td>Category No.2</td>
<td>Animal Waste (animal tissues, organs, body parts carcasses, bleeding parts, fluid, blood and experimental animals used in research, waste generated by veterinary hospitals, colleges, discharge from hospitals, animal houses)</td>
<td>Incineration*/ deep burial*</td>
</tr>
<tr>
<td>Category No.3</td>
<td>Microbiology &amp; Biotechnology Wastes (Wastes from laboratory cultures, stocks or specimens of micro-organisms live or attenuated vaccines, human and animal cell culture used in research and infectious agents from research and industrial laboratories, wastes from production of biologicals, toxins, dishes and devices used for transfer of cultures)</td>
<td>Local autoclaving/ microwaving/ incineration*</td>
</tr>
<tr>
<td>Category No.4</td>
<td>Waste sharps (needles, syringes, scalpels, blades, glass etc. that may cause puncture and cuts. This includes both used and unused sharps)</td>
<td>disinfection (chemical treatment)/ autoclaving/ microwaving and mutilation/shredding##</td>
</tr>
<tr>
<td>Category No.5</td>
<td>Discarded Medicines and Cytotoxic drugs (wastes comprising of outdated, contaminated and discarded medicines)</td>
<td>incineration*/ destruction and drugs disposal in secured landfills</td>
</tr>
<tr>
<td>Category No.6</td>
<td>Soiled Waste (Items contaminated with blood, and body fluids including cotton, dressings, soiled plaster casts, linen, beddings, other material contaminated with blood)</td>
<td>incineration @ autoclaving/ microwaving</td>
</tr>
</tbody>
</table>

192 See Rule 5, BWM Rules, 1998
<table>
<thead>
<tr>
<th>Waste Category No.</th>
<th>Waste Category Type</th>
<th>Treatment and Disposal [Option +]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Category No.7</td>
<td>Solid Waste</td>
<td>disinfection by chemical treatment@@ autoclaving/microwaving and mutilation/shredding##</td>
</tr>
<tr>
<td></td>
<td>(Wastes generated from disposable items other than the waste sharps such as tubings, catheters, intravenous sets etc.)</td>
<td></td>
</tr>
<tr>
<td>Category No.8</td>
<td>Liquid Waste</td>
<td>disinfection by chemical treatment @@ and discharge into drains.</td>
</tr>
<tr>
<td></td>
<td>(waste generated from laboratory and washing, cleaning, house-keeping and disinfecting activities)</td>
<td></td>
</tr>
<tr>
<td>Category No.9</td>
<td>Incineration Ash</td>
<td>disposal in municipal landfill</td>
</tr>
<tr>
<td></td>
<td>(ash from incineration of any Bio-Medical Waste)</td>
<td></td>
</tr>
<tr>
<td>Category No.10</td>
<td>Chemical Waste</td>
<td>Chemical treatment @@ and discharge into drains for liquids and secured landfill for solids</td>
</tr>
<tr>
<td></td>
<td>(chemicals used in production of biologicals, chemicals used in disinfection, as insecticides etc.)</td>
<td></td>
</tr>
</tbody>
</table>

Table 3.1

@@ Chemicals treatment using at least 1% hypochlorite solution or any other equivalent chemical reagent. It must be ensured that chemical treatment ensures disinfection.

## Mutilation/shredding must be such so as to prevent authorised reuse.

@ There will be no chemical pre-treatment before incineration. Chlorinated plastics shall not be incinerated.

* Deep burial shall be an option available only in towns with population less than five lakhs and in rural areas.¹⁹³

¹⁹³ No town in the State of Goa has a population exceeding 5 lakhs. Hence deep burial is a permissible option for treatment of specified wastes.
Table 3.2 shows the different colour coding and type of container for disposal is included in Schedule II of the BWM Rules.\textsuperscript{194}

**COLOUR CODING AND CONTAINER TYPES**

<table>
<thead>
<tr>
<th>Colour Coding</th>
<th>Type of Container</th>
<th>Waste Category</th>
<th>Treatment options as per Schedule I</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yellow</td>
<td>Plastic bag</td>
<td>Cat.1, Cat. 2, Cat.3, Cat. 6</td>
<td>Incineration/deep burial</td>
</tr>
<tr>
<td>Red</td>
<td>Disinfected container/plastic bag</td>
<td>Cat. 3, Cat.6, Cat.7</td>
<td>Autoclaving/Microwaving/Chemical Treatment</td>
</tr>
<tr>
<td>Blue/White translucent</td>
<td>Plastic bag/puncture proof container</td>
<td>Cat.4, Cat.7</td>
<td>Autoclaving/Microwaving/Chemical Treatment and destruction/shredding</td>
</tr>
<tr>
<td>Black</td>
<td>Plastic bag</td>
<td>Cat.5 and Cat.9 and Cat.10 (Solid)</td>
<td>Disposal in secured landfill</td>
</tr>
</tbody>
</table>

Table 3.2

Notes:

1. Colour coding of waste categories with multiple treatment options as defined in Schedule I, shall be selected depending on treatment option chosen, which shall be as specified in Schedule I.

2. Waste collection bags for waste types needing incineration shall not be made of chlorinated plastics.

3. Categories 8 and 10 (liquid) do not require containers/bags as they are discharged into drains after disinfection.

4. Category 3, if disinfected locally need not be put in containers/bags.

\textsuperscript{194} See Rule 6, BWM Rules, 1998
The BWM Rules prescribe the labels to be used for Bio-Medical Waste containers/bags and these are reproduced here below:\(^{195}\)

![BIOHAZARD](image1)

![CYTOTOXIC](image2)

**BIOHAZARD**

**CYTOTOXIC**

**Note:** Label shall be non-washable and prominently visible.

For the purpose of transportation of Bio-Medical Waste containers or bags from the places of generation to the site of treatment with the Operators, the BWM Rules provide for information to be provided on the container as detailed in Schedule IV, in addition to the biohazard symbols.\(^{196}\)

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\(^{195}\) See Rule 6, BWM Rules, 1998

\(^{196}\) See rule 6, BWM Rules, 1998
Day………… Month………………
Year ……………………….
Date of generation…………………….

**Waste category No………………**

Waste Class
Waste description

**Sender's Name & Address** | **Receiver's Name & Address**
---|---
Phone No………………… | Phone No…………………
Telex No………………… | Telex No…………………
Fax No………………… | Fax No…………………
Contact Person………….. | Contact Person…………..

**In case of emergency please contact:**

**Name & Address**
Phone No.

_________________________________________

**Note: Label shall be non-washable and prominently visible.**

The BWM Rules also lay down the standards for treatment and disposal of Bio-Medical Wastes which include standards for incinerators,
standards for waste autoclaving, standards for liquid wastes, standards for microwaving and standards for deep burials in Schedule V.  

Table 3.3 highlights Schedule VI of the BWM Rules laid down certain deadline dates for installing facilities like incinerators, autoclave and microwave systems ranging from 30th June 2000 to 31st December 2002 as the maximum permissible period, depending on the population size of the town and the number of beds in the hospital. 

**TIME-FRAME FOR INSTALLING FACILITIES**

<table>
<thead>
<tr>
<th>A. Hospitals and nursing homes in towns with population of 30 lakhs and above</th>
<th>By 30th June, 2000 or earlier</th>
</tr>
</thead>
<tbody>
<tr>
<td>B. Hospitals and nursing homes in towns with population of below 30 lakhs -</td>
<td></td>
</tr>
<tr>
<td>(a) with 500 beds and above</td>
<td>By 30th June, 2000 or earlier</td>
</tr>
<tr>
<td>(b) with 200 beds and above but less than 500 beds.</td>
<td>By 31st December, 2000 or earlier</td>
</tr>
<tr>
<td>(c) With 50 beds and above but less than 200 beds</td>
<td>By 31st December, 2001 or earlier</td>
</tr>
<tr>
<td>(d) With less than 50 beds</td>
<td>By 31st December, 2002 or earlier</td>
</tr>
<tr>
<td>C. All other institutions generating Bio-Medical Waste not included in A and B above.</td>
<td>By 31st December, 2002 or earlier</td>
</tr>
</tbody>
</table>

Table 3.3

---

197 See Rule 4 and read with Schedule I of BWM Rules, 1998.
The BWM Rules are very exhaustive insomuch as the various forms required for the purpose of communicating with the concerned authorities are also provided, viz. Form I is to be used by an applicant when applying for authorization or renewal of authorization, which form is to be filled in and submitted in duplicate.\textsuperscript{199} Form II is to be filled in by every Occupier/Operator every year as it is an annual report to be submitted to the prescribed authority before 31 January every year.\textsuperscript{200} Accident reporting is to be done by filling Form III which contains all the necessary particulars.\textsuperscript{201} Form IV is with respect to grant of authorisation for operating a facility for collection, reception, treatment, storage, transport and disposal of Bio-Medical Wastes, to be used by the authority.\textsuperscript{202} When an appeal is to be filed against the order of the appropriate authority at the district or regional level or of the Goa State Pollution Control Board acting as the appropriate authority or the State/Union Territory level authority, the same has to be done with the use of Form V.\textsuperscript{203}

So as seen, the responsibility of the institution providing Bio-Medical Waste, the Municipal Corporations, Municipal Boards or Urban Local Bodies shall be responsible for providing suitable common disposal/incineration sites for the Bio-Medical Waste generated in their area.

\textsuperscript{199} See Rule 8, BWM Rules, 1998.
\textsuperscript{200} See Rule 10, BWM Rules, 1998.
\textsuperscript{201} See Rule 12, BWM Rules, 1998.
\textsuperscript{203} See Rule 13, BWM Rules, 1998.
If the area is outside the jurisdiction of Municipal Corporation/Boards, etc., it becomes the duty of the Occupier generating Bio-Medical Waste/Operator to arrange for suitable sites individual or in association, so as to comply with the provisions of these Rules. Every authorised person (Occupier, etc.) is under a duty to maintain records related to generation, collection, reception, storage, transportation, treatment, disposal or handling of Bio-Medical Waste in any form in accordance with the rules or guidelines issued.

The abovementioned Bio-Medical Waste Rules is a benevolent piece of legislation and shows the growing concern of the government to contain and control the growing problem of Bio-Medical Waste. Since the management and handling of Bio-Medical Waste is a problem of great importance and may anytime assume threatening dimension, it is essential that these rules are implemented with a heavy hand and all seriousness. The problem of Bio-Medical Waste Management is worsening in metropolitan cities of India; therefore, it requires proper and effective implementation of these rules.

The obligation to manage and handle Bio-Medical Waste according to the Rules is clearly on ‘Occupier’ of an institution generating Bio-Medical Waste which includes a hospital, nursing home, clinic, dispensary, veterinary institution, animal house, pathological laboratory, blood bank by whatever name called to take all steps to ensure that such waste is handled without any
adverse effect to human health and the environment. Since the term ‘Occupier’ in relation to an institution generating Bio-Medical Waste means a person who has the control over that institution and/or its premises, it is the person who holds control over an institution and/or is premises that the Rules make duty bound to observe the stipulated standards and procedures. However, the Rules, explicitly state that it applies to all persons who generate, collect, receive, store, transport, treat, dispose or handle Bio-Medical Waste in any form. They shall be responsible for acts and omissions that fall under their activities.

The general obligation under the Rules is to take all steps that are necessary to ensure that the Bio-Medical Waste is handled without any adverse effect to human health and the environment. Specific obligations however, falls mainly under two categories. Firstly, every Occupier of an institution generating, collecting, receiving, storing, transporting, treating, disposing and/or handling Bio-Medical Waste in any manner, except such Occupier of clinics, dispensaries, pathological laboratories, blood banks providing treatment/service to less than 1000 patients per month, and also every Operator of a Bio-Medical Waste treatment facility shall obtain necessary authorization from the prescribed authority, for dealing with Bio-Medical Wastes. Secondly, every Occupier, where required, shall set up in accordance with the time-schedule given below, requisite Bio-Medical Waste treatment facilities like incinerator, autoclave, microwave system for the
treatment of waste, or ensure requisite treatment of waste at a common waste treatment facility or any other waste treatment facility. It may be noted that the prescribed time limits of all types of institutions have already expired by 31 December 2002, making these facilities mandatory for all.

As stated above, every Occupier of an institution, generating, collecting, receiving, storing, transporting, treating, disposing and/or handling Bio-Medical Waste in any manner, and providing treatment or service to at least one thousand patients per month and every Operator or a Bio-Medical Waste facility shall apply to the prescribed authority for grant of authorization.

It is needless to mention here that for obtaining authorization from the prescribed authority, the Occupier of the institution shall have to set up all the necessary facilities and meet all the prescribed standards of waste handling and treatment. Facilities are to be established for treating and disposing the Bio-Medical Waste in accordance with Schedule I and for complying with the standards prescribed in Schedule V.

Authorisation can be obtained from the prescribed authority by setting up necessary facilities and applying in accordance with Rule 8 on Form I.\textsuperscript{204} The Governments of all States and Union territories were required to

\textsuperscript{204} A copy of the Form is available in Annexure-2 for ready reference.
establish, within one month of the coming into force of the Rules, a prescribed authority for granting authorization and implementation of the Rules. The respective Governments were also required to constitute an Advisory Committee consisting of experts in the field of medicine and health, animal husbandry and veterinary sciences, environmental management, municipal administration, and any other related department or organization, including non-governmental organizations. As and when required, the Committee is required to advise the Government and the prescribed authority on matters related to the implementation of these Rules. Similarly, the Ministry of Defence is required to constitute in the Ministry, an Advisory Committee in respect of all healthcare establishments of the Armed Forces under the Ministry of Defence, to advise the Director General, Armed Forces Medical Services and the Ministry of Defence in matters relating to implementation of these Rules.

The prescribed authority shall on receipt of Form I make such enquiry as it deems fit and if it is satisfied that the applicant possesses the necessary capacity to handle Bio-Medical Waste in accordance with these Rules, grant or renew an authorization as the case may be. An authorization shall be granted for a period of three years, including an initial trial period of one year from the date of issue. Thereafter, an application shall be made by the Occupier/Operator for renewal. All such subsequent authorization shall be for a period of three years. A provisional authorization will be granted for the
trial period, to enable the Occupier/Operator to demonstrate the capacity of the facility.

The prescribed authority may after giving reasonable opportunity of being heard to the applicant and for reasons thereof to be recorded in writing, refuse to grant or renew authorization. Every application for authorisation shall be disposed of by the prescribed authority within ninety days from the date of receipt of the application. The authorization to operate a facility shall be issued in Form IV, subject to conditions laid therein and such other condition, as the prescribed authority, may consider necessary. The prescribed authority has the power to cancel or suspend the authorisation if, for reasons to be recorded in writing, the Occupier/Operator has failed to comply any provisions of the Environment (Protection) Act, 1986 or this Rules, provided that no authorisation shall be cancelled or suspended without giving a reasonable opportunity to the Occupier/Operator of being heard.

Any person aggrieved by an order of the Director General, Armed Forces Medical Services, under these Rules, may within thirty days from the date on which the order is communicated to him, make an appeal to the Central Government in the Ministry of Environment and Forests. In all other cases, any person aggrieved by an order made by the prescribed authority under these Rules may, within thirty days from the date on which the order is
communicated to him or her, make an appeal in Form V to such authority as the Government of State or Union territories may think fit to constitute.

There are several duties of Occupiers. The fundamental duty of an Occupier, with regard to handling and management of Bio-Medical Waste is to take all steps necessary to ensure that such waste is handled without any adverse effect to human health and the environment. Every Occupier, as required, shall set up, necessary Bio-Medical Waste treatment facilities like incinerator, autoclave, microwave system for the treatment of waste, or ensure requisite treatment of waste at a common waste treatment facility, or any other water treatment facility.

Every Occupier or Operator shall submit an annual report to the prescribed authority in Form II by 31st January every year, to include information about the categories and quantities of Bio-Medical Wastes handled during the preceding year. The prescribed authority shall send this information in a compiled form to the Central Pollution Control Board by 31st March every year. Form II is produced here for the purpose of facilitating readers’ ready reference.

When any accident occurs at any institution or any site where Bio-Medical Waste is handled, or if any accident happens during transportation of such waste, the authorized person shall report the accident in Form III to the
prescribed authority forthwith. Suffice here to say that it is the duty of the Occupier of an institution dealing with Bio-Medical Waste, if he or she is treating/serving at least 1000 patients in a month and every Operator of a Bio-Medical Waste Treatment facility, to obtain necessary authorisation from the prescribed authority.

Every authorized person shall maintain records related to the generation, collection, reception, storage, transportation, treatment, disposal, and/or any form of handling of Bio-Medical Waste in accordance with these rules and any guidelines issued. All such records shall be subject to inspection and verification by the prescribed authority at any time.\textsuperscript{205}

There are certain standards for the handling and treatment of Bio-Medical Waste in terms of treatment and disposal and standards of incinerators, viz. their operating standards and the emission standards. So also the standards for water autoclaving including optimum temperatures are laid down. It is further specified that there should be a recording of operational parameters by having graphic or computer recording devices, which will automatically, and continuously monitor and record dates, time of day, load identification number, and operating parameters throughout the entire length of the autoclave cycle.\textsuperscript{206}

\textsuperscript{205} See Annexure-2 for detailed specifications.  
\textsuperscript{206} Ibid
The validation test of spore testing and the routine test using chemical indicator strip/tape and the standards for liquid waste generated as an effluent having to conform to certain bio-physical and bio-chemical parameters and the permissible limits are laid down as part of the BWM Rules. These limits are applicable to those hospitals that are either connected with sewers without terminal sewage treatment plant or not connected to public sewers. For discharge into public sewers with terminal facilities, the general standards as notified under the Environment (Protection) Act, 1986 shall be applicable.207

The standards for microwaving or microwave treatment is that it shall not be used for cytotoxic, hazardous, or radioactive wastes, contaminated animal carcasses, body parts, and large metal items. The microwave system shall comply with the efficacy test or routine tests and the supplier, before operation of the limit, may provide a performance guarantee. The microwave should completely and consistently kill the bacterial and other pathogenic organism that are ensured by approved biological indicator at the maximum design capacity of each microwave unit. Biological indicators for microwave shall be *Bacillus Subtilis* spores using vials or spore strips with at least 1x10 spores per millilitre.208

The standard for deep burial of the specified wastes is that a pit or trench should be dug about 2 meters deep. It should be half filled with waste,
and covered with lime within 50 cm of the surface, before filling the rest of the pit with soil. It must be ensured that animals do not have any access to burial sites. On each occasion, when wastes are added to the pit, a layer of 10 cm of soil shall be added to cover the wastes. Burial must be performed under close and dedicated supervision. The deep burial site should be relatively impermeable and no shallow well should be close to the site. The pits should be distant from habitation, and sited so as to ensure that no contamination occurs of any surface water or ground water. The area should not be prone to flooding or erosion. The location of the deep burial site will be authorized by the prescribed authority. The institution shall maintain a record of all pits for deep burial.209

The Municipal Corporations, Municipal Boards or Urban Local Bodies, as the case may be (without prejudice to the rule relating to the treatment and disposal of Bio-Medical Waste) shall be responsible for providing suitable common disposal or incineration sites for the Bio-Medical Wastes generated in the area under their jurisdiction. In areas outside the jurisdiction of any municipal body, it shall be the responsibility of the Occupier generating Bio-Medical Waste, or the Operator of a Bio-Medical Waste treatment facility to arrange for suitable sites individually or in association, so as to comply with the provisions of these Rules.

209 Ibid.
There are certain standards for the handling and treatment of Bio-Medical Waste. The basic premise is that Bio-Medical Waste shall not be mixed with other type of waste. Any non bio-medical solid waste, generated in hospitals and nursing homes, as well as duly treated Bio-Medical Wastes, shall be picked up by the Municipal body of the area, for disposal at municipal dump site. Untreated Bio-Medical Waste should never be kept stored for more than 48 hours. However, if it becomes necessary to store the waste beyond this time limit, the authorized person must take permission of the prescribed authority, and adopt measures to ensure that the waste does not adversely affect human health and the environment.

Before disposal, Bio-Medical Waste should be segregated according to the categories prescribed because the modes of disposal for various categories are different. These details are as provided in Schedule I. The segregated Waste should be arranged in coloured containers or bags, at the point of generation, in accordance with the standards prescribed by Schedule II. The containers or bags containing the various categories of Bio-Medical Waste have to be labelled as per the instructions given in Schedule III. If a container has to be transported from the area where the Bio-Medical Waste was produced, to any treatment facility outside the area, the container should, apart from the label prescribed in Schedule III, also carry the information prescribed in Schedule IV.
For the sake of its importance, even at the cost of repetition, it is once again reiterated that the object of a person who is in charge of any Bio-Medical Waste should be to ensure that they are properly handled so that no adverse effects are caused to human health and the environment. In no case, Bio-Medical Waste should be allowed to be mixed with other types of wastes. In storing as well as transporting, all prescribed precautions are to be compulsorily ensured.

Finally, no untreated Bio-Medical Waste should be stored beyond a period of 48 hours. If at all this cannot be avoided, then the person in charge must obtain permission from the prescribed authority and take measures to ensure that the waste does not cause any adverse effect to human health and the environment.

3.9 National Guidelines for Bio-Medical Waste Management

In March 2002, the Ministry of Health and Family Welfare, Govt. of India laid down the National Guidelines on Hospital Waste Management, which apart from covering the aspects included in the Bio-Medical Rules, also laid down recommendations for safety measures, training, management and administrative functions. These guidelines came into focus in every
indirect manner, other than the core purpose for which they were laid down. 210

The important aspects of these guidelines are the aim, definition and categories of Bio-Medical Wastes. The policy statement aims to provide for a system for management of all potentially infectious and hazardous waste in accordance with the Bio Medical Waste (Management & Handling) Rules, 1998. Bio-Medical Waste means any waste, which is generated during the diagnosis treatment or immunization of human beings or animal or in research activities pertaining thereto or in the production or testing of biologicals, including categories mentioned in the Schedule I of the Bio-Medical Waste (Management & Handling) Rules, 1998.

The various categories of wastes, hazardous, toxic and Bio-Medical Waste should be segregated into following categories for the purpose of its safe transportation to a specific site for specific treatment. Certain specific categories of toxic and hazardous waste required specific treatment (disinfection/ decontamination) before transportation for treatment, which can also be done under the categorization as mentioned.

Category No. 1 - **Human anatomical waste** - These contains human tissues, organs and body parts;

Category No. 2 - **Animal waste** - This contains animal tissue, organs, body parts carcasses, bleeding parts, fluid, blood and experimental animals used in research, waste generated by veterinary hospitals, colleges, discharge from hospitals, animal houses;

Category No. 3 - **Microbiology and biotechnology waste** - This contains waste from laboratory cultures, stocks or specimens of microorganisms live or attenuated vaccines, human and animal cell culture used in research and infectious agents from research and industrial laboratories, wastes from production of biologicals, toxins, dishes and devices used for transfer of cultures;

Category No. 4 - **Waste sharps** - This contains needles, syringes, scalpels, blades, glass etc, which may cause puncture and cuts. This includes both used and unused sharps;

Category No. 5 - **Discarded medicines and cytotoxic drugs** - This contains waste comprising of outdated, contaminated and discarded medicines;

Category No. 6 - **Soiled waste** - This contains items contaminated with blood, and body fluids including cotton, dressings, soiled plaster casts, linens, beddings, other material contaminated with blood;
Category No. 7 - **Solid waste** - This contains wastes generated from disposable items other than the Wastesharps such as tubing, catheters, intravenous sets etc;

Category No. 8 - **Liquid waste** - This contains wastes generated from laboratory and washing, cleaning housekeeping and disinfecting activities;

Category No. 9 - **Incineration ash** - This contains ash from incineration of any Bio-Medical Waste;

Category No. 10 - **Chemical waste** - This contains chemical used in production of biologicals and chemicals used for disinfection, as insecticides etc.

It is also specified that the points of segregation are the points of generation. An unique feature is the type of container to be used for collection is specified along with the colour codes in Table 3.4

**WASTE-WISE CONTAINER AND COLOUR CODING**

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Category</th>
<th>Type of Container</th>
<th>Colour Coding</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Human anatomical waste</td>
<td>Plastic Bag</td>
<td>Yellow</td>
</tr>
<tr>
<td>2.</td>
<td>Animal waste</td>
<td>-do-</td>
<td>-do-</td>
</tr>
<tr>
<td>3.</td>
<td>Microbiology &amp; Bio-Technology waste</td>
<td>-do-</td>
<td>yellow/ red</td>
</tr>
<tr>
<td>4.</td>
<td>Waste sharp</td>
<td>Plastic bag puncture proof container translucent</td>
<td>Blue/White</td>
</tr>
<tr>
<td>5.</td>
<td>Discarded Medicines &amp; Cytotoxic waste</td>
<td>Plastic bag</td>
<td>Black</td>
</tr>
<tr>
<td>S. No.</td>
<td>Category</td>
<td>Type of Container</td>
<td>Colour Coding</td>
</tr>
<tr>
<td>-------</td>
<td>---------------------------</td>
<td>----------------------------</td>
<td>---------------------</td>
</tr>
<tr>
<td>6.</td>
<td>Solid waste (Soiled)</td>
<td>-do-</td>
<td>Yellow/ red</td>
</tr>
<tr>
<td>7.</td>
<td>*Solid waste (Plastic)</td>
<td>Plastic bag puncture proof container translucent</td>
<td>Blue/White</td>
</tr>
<tr>
<td>8.</td>
<td>Liquid waste</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>9.</td>
<td>Incineration ash</td>
<td>Plastic bag</td>
<td>Black</td>
</tr>
<tr>
<td>10.</td>
<td>Chemical waste (solid)</td>
<td>-do-</td>
<td>Black</td>
</tr>
</tbody>
</table>

Table 3.4

As regards the location of the containers, labelling, instructions regarding bags and storage, following are the guidelines. All containers having different coloured plastic bags should be located at the point of generation of waste i.e. near OT Tables, injection rooms, diagnostic services areas. The colour of container/plastic bags used for collection of segregated Bio-Medical Waste should be identifiable. All the bags/containers must be labelled according to the rules (Schedule III) of Bio Medical Waste Rules, 1998. It should be ensured that waste bags are filled up to only three fourth capacity, tied securely and removed from the site of the generation regularly and timely. Storage refers to the holding of Bio-Medical Waste for a certain period of time, after which it is sent for treatment and disposal. In other words it means the duration of time wastes are kept at the site of generation and transit till the point of treatment and final disposal. No untreated Bio Medical Waste shall be kept, stored beyond a period of 48 hours. The authorised person must take the permission of the prescribed authority, if for any reason; it becomes necessary to store the waste beyond 48 hours. The authorised
person should take measures to ensure that the waste does not adversely affect human health and the environment, in case; it is kept beyond the prescribed limit.

Besides these, the national guidelines have been clearly laid down as to transportation, treatment of different types of wastes, safety measures and training of medical and paramedical personnel. The constitution of the waste management committee with the head of the hospital as its chairman has been strongly advocated. Besides, co-ordination between the hospital agencies has been recommended. Finally the educative and co-operative angle of these guidelines is seen when the NGOs involvement in dissemination of information is solicited while laying down that healthcare units with treatment facilities should extend the same to others in the vicinity.  

3.10 Specific Judicial Response

Undoubtedly, the decisions of the higher judiciary, especially those given by the Supreme Court of India are with the concept of ‘legal regime’ as that is the law of the land.  

Although the judiciary has a host of decisions on environmental jurisprudence and its interlinking with Art. 21 of the Constitution of India, the decisions with respect to Bio-Medical Waste Management commenced in the mid-1990s.

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211 See Annexure-3.
The issue of 'Improper Hospital Waste Management' in India was first highlighted in a writ application in *B.L. Wadhera v. Union of India*,213 long before the hospital wastes were regulated by the 1998 Rules. The apex court while keeping in view the appalling conditions arising due to Bio-Medical Waste disposal provided certain guide lines:

(a) All hospitals with 50 beds and above should install incinerators or any other effective alternate method under their own administrative control.

(b) The incinerator or alternative methods should be fitted with necessary pollution control mechanism, approved and conforming to the standards laid down by the Central Pollution Control Board.

(c) The Central Pollution Control Board and the State Pollution Control Boards should regularly send its inspection teams in different areas to ascertain that the collection transportation and disposal of garbage/wastes is carried out satisfactorily.

After the notification of the Bio-Medical Waste (Management and Handling) Rules, 1998, there has been no specific judicial response on the subject from the Supreme Court of India. However there have been directions and orders of different High Courts in the country, mainly on the aspect of compliance.

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213 AIR 1996 SC 2969
The Karnataka High Court on 14.3.2000 in the matter of State of Karnataka and Others v. B. Krishna Bhat and Others\textsuperscript{214} directed the Government of Karnataka to take action in regard to disposal of hospital wastes and to totally ban throwing of hospital wastes in any public or common area and to introduce incinerators in big hospitals; and to transport waste from small hospitals to Corporation incinerators. The 56 interim orders made by the learned Judge, broadly covered improvement of roads, public health and infrastructural facilities in Bangalore. These orders covered laying roads and sidewalks, improving street lighting, co-ordination among agencies regarding digging footpaths and road cutting, prevention of dumping of debris and hospital waste, etc.

The Delhi High Court in Courts On Its Own Motion v. In The Matter of Statement made by Shri Raman Duggal, Adv.\textsuperscript{215} on 16.1.2001 gave directions to the M.C.D. and other related authorities that the All India Institute of Medical Sciences, New Delhi through its Director to install sufficient number of incinerators, or an equally effective alternate, to dispose of the hospital waste. The Director shall file an affidavit within two months to indicate the progress made in this respect. It further gave directions that the MCD and NDMC to issue notices to all the private hospitals/nursing homes in Delhi to make their own arrangements for the disposal of their garbage and

\textsuperscript{214} 2001(2) KarLJ 1
\textsuperscript{215} 2001 CrLJ 1064
hospital waste and that they be asked to construct their own incinerators. In case these hospitals are permitted to use facilities (for collection, transportation and disposal of garbage) provided by the MCD and NDMC then they may be asked to pay suitable charges for the service rendered in accordance with law.

The Andhra Pradesh High Court decided on 29.08.2001 M. Vijaya v. Chairman and Managing Director, Singareni Collieries Co., Ltd., Hyderabad and others\(^\text{216}\) regarding a woman who had contracted the dreaded disease, AIDS due to negligence of the hospital. It was held that all the hospitals and nursing homes should be directed to dispose of their Bio-Medical Waste in terms of Bio-Medical Waste (Management and Handling) Rules, 1998 and they shall strictly comply with the norms specified therein. Such hospitals shall be directed to obtain the necessary authorisation for disposal of the waste from the Pollution Control Board.

The Allahabad High Court, in Rajesh Kumar Srivastava v. A.P. Verma and Ors.\(^\text{217}\) on 28.1.2004 was commenting on the evasion of legal restrictions by physicians and noted that they shall observe the laws of the country in regulating the practice of medicine and shall also not assist others to evade such laws. They should be co-operative in observance and enforcement of sanitary laws and regulations in the interest of public health.

\(^{216}\) AIR 2001 AP 502

\(^{217}\) 2004(2) AWC 967

The Rajasthan High Court (Jaipur Bench) decided on 20.10.2000 in *Suo Motu v. State of Rajasthan and Ors.*[^218^] held that the city of Jaipur has an important place in the history of the State of Rajasthan. It being the capital of the State deserves to showcase the history, heritage and culture of the people of the city. But the city has since been suffering from slew of maladies. And this has also adversely affected the quality of life of the residents. Decay of the city must be prevented and it needs to be restored to its pristine glory, beauty, grace and charm. And all types of hygiene must be maintained and rules of waste management must be followed including hospital waste management. Necessary directions were given to the municipal corporation, the Jaipur development Authority and the Rajasthan Housing Board in this regard.

The Allahabad High Court on 1.11.2004 held in the matter of *Satish Chaturvedi S/o S. Chaturvedi v. State of U.P. through the Chief Secretary and Ors.*[^219^] gave directions important in the field of management and handling of Bio-Medical Wastes at the Swaroop Rani Hospital, Allahabad. This was since the hospital had made a garbage dump inside the hospital near

[^218^]: AIR 2005 Raj 82  
the post mortem operation theatre. This was held to be most objectionable as it will make even the healthy people who visit the hospital sick.

The High Court of Andhra Pradesh decided on 29.03.2005 in Oil Country Tubular Ltd. v. A.P. Pollution Control Board and Anr.\(^{220}\) directed the Yellareddy Gram Panchayat, Nalgonda District in Andhra Pradesh to ensure their 'No Objection Certificate' should contain conditions about waste management including Bio-Medical Waste in connection with an industry propose to be set up.

On 15.02.2006 in Suo Motu v. Ahmedabad Muncipal Corpn. and 46 Ors.\(^{221}\), the Gujarat High Court directed the hospitals run by the management administered by the Government, semi-Government or local civic bodies, having 30 or more beds to make their own arrangement to construct and install incinerator or to have equally efficient arrangement for the disposal of the garbage and the hospital waste. It was held that such notification is to be issued and adequate publicity be given to it as expeditiously as possible and in any case not later than 30th April, 2006. In case the private hospitals are permitted to use facilities, namely, collection, transportation and disposal of garbage and hospital waste provided by the Government/civic body hospitals, the management of the private hospitals to be asked to pay suitable charges for the service rendered in accordance with law.

\(^{220}\) 2005(3) ALT 175
\(^{221}\) (2006)2 GLR 1129
The Bombay High Court in *Bombay Environment Action Group and Sameer Mehta v. State of Maharashtra (through Secretary, Urban Development Dept. and Secretary, Revenue and Forest Dept.) and Ors.*

held on 19.10.2006 that Municipal bodies of the twin hill stations of Mahabaleshwar and Panchgani must appreciate that they are going to suffer if environment is not protected by them and it was in interest of all that steps suggested to protect environment ought to be implemented and civic amenities including hospital waste management handled in accordance with law.

The Orissa High Court on 15.11.2006 in *Maitree Sansad v. State of Orissa and Ors.* expressed serious concern in respect of three Medical Colleges and Hospitals of the State as well as some nursing homes which are operating in the city of Cuttack as also the Capital Hospital in Bhubaneshwar which the petitioner contended gross violation of the rules relating to management and handling of Bio-Medical Wastes and directed the Chairman, State Pollution control Board to cause inquiry in this regard.

In *Delhi Medical Association and Ors. v. Union of India (UOI) and Ors.* the Delhi High Court on 24.04.2009 held that the running of a nursing

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223 103 (2007) CLT 191

224 AIR 2009 Delhi 163
home involves the use of and therefore disposal of highly toxic chemicals and substances. The waste generated by a hospital or nursing home is certainly of a hazardous nature. The Environment (Protection) Act, 1986 sets out the applicable statutory provisions concerning the disposal of such hazardous waste by a nursing home or a hospital. Merely because an Act and the Rules there under do not specifically advert to the disposal of hazardous waste by such nursing home, it would not mean that such nursing home does not have to conform to the standards set down under the EPA and the Rules made there under.

The Madras High Court on 15.05.2009 in D. Saravanan v. The Union of India (UOI) rep. by Secretary to Government, Ministry of Environment and Forest and Ors., it was held that any hazardous waste including Bio-Medical Waste should be disposed of as per applicable Rules & norms with necessary approvals of the Govt. of Pondicherry (Department of Science, Technology & Environment).

In All India Plastic Industries Association through its Secretary Shri Ajay Gupta S/o Shri R.N. Gupta, Mr. Bhupesh Ralli S/o Shri J.P. Ralli, Gupta Plastic Industries and Mr. Radhey Shyam Gupta S/o late Shri O.P. Gupta, Gupta Plastic Industries v. Government of NCT of Delhi Department of

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Forests and Wildlife\textsuperscript{226} the Delhi High Court held on 14.07.2009 that the use, sale and storage of all kinds of plastic bags shall be forbidden in respect of different places in the National Capital Territory of Delhi, like Five Star and Four Star Hotels restaurants and eating places, fruit and vegetable outlets of Mother Dairy but exempt Hospitals as far as the use of plastic bags as prescribed under Bio Medical Waste (Management and Handling) Rules, 1998, since hospital waste management is of concern.

The researcher has observed that the judicial concern on the part of the various High Courts is noteworthy. However, the Supreme Court has not been approached in any way for directions by aggrieved citizens, NGOs or any others nor has the apex Court chanced to take stock of the situation \textit{suo motu}, after the coming into force of the Bio-Medical Waste (Management and Handling) Rules, 1998.

Incidentally, judicial activism by the Bombay High Court, Panaji Bench at Goa has come as a welcome step in respect of the management of Bio-Medical Waste in the State of Goa. The researcher has closely followed the directions in this regard and has reported the same in the fourth Chapter of this thesis which is a statistical profile of the Goan experience.

\footnote{\textsuperscript{226} Reported as MANU/DE/0954/2009 See also \textit{Praveen Mittal v. Department of Environment, Govt. of NCT of Delhi} 162(2009)DLT365 decided by the Delhi High Court on 28.8.2009.}
3.11 Conclusion

This Chapter has traced the growth of the different legal provisions from various enactments pertaining to environmental protection, including certain penal laws. There is need to mention here, that although in this Chapter, such legal provisions are mentioned, the National Legal Regime for the management and handling of Bio-Medical Waste is through Rules, namely The Bio-Medical Waste (Management and Handling) Rules, 1998. This is a subordinate legislation issued under the provisions contained in the parent Act, i.e. The Environment (Protection) Act, 1986.

The enforcement provisions contained in the parent Act is therefore, applicable to the Rules as well. There is power vested in the authority to enter at all reasonable times with such assistance as he considers necessary, any place for he enforcement of the Act and provision for stringent punishment for contravention of provisions.

Apart from the Rules, National Guidelines have been prepared by the MoEF, Govt. of India to enable each hospital to implement the said Rules by developing comprehensive plans. Further, various High Courts in the country have been proactive in matters related to such waste management.