# EFFECTIVENESS OF LAWS IN CONSERVING RAMSAR SITES IN ASIA: A STUDY WITH SPECIAL REFERENCE TO RAMSAR SITES IN NORTHEAST INDIA

### <sup>1</sup>PROF. DR. DIPTIMONI BORUAH, <sup>2</sup>KANGKANA GOSWAMI <sup>1</sup>Email: diptiboruah@nluassam.ac.in <sup>1</sup>Professor, National Law University and Judicial Academy, Assam <sup>2</sup>Email: kgoswami1987@gmail.com <sup>2</sup>Researcher, National Law University and Judicial Academy, Assam

### Abstract:

Wetlands are highly productive ecosystem and the most biologically diverse habitats on earth. In addition to this, wetlands are of critical importance for sustenance and survival of humans too, as their functionality range from climate control to flood attenuation etc. It is due to these reasons that wetlands are accredited international importance under international environmental concerns and are a relevant subject matter of serious research and analytical study. However, it happens to be a matter of grave concern that wetlands in Asia and particularly India are disappearing and almost on the verge of global non-existence. Highlighting an alarming trend, the 'Global Wetland Outlook' has flagged that at-least 35 % of the world's natural habitat has been lost since 1970.

Same is the situation with the internationally significant Ramsar Sites in Northeast India, which are irrevocably degraded due to human interventions, rampant pollution and flouting of crucially sensitive environmental norms. The irretrievable damage in the form of pollution of the water body has endangered biodiversity, broken ecological chains and also affected local livelihood. The striking paradox however is that even after being backed by an international convention, a concrete national legal framework has not been shaped up to specifically deal with Ramsar sites in India. Also, the umbrella parent national and State laws, rules and regulations have not been able to address the concerns of rampant and unabated environmental pollution. This study therefore is intended to identify at the first place, the environmental threats pertaining to the Ramsar sites of Northeast India and then revolve around scrutinizing the efficacy of laws, institutions and practices in adhering to Ramsar Convention norms.

Key Words: Wetlands, Asia, Ramsar Convention, Threats, Protection, Conservation

### **1.INTRODUCTION**

Wetland ecosystems are very important types of terrestrial systems performing multiple ecological and environmental functions along with contributing to sustenance of human civilization since times immemorial. Wetlands have had a major role in sustaining humankind with manifold functions ranging from climate control, flood management, water cleansing, water assimilation, soil erosion mitigation, ground water recharge etc. along with other socio-economic and livelihood benefits supporting indigenous way of life. Wetland water-systems such as the Nile, the Euphrates, the Tigris and others spread across various humid regions of the world have been identified as fertile areas of rice and other foodgrain cultivation practices. The 16<sup>th</sup> century witnessed rampant rice cultivation in the American swamps, marshes bogs and other backwater wetlands. In the Asian continent, the Himalayan foothills extending all the way to southern and western China provided a fertile bed for widespread rice cultivation.<sup>1</sup>Therefore wetlands have been crucial in supporting human population in several tropical, inundated, wet-humid and rich floodplains around the world.

However, inspite of the wide range of ecosystem services they provide to mankind, wetlands have irreparably and irretrievably degraded, deteriorated and shrunk or vanished worldwide. More grave is the scenario in Asia, wherein the protection quotient is just 8% of the overall protection,

<sup>&</sup>lt;sup>1</sup> Donald Hook, 'Wetlands, History, Current Status, And Future' (1993) 12 Environmental Toxicology and Chemistry 2157

accreditation and institutional accommodation accorded to wetlands across the world. Wetlands even within protected zones in Asia have particularly recorded high rate of human influence and anthropogenic intervention<sup>2</sup>.

Northeast India, is the home to two of the internationally accredited Ramsar Sites, the Loktak Lake in Manipur (designated as Ramsar Site<sup>3</sup> in 1981) and the Deepor Beel in Assam (listed in November 2002<sup>4</sup> under the Ramsar Convention 1971)<sup>5</sup>. 'Ramsar Sites' are designated under the 'Ramsar Convention,1971' which is an international legal accord for materializing concerted synchronization between national action and international collaboration in terms of conservation and wise-use of wetlands. Besides being a Ramsar site, the Loktak lake which is the largest freshwater lake in Southeast Asia is also the home to the only floating national park in the world, the '*Keibul Lamjao National Park*'. The Lake however was inserted in the Montreux Record because of serious ecological instability palpable as a result of pollution, widespread infestation of water hyacinth and INCREASED contamination and toxicity of water.

On the other hand, the Deepor Beel Ramsar wetland is also a 'Wildlife Sanctuary' protected under the Wildlife Protection Act, 1972<sup>6</sup> and an important International Bird Area Site as identified by Bombay Natural History Society (BNHS) and Birdlife International since 2003(As per the IUCN <sup>7</sup>over 300 species of birds are found in the wetland). This wetland, among others in India, is also on the brink of extinction and ecological alteration due severe anthropogenic pressure, extensive landfilling, intense encroachment, insensitive fishing and excessive pollution due to garbage dumping and effluent draining.

Such aberrations between the institutional protection cover provided to these wetlands and the real scenario on ground, points towards serious defects, irregularities and inadequacies in the existing legal mechanism and serious shortfalls in the implementation configurations. This study is therefore intended towards a thorough introspection and appraisal of the efficiency and efficacy of domestic regulations in executing the international mandates concerning protection, conservation and wise use of Ramsar Sites in Asia, with special reference to the Ramsar sites on Northeast India.

### 2.WETLAND ECOSYSTEMS IN ASIA AND THEIR SIGNIFICANCE:

The world's largest continent Asia is the home to many of the world's prominent waterbodies and river systems along with connected riverine wetlands, swamps, bogs, marshes, lagoons and mangroves. The Lena, Ob, Yenisei and Irtysh towards the north, the Yangtze, Amur and Yellow towards the east and the Brahmaputra, Ganges, Indus, Euphrates, Tigris and Mekong towards the south constitute the abundance of water systems that originate and flow through the Asian geographical space. These waterbodies and wetland ecosystems have constituted the proliferation ground to a host of major civilizations across Asia since times immemorial.

Asian wetlands are of diverse varieties that range from the most extensive mangroves to the most exclusively diverse coral reefs. Mangroves and peat swamp forest cover in Asia count to more than 30 million hectares in comparison to just a meagre one-million-hectare forest cover in Amazonia. To specify, the Sundarbans mangroves in Bangladesh and India are the single largest mangrove spread

<sup>2</sup> Vanessa Reis et al., 'A Global Assessment of Inland Wetland Conservation Status' (2017)6.

BioScience 524

<sup>3</sup> Designated as Ramsar Site No:463

<sup>4</sup> Designated as Ramsar Site in 2002 as site No.1027

<sup>5</sup> The Ramsar Convention on Wetlands of International Importance Especially as Waterfowl Habitat, Feb2,1971, T.I.A.S. No.1084,996 UNTS 245.

<sup>6</sup> Dr. Avinash Chiranjeev, Er. Anil Kumar Jamwal, Environmental Law and Protection, (Jnanada Prakashan : New Delhi, 2008)

<sup>7</sup> THE INTERNATIONAL UNION FOR CONSERVATION OF NATURE, http://www.iucn.org/

that is scattered across the Ganga and Brahmaputra delta belt. Indonesia alone is the home to 22% of the mangrove cover all around the world.<sup>8</sup> These diverse

geographical, biological and zoological ecosystems house an abundant variety of bio-diversity, wide variation of fish, shrimp, reptiles, amphibians, mammals and avifauna species.

The significance of wetlands in Asia can be evaluated from the fact that they not only provide ecosystem and ecological services to the environment but also are the primary source of livelihood for the indigenous local communities living in the peripheral areas of this wetlands. Local and tribal population living in the vicinity of these wetlands are dependent on these ecosystems for activities like fishing, agriculture, animal husbandry, peat production and other and farming and allied activities.

Apart from the ecological, livelihood and provisioning services of wetlands, there are a number of cultural and religious services of wetlands that numerous mainstream faiths and indigenous, local community and customary usages have recognised and practiced since ages. These benefits of wetlands defined as 'Non-material' benefits have also been mentioned in the 'Millennium Ecosystem Assessment' report of 2005 and include recreational experience, aesthetic enrichment, knowledge system ,cognitive development and social value system practices<sup>9</sup>. To add on, the plethora of sociocultural and religious aspects of wetlands include traditional healing practices related to wetlands, religious and sacred use of wetland flora and fauna species, religious literature, chants, aphorisms and songs based on wetlands, significance of wetlands as sacred sites, use of wetlands in religious ceremonies and customary practices etc. To cite an example, the Manasarovar Lake in the Tibetan Autonomous region is the pilgrimage site for the famous 'Kailash Manasarovar Yatra'. Every year, this site attracts huge scale of religious tourists from Nepal, Tibet and India as its waters are believed to be having the sacred effect of cleansing all sins. The confluence of the three major Indian rivers, the Ganga, the Yamuna and Saraswati is known as the 'Tribeni Sangam' in India and is a site of tremendous aesthetic, religious, and spiritual significance. It is also the site for the world famous 'Kumbh Mela' held at an interval of 12 years in India. These religiously sacred aspects of wetlands in turn have facilitated towards the importance of wetlands in their management and conservation perspectives.

#### 3.STATUS OF WETLANDS IN ASIA:

Despite the fact that Asia hosts a significant area of wetlands of international relevance, the current status of wetlands in Asia does not project an affirmative story. In Asia only 15 percent of the total area of wetlands of international importance are included under protected area network. While countries like India, Pakistan, Nepal, Bhutan and Sri Lanka have a substantial portion of their wetlands under the 'protected area 'network, countries like Cambodia, Myanmar, Indonesia, Vietnam, Laos and Mongolia only have a meagre proportion of its wetlands under some form of protection. Moreover, wetlands in Asia represents a sorry state of affairs due to various anthropogenic interferences and many of them are on the verge of extinction. Adverse and interfering practices like landfilling of wetlands, draining of affluents into wetlands, use of wetlands as dumping grounds, human encroachments in the periphery of wetlands, conversion of wetland fringe areas into spaces for agricultural activities, industrial manufacturing, storage, construction and other hazardous industrial activities have led to irrevocable loss, damage and deterioration of wetlands in the recent years. For example, various studies in India have revealed irreparable loss to wetlands as a result of rampant dumping of pollutants at large scale in the vicinity of wetlands. Acknowledging the fact that India is a landscape with clusters of inhabitants on riparian banks, the impact of human intervention on waterbody in India is grave. It has been specifically pointed out in various studies that in India, more than fifty thousand (50,000) water bodies are poisoned to the extent of being considered 'dead', and

Millennium Ecosystem Assessment, 2005

<sup>&</sup>lt;sup>9</sup> World Resources Institute, Ecosystems and Human Well-Being: Wetlands and Water Synthesis,

the major contaminating factors being municipal waste, sewage, industrial pollution and highly cosmetic agricultural runoff.<sup>10</sup>

In the larger picture, complex socio-economic factors, adverse political and administrative policies, geo-political and demographic factors like population explosion etc have been construed as broader factors responsible for the extinction of wetland ecosystems and habitat destruction.

According to Indo-Burma Wetland Outlook 2022 which is a comprehensive synthesis on the current condition and status of wetlands across countries like Thailand, Myanmar, Loa PDR, Cambodia and Vietnam, the fate of around 250 million people in these countries will be further compromised if urgent and coordinated intervention to protect their wetlands is not made.<sup>11</sup> According to this report, the region has an estimated wetland area of around 383,000 sq kms in which the extinction of total coastal wetlands accounts for one fifth of the total loss of

wetlands across the globe, 12% of the wetland animals are at the risk of extinction and 47% of the waterbird population are confronting a declining trend<sup>12</sup>.

#### 4. INTERNATIONAL LEGAL RESPONSES TO WETLAND CONSERVATION:

'The Convention on Wetlands of International Importance especially as Waterfowl Habitat' popularly known as 'The Ramsar Convention 1971' was the first sincere global formal cognition of the concerns of wetland, wildlife and waterfowl protection and conservation. The Convention that entered into force on December 21,1975 ambitiously aims to contain the rampant deterioration, degradation and extinction of wetlands worldwide. The three main stipulations of the Convention bind the contracting parties with obligations such as identifying and designating wetlands of international importance, formulating adequate national policies providing for protection, conservation and wise-use of wetlands within their territory and coordinate international cooperation for implementation of obligations concerning transboundary wetlands and watercourses.<sup>13</sup>

Post Ramsar, in 1972, 'The United Nations World Conference on Human Environment' in Stockholm adopted a text that pursued prime importance to the fact that the natural resources of the earth including air, water, land, flora, fauna and the overall ecosystem must be safeguarded for the fundamental betterment of mankind. It also laid stress on the concept of intergenerational equity by stressing that the resources of the earth should be wisely managed, maintained, restored and improved for both the sustenance of present and future generations.

The 'Convention on International Trade in Endangered Species of Wild Fauna and Flora'(CITES) invoked a mechanism to contain illegal trade and commercial exploitation of endangered species including waterfowl and other wetland species.<sup>14</sup> The 'Convention on the Conservation of Migratory Species of Wild Animals', covered the legal apparatus for conservation of migratory species and their habitat including wetlands<sup>15</sup>.

<sup>10</sup> S.N. Prasad, et al., 'Conservation of Wetlands Of India - A Review', (2001) 43Trop Ecol 178

<sup>11</sup> IUCN, New report highlights the loss of wetlands in the Lower Mekong region and the consequences for biodiversity, climate and the well-being of 250 million people, https://www.iucn.org/press-release/202211/new-report-highlights-loss-wetlands-lower-mekong-region-and-consequences

<sup>12</sup> IUCN, Indo Burma Wetland Outlook, 2022, chrome-

extension://efaidnbmnnnibpcajpcglclefindmkaj/https://www.iucn.org/sites/default/files/2022-11/indo-burma-wetland-outlook-2022\_v4.5\_pages-compressed.pdf.

<sup>13</sup> David Farrier, Linda Tucker, 'Wise Use of Wetlands Under the Ramsar Convention: A Challenge for Meaningful Implementation Of International Law' (2000) 12 Journal of Environmental Law 24

<sup>14</sup> Convention on International Trade in Endangered Species of Wild Fauna and Flora 1973

<sup>15</sup> Convention on the Conservation of Migratory Species of Wild Animals 1979

The Stockholm resolutions formed the edificial basis for many other binding and non-binding international environmental policy formulations that reinforced the present-day legislative structures and environmental jurisprudence. The 'World Charter for Nature ,1982' adopted by the UN General Assembly categorically stated that the cause of conservation of nature should be sincerely integrated into the planning and execution of socio-economic development activities.<sup>16</sup>

A more anthropocentric approach to environmental conservation and sustainable development was pursued by the 'Rio Declaration on Earth and Development' in 1992 which asserted for the asserted for the spirit of global partnership for protection, conservation and restoration of the ecosystem. The declarations also highlighted the crucial importance of public participation in decision making process and the role of indigenous communities in ecosystem conservation and management<sup>17</sup>.

Another issue of serious concern which is fatal to wetlands is desertification of wetlands due to land filling, reduction in water supply, overgrazing, waste dumping, water pollution, erosion and the consequential ramifications of global warming and climate change. These issues were brought to realization and recognition by 'The Convention on Desertification'<sup>18</sup> in 1994 and 'The United Nations Framework convention on Climate Change in 1992<sup>19</sup>.

The 'Convention on Desertification' arranges for identification of the damaging processes followed by their systematic mitigation by developing sustainable water resource management ,integrated strategies for maintenance, conservation ,rehabilitation and restoration of the wetlands and water bodies , sufficient irrigation systems and addressing of other physical, biological and socio-economic parameters of waterbody management. In December 1998 ,the Ramsar Bureau signed a 'Memorandum of Cooperation' with the secretariate of the 'Convention on Desertification' to address issues related to desertification of wetland water-systems.

The 1992 UNFCC works towards lowering green-house gas accumulation in the atmosphere and limiting carbon emissions by industrial practices. Wetlands functions as natural carbon sinks and have significant contributions in the areas of containment of global warming and climate change. It is in realization of such ecosystem functions of wetlands that these ecosystems not only demand conservation but also necessitates restoration and creation of additional new resources. The UNFCC also promotes development of renewable forms of energy. This can be of great relief particularly for mangroves where local communities donot have any other option but to rely on these forestations for fuel sources.

Parties to the Ramsar Convention are also parties to the 'Convention on Biological Diversity, 1992' which is a ground breaking approach including all forms of ecosystems and biological resources. The 'Convention on Bio-diversity' goes one step beyond the 'Ramsar Convention' to mandate transboundary cooperation in environmental cooperation by framing the binding obligation that 'activities of a State within its territories cannot be detrimental or prejudicial to the environment or ecosystem in another State'. Such stipulations go a long way to facilitate international cooperation in conservation of transboundary wetlands which the Ramsar Convention categorically stressed for.<sup>20</sup>

### 5. LEGAL PROVISIONS ADDRESSING THE ISSUES OF WETLANDS IN INDIA:

The Indian legal system embraces a plethora of environmental legislations that remotely address the issues of wetland and waterfowl conservation.

<sup>&</sup>lt;sup>16</sup> World Charter for Nature 1982

<sup>&</sup>lt;sup>17</sup> The United Nations Conference on Environment and Development 1992

<sup>&</sup>lt;sup>18</sup> The United Nations Convention to Combat Desertification 1994

<sup>&</sup>lt;sup>19</sup> The United Nations Framework convention on Climate Change in 1992

<sup>&</sup>lt;sup>20</sup> Clare Shine and Cyrille de Klemm, Wetlands, Water and the Law: Using law to advance wetland conservation and wise use (IUCN: Gland, Switzerland, Cambridge, UK and Bonn, Germany, 1999) 37

### $\cdots$

#### 5.1 The Ramsar Convention, 1971<sup>21</sup>:

In Feb 1982, India ratified and became a signatory to the 'Ramsar Convention' and therefore accepted the responsibility to frame national legal and policy designs towards achieving protection and conservation of Wetlands within its territory. Such commitments under international conventions are given due regards in India under 'Article 51' of the 'Constitution of India' which stipulates that 'it is the responsibility of the state to make endeavours to foster respect for international law and treaty obligations'<sup>22</sup>.

Moreover, 'Article 253' of the 'Constitution of India' provides that the Parliament of India has wide and absolute powers to make domestic laws for implementation of international treaties.

As a part of its commitment under the Ramsar Convention India has so far identified 42 wetlands within its territory as 'wetlands of international significance' which were designated as 'Ramsar Sites' by the Ramsar secretariate. India has also framed the 'Wetlands (Conservation and Management) Rules, 2017', which formulates regulations for protection, conservation and sustainable wise use of its Ramsar sites. 'The Wetland (Conservation and Management) Rules, 2017' prohibits conversion of wetlands for non-wetland uses which includes solid waste dumping, channelling of sewage and effluents and use of wetlands in a way that will pollute the wetland to an irreversible extent.

#### 5.2. Relevant provisions under 'The Constitution of India':

The Constitution of India stipulates various provisions as a part of the 'basic structure' of the Constitution, which embarks upon the need to protect and conserve the Environment.

The 'Directive Principles of State Policy' enshrined in the 'Constitution of India" in 'Article 48A' obliges the State to 'protect and safeguard the environment and wildlife'. In Sachidanand Pandey<sup>23</sup> case ,the Supreme Court of India emphasized on the fact that 'Article 48A' must not be disregarded in matters relating to maintenance of ecology.

The 'Fundamental Duties' in the 'Constitution of India' also mandate commitment and adherence to environmental norms. 'Article 51 -A (g)' in the Constitution imposes that it shall be the duty of every citizen to not only protect but also improve the natural environment.

The Constitution of India therefore obliges both the State and its citizens to strive towards protection, conservation and maintenance of the natural environment. Such broader tone and language of the environmental clauses of the 'Constitution of India' embrace within its ambit the cause of wetland protection and conservation.

#### 5.3. Provisions under The Environment (Protection) Act, 1986:

The issues of wetland protection and conservation is broadly covered in India under the umbrella legislation called '*The Environment (Protection) Act*'<sup>24</sup>. Sec. 2 of the 'Environment Protection Act' defines 'Environment' in a way that it includes 'Air', 'Water', 'Land' and also 'the inter-relationship that exist in the entire ecosystem'.

Thus the 'Environment (Protection) Act ,1986' is construed as a parent legislation providing the base to various rules and regulation pertaining to wetland protection in India.

Under Sec. 3 of the Act, the Central government has the power to take steps for protection and conservation of the environment and for prevention, abatement and control of environmental

<sup>22</sup> Dr. S.C. Tripathi, Environmental Law, 5th ed. (Central Law Publications: Allahabad, India, 2012)
124

<sup>23</sup> Pandey & Ors. v. The State of West Bengal & Ors (1987) AIR 1109

<sup>24</sup> The Environment (Protection) Act 1986

<sup>&</sup>lt;sup>21</sup> The Ramsar Convention on Wetlands of International Importance especially as Waterfowl Habitat, Feb 2,1971, T.I.A.S. No.1084,996 UNTS 245.

pollution. Sec. 3(v) specifies areas in which certain operations, processes or functioning of industries shall not be carried out. Moreover, the Act under Sec. 25 also empowers the Central Government to make regulations controlling discharge of environmental pollutants and handling of hazardous substance. The provisions of this Act were also invoked in a host of Judicial decisions concerning protection and conservation of wetlands. The prohibition of aqua-culture that mushroomed in coastal areas and the protection of the *Dahanu* wetlands<sup>25</sup> in Maharashtra from industrial pollution etc. are just to cite a few examples.

### 5.4 Provisions under 'The Wetlands (Conservation and Management) Rules, 2017'26

India does-not have a specific law or legislation pertaining to wetland protection. However, as a part of its commitment under the 'Ramsar Convention', the 'National Environment Policy ,2006' and the recommendations of the 'National Forest Commission', the Parliament of India notified the 'Wetlands (Conservation and Management) Rules, 2017' under Sec. 25 read with Sec. 3 of the 'Environment (Protection) Act ,1986'.

These rules are framed with an aim to mandate certain guidelines relating to wetland management and therefore aid in the process of wetland protection, conservation, monitoring and identification for Ramsar designation.

The Wetlands (Conservation and Management) Rules, 2017 restricts certain unwarranted and derogatory activities and practices within wetlands. The rules prohibit unauthorised conversion and transformation of wetlands, use of wetlands for dumping, drainage, industrial and agricultural exploitation, wetland filling and encroachment, use of wetland area for illegal construction, hunting, poaching and wildlife exploitation within wetland area and unauthorised use of wetland resources for recreation purposes. These activities are prohibited in tune with the environmental pollution perspective as a part of the ecological approaches of wetland protection.

#### 5.5 Municipal Waste (Management and Handling) Rules, 2000

Wetlands find mention in 'The Municipal Waste (Management and Handling) Rules, 2000' as most of the wetlands in India are used for municipal waste dumping. 'The Municipal Waste (Management and Handling) Rules, 2000' specifies the norms concerning handling of municipal solid waste and landfill site specifications.

Schedule III of the said Rules specifically points out that the selection of the site for municipal solid waste dumping should be based on a thorough and rigorous impact assessment of environmental risk and prejudice. More specifically and distinctly, Rule.8 of Schedule III clearly mentions that the landfill sites for municipal and hazardous waste dumping should be away from ecologically sensitive areas such wetlands and other forms of water bodies. Schedule III in Rule.18 to 21 also stipulate scientific measures and precautions that should be adopted in landfill sites and states that the waste should be covered with minimum 10 cm of soil/debris/construction material after each working day to contain air pollution. It also states that prior to monsoon season, an intermediate cover of 40-65 cm thickness of soil shall be placed along with proper grading and compaction, to prevent seepage and infiltration during the rains. Moreover should be facilitated with scientific design to minimize infiltration and erosion<sup>27</sup>.

 $^{27}$  The final cover shall meet the following specifications, namely: The final cover shall have a barrier soil layer comprising of 60 cm of clay or amended soil with permeability coefficient less than 1 x 10-7 cm/sec. b. On top of the barrier soil layer there shall be a drainage layer of 15 cm. On top of the drainage layer there shall be a vegetative layer of 45 cm to support natural plant growth and to minimize erosion.

<sup>&</sup>lt;sup>25</sup> Dahanu Taluka Environmental Welfare Association v. Union of India (1991) 2 SCC 539

<sup>&</sup>lt;sup>26</sup> The Wetland (Conservation and Management) Rules 2017

Again, Schedule IV of the said Rules deals with standards for composting, treated leachate and incineration. It stipulates that in order to check pollution from composting remnants, the waste storage area should be in a covered state. It further provides that even if such composting is done in an open area, it should be provided with impermeable membrane at the base with facility for collection and disposal of run-off and leachate. The run-off from landfill should not be entering any stream, pond, lake or any other water body.

### 5.6. Other legal provisions:

Apart from these umbrella legislations, there are a host of other umbrella legislations that remotely touch the matters of wetland protection and conservation.

Legislations like 'The Indian Fisheries Act, 1897' imposes strict sanctions against poisoning of water bodies. The Act contains punitive provisions for killing or poaching of waterfowl and fish by poisoning of water. The legislation clearly warrants against the criminal activity of poisoning of waters by releasing toxic, noxious or poisonous materials into the water.

Similarly, legislations like 'The Water (Prevention and Control of Pollution) Act, 1974' and 'The Water (Prevention and Control of Pollution) Rules, 1975' cover concerns of water pollution. Sec. 25 of 'The Water (Prevention and Control of Pollution) Act, 1974' imposes duty on the State Pollution Control Body to make restrictive and corrective interventions against practices leading to water pollution.

Again, legislations like the 'The Forest Conservation Act, 1980', 'The Biological Diversity Act, 2002', 'The Wildlife (Protection) Act, 1972''The Air (Prevention and Control of Pollution) Act, 1981'etc. also invoke strict stipulations against various forms of environmental and wildlife crimes.

### 5.7 The 'Polluter Pay' Principle:

The 'Polluter Pay' principle which was first introduced by the OECD<sup>28</sup> to regulate the economic aspects of environmental policies was also subsequently enshrined in Principle 16 of the 'Rio Declaration'<sup>29</sup>. Imposing liability on the person who pollutes the environment the principles establish and introduces the elements of both responsibility and accountability<sup>30</sup>. According to the said Principle, a person or State who pollutes the environment should bear the cost of pollution and also compensate for the damage inflicted upon the environment while making endeavours to restore the environment to its original state.

The India Judiciary has in several landmark judgements incorporated and applied the Principles of Polluter pays as a core principle of Environmental jurisprudence in its legal regime. In Vellore Citizen's Case <sup>31</sup>that Court interpreted the 'Polluter Pay' principle as an absolute liability where the responsibility for harm or damage caused to the environment extends not only to the point of compensating the victims of pollution but also to the extent of paying the cost of restoring the environment from the state of degradation.

In India Council for Enviro-Legal Action case <sup>32</sup> the Court held that once the person carries on an activity that is inherently hazardous or dangerous, he is liable to make good the loss, even if he undertook reasonable care and caution while carrying on the activity.

Again, in the Oleum Gas Leak Case<sup>33</sup>, the Court held that if an enterprise engaged in a hazardous or inherently dangerous industry which poses threat to health and safety of persons residing in surrounding areas, it is absolutely liable for any damage caused.

<sup>&</sup>lt;sup>28</sup> Organisation For Economic Co-Operation and Development.

<sup>&</sup>lt;sup>29</sup> Convention on Biological Diversity, Rio Declaration on Environment and Development,

https://www.cbd.int/doc/ref/rio-declaration.shtml

<sup>&</sup>lt;sup>30</sup> OECD Legal Instruments, Recommendation of the Council on Implementation of 'Polluter Pay' principle

<sup>&</sup>lt;sup>31</sup> Vellore Citizen's Welfare Forum v. Union of India (1996) (5) SCC 647

<sup>&</sup>lt;sup>32</sup> Indian Council for Enviro-Legal Action v. Union of India (1996) (3) SCC 212

<sup>&</sup>lt;sup>33</sup> M.C. Mehta vs. Union of India AIR (1987) SC 1086

#### 

### 6. THE CASE STUDY OF RAMSAR SITES IN NORTHEAST INDIA

The Loktak lake in the State of Manipur and the Deepor Beel in the State of Assam are the only two Ramsar wetlands in the northeastern part of India. Spread across a vast area of around 300sq kms, the Loktak lake is considered as one of the largest fresh water lakes not just in India but entire South-East Asia. The Loktak lake is particularly famous for the circular floating islands called 'Phumdis' in local language, which are ring shaped accumulated mass of organic matter, soil and heterogenous vegetation. The ecological significance of the lake may be gauged and assessed from the abundant variety of aquatic vegetation, aquatic macrophytes, aqua-fauna, avi-fauna, and rare endangered species of migratory birds flocking the wetland from the northern hemisphere. Along with its ecological value the lake is also of enormous socio-economic value as it serves water for hydroelectricity, irrigation, drinking water and livelihood to around 10,000 indigenous and fishermen families living in the phumdis and other peripheral areas of the lake<sup>34</sup>.

The 'Deepor Beel', which is a freshwater lake is a distinctly important riverine wetland in the Brahmaputra valley in Assam in Northeast India. The Deepor Beel is considered as one of the largest wetlands in Assam and is categorised as a 'Burma Monsoon Forest Biographic' region. The Deepor Beel which is the home to around 232 local and migratory birds was included in 'The Directory of Asian Wetlands' in 1987. This wetland is an eye-catching site to a large variety of aquatic avifauna which also includes some globally threatened species like the Greater Adjutant Stork, the Lesser Adjutant Stork, the Spot Billed Pelican, the Baer's Pochard etc. that are also included in the IUCN Red List. In January 1989, the Government of Assam declared 4.14 sq. km of its total area as a 'Wildlife Sanctuary' vide its notification No. FWR 1/89/25 under the provisions of the Wildlife (Protection) Act,1972. In 2004, it was also listed as an 'Important Bird Area' by international organization 'Bird Life International<sup>35</sup>' Accredited as an internationally important Ramsar Site in 2002, the Deepor Beel has been reeling under the quagmire of anthropogenic pressure and geographical extinction.

### 6.1 Current status of Ramsar Sites in Northeast India.

The two Ramsar wetlands of Northeast India are under tremendous ecological stress owing to a plethora of anthropogenic interferences and flouting of crucially sensitive enviro-legal norms. A range of human induced disturbances tampering with the ecology of these internationally important wetlands have resulted into catastrophic consequences pushing the wetlands to the edge of geographic and ecological extinction. Deleterious pollution, unabated encroachments, over exploitation of the wetland resources, interferences with the wetland territory, land filling, unregulated water starvation and lack of strict monitoring of environment impact have choked the wetlands to an irrevocably disastrous extent.

#### 6.1.1Alarming level of Pollution:

The lone Ramsar site of Assam, the Deepor Beel is submerged in the irreversible pollution due to over-loaded dumping of waste in the west Boragaon dumping site and channelling of effluents via the inlets to the Deepor Beel. The 24 hectare west-Boragaon dumping site lies in the fringe areas of the internationally accredited Ramsar Site, Deepor Beel and is neither scientifically designed nor it is technically separated from the main water body resulting into a plethora of environmental problems emanating from the positioning of this dumping site.<sup>36</sup> The dumping site is located right in the bed of the Deepor Beel leading to piles of legacy waste dumped from 2004 spreading across the peripheral

<sup>&</sup>lt;sup>34</sup> R. S. Khoiyangbam, 'Wetlands in Loktak: Issues and challenges of merging Wildlife conservation and Hydropower generation - An Overview' (2021) 14 IJLR 223

<sup>&</sup>lt;sup>35</sup> Malabika Kakati Saikia, Prasanta Saikia, Ramesh Bhatta, 'Management Perspective for Avian

Population Conservation and enrichment in Deepor Beel Ramsar Site, North-East India' (2014) 3 Journal of Global Bio-Sciences 428

<sup>&</sup>lt;sup>36</sup> Priyanka Gogoi, 'Saving Deepor Beel, Assam's Lone Ramsar Site' (2016) 1 Journal For Environmental Law, Research And Advocacy 35

areas and the midsection of this wetland. It is an open dumping facility in strict contradiction to the standards provided in Schedule (I, II, III, IV) of the Municipal Solid Waste Management Rules 2000<sup>37</sup>. In a report prepared by 'The Planning Commission of India' in 2008, it has pointed out that the parameter of toxic and contaminated leachate percolating into the core areas of the water body is very high.<sup>38</sup>Moreover in a report prepared by the 'Comptroller and Auditor General of India' (CAG Report 2016<sup>39</sup>,) the Boragaon Dumping did not comply with the stipulated parameters as set by the Central Public Health and Environmental Engineering Organization (CPHEEO)<sup>40</sup>.

A rigorous study and monitoring of the various parameters of the water and the sediment of the wetland has exposed the truth that the municipal waste dumping facility at Boragaon happens to be the primary point source of pollution to the water body.<sup>41</sup>

On similar lines, the Ramsar site of Loktak lake has been facing serious ecological decline due to which it was placed in the Montreux record in 1993. The Montreux Record is a register of Ramsar Sites facing irrevocable degradation and rapid extinction. The loktak wetland is reported to be heavily contaminated by the waters of the Nambul river that channels into the lake carrying massive volume of hazardous pollutants, municipal waste, bio-medical and electronic waste, industrial affluents , plastic and human excreta. This has in turn resulted into devastating change in the ecosystem of the lake, massive habitat loss, death and poisoning of aquatic flora and fauna and invasion of alien species including eutrophication in the lake<sup>42</sup>.

#### 6.1.2 Encroachment and over-exploitation of wetland resources:

The greater wetland of Deepor Beel which as per the Ramsar Site Map is stated to be 40sq km, has not been demarcated till present date. Only 4.14sq km of the Deepor Beel has been notified as the 'Deepor Beel Wildlife Sanctuary' under 'The Wildlife Protection Act ,1972' and the Beel area as per the Guwahati Municipality Development Authority is only about 6.89 sq.km. Moreover in 1990 around 54.01sq km of water spread area has been recorded by the flood control department of the Government as proposed flood storage. Such inconsistencies and aberrations in identifying, recognizing and institutionalizing the actual boundary of the greater wetland has been the bane behind rampant and extensive illegal encroachments, land filling, unwarranted constructions, politically motivated allotment of land and eventually shrinking of the wetland to an irrevocable extent. Overall, large scale illegal encroachment and industrial and commercial developments within

<sup>37</sup> *Municipal Waste (Management and Handling) Rules, 2000*, INDIA KANOON, https://indiankanoon.org/doc/10681868/.

<sup>38</sup> Planning Commission, Government Of India, Report on Visit to Deepor Beel in Assam - a wetland included under National Wetland Conservation and Management Programme of the Ministry of Environment & Forests, 13(2008)

<sup>39</sup> CAG, Performance Audit of Environmental Degradation in Greater Guwahati Area with Special Emphasis on the Role of Pollution Control Board Assam (2016)

<sup>40</sup> Central Public Health and Environment Engineering Organization, Ministry Of Urban Development, Government Of India, Municipal Solid Waste Management Manual,

chrome

extension://efaidnbmnnnibpcajpcglclefindmkaj/http://cpheeo.gov.in/upload/uploadfiles/files/Par t2.pdf.

<sup>42</sup> B. Mayanglambam, S.S Neelam, 'Geochemistry and Pollution Status of Surface Sediments Of Loktak Lake, Manipur, India' (2020) 2 SN APPL SCI 2097

the periphery of the greater wetland is causing a shrinkage in the total wetland cover along with polluting the water body.

On similar lines, rampant encroachment on biomass (locally called '*phumdis*') over the Loktak lake and illegal fishing using electric shocks and other ecologically hazardous means have had devastating impact on the bio-diversity of the lake apart from chocking and contaminating the wetland core areas. Media reports have suggested that the Manipur Government had enacted 'The Loktak Lake (Protection) Act' <sup>43</sup> for effective maintenance, management, administration, conservation and protection of this Ramsar Site. As a part of its commitment under the said Act, the Government had taken several initiatives to carry out eviction of the phumdis along with adequate compensation to the illegal encroachers. However recent media reports have suggested that even after receiving due compensation, the encroachers starting re-occupying many parts of the wetland along with carrying out illegal poaching and fishing in the lake invoking the rights of the indigenous to life and livelihood.<sup>44</sup> These activities have also led to overexploitation of the lake resources and altered its ecology to a irretrievable extent.

### 6.1.3 Conflict between environmental protection and livelihood and traditional rights

In several incidents of contestations between the government and the local indigenous fishermanfolk of the Loktak lake, the tussle between 'indigenous livelihood and traditional rights', 'environmental protection' and 'sustainable development' took centre-stage. As a part of its commitment to conserve the Loktak lake and plan for its sustainable development the Loktak Development authority has in several instances ordered the eviction of the local fishermen community from the *phumdis* of the Loktak lake. The Loktak development authority along with the Wetland International had designed an integrated eco-tourism plan for development of the Loktak lake as a tourism hotspot. This project is however flagged by the locals as an environmentally and socially disruptive design that seeks to generate revenue neglecting the livelihood rights and customary and traditional rights of the communities directly dependent on the Loktak lake. The locals also suggested that the powers granted by 'The Manipur Loktak Lake (protection) Act' to the government to grant approval for projects for 'commercial utilization' of the lake resources is of excessively wide and arbitrary nature.<sup>45</sup> Moreover the exclusion of the locals in the development process is also in strict abrogation of the Ramsar Convention clause that mandates participation of the locals in decision making and development process.

#### 6.1.4 Interferences in wetland territory

In 2001 a railway track was constructed by North-East Frontier Railways cutting straight through the Deepor Beel core wetland area fragmenting the entire Rani-Garbhanga-Deepor beel ecosystem to three discontinuous sub-systems. This railroad has been the root source of many challenges ranging from posing threat to the ecosystem and wildlife of the Deepor Beel to facilitating in enhanced deforestation, soil erosion, encroachment and ecological disturbances. Apart from severe form of noise pollution which is detrimental to wildlife and danger posed by high voltage powerlines to avian population the railway track has led to innumerous wildlife casualty due to train-animal collisions

<sup>44</sup> HY News, Illegal Encroachment And Fishing Using Illegal Means Around The Premises Of Loktak

Lake Should Be Stop Immediately: JYDC, http://hynews.in/article/state/illegal-encroachment-and-fishing-using-illegal-means-around-the-premises-of-loktak-lake-should-be-stop-immediately-jydc/3950

<sup>45</sup> THE LEAFLET, For Those Dependent On The Loktak Lake, Sustainable Development Is An Elusive Goal, https://theleaflet.in/for-those-dependent-on-loktak-lake-sustainable-development-is-an-elusive-goal/

<sup>&</sup>lt;sup>43</sup> The Manipur Loktak Lake (Protection) Act 2006

### \*\*\*\*\*

and serious flouting of norms pertinent to elephant corridor. Adding to the woes of the wetland, very recently the NF Railways attempted to start electrification of the railway tracks despite a hold on any kind of electrification or further construction on the tracks, imposed by the National Green Tribunal.<sup>46</sup>

The railway line together with other forms of increased frequency vehicular traffic is the sole reason behind deaths of various animals and specifically elephants that cross the railway line to visit the beel.

Therefore, an overall view of a slew of primary threats project that large -scale land usurpation, industrial development within the periphery of the greater wetland ,unregulated and unscientific garbage dumping and percolation of filth and toxic effluents from the inward channels, irresponsible tourism , construction of the railway track and fragmentation of the hydrological ecosystem, unchecked recreation and fishing , conversion of wetland into agricultural land and unmonitored land filling have pushed this once pristine ecosystem to the brink of extinction and irreparable deterioration.

#### 7.CONCLUSION AND SUGGESTIONS

The lack of a targeted legislative enactment specifically addressing the issues of wetland conservation and management is a core void in the wetland legal mechanism in India. The Indian legal apparatus has many legislations that loosely and remotely touch the specifications of wetland conservation. However, these umbrella legislations are not scientifically and legally apt to concretely address the specific aberrations in wetland conservation and habitat management. Moreover, absence of stringent disciplinary and punitive clauses have rendered the effectiveness of laws futile. To cite an example, discarding of municipal solid waste in wetlands have been prohibited both under 'The Wetlands (Conservation and Management) Rules 2010' and 'The Municipal Waste (Management and Handling) Rules, 2000'. However, most of the Indian waterbodies and wetlands today are used for solid waste dumping and effluent discharge. To add on, when it comes to application of principles like the 'Polluter pay' principle or the 'Precautionary Principle' certain insufficiencies in the execution pros and cons make it only subtly effective in the practical sense. For example, identification of the exact polluter in the economy cycle is a real challenge as the polluter is a part of the lengthy production, distribution, and consumption chain. Again, the inadequacy of the penal sanctions under these principles is also an issue to be introspected upon. A compensation amount of Rs 10,000 in the Vellore Citizen's case<sup>47</sup> and an amount of Rs 10 lakhs was slapped on the polluter Kamal Nath's case<sup>48</sup> in application of the 'Polluter Pay' principle. However, such a in the compensation is too small an amount to be considered as exemplary damage for big corporate houses and industrial giants. As such, the gravity of damage and the amount of punishment or compensation should be proportionate to each other so as to serve the purpose of equity and justice.

Adding another dimension to the challenges of wetland management is the need for site -specific legal framework. Due to varied and diverse site-specific characteristics of different categories of wetlands, each type of ecosystem demands specially customised and curated legal approach. Coastal wetlands and mangroves for example demand a different legal orientation in comparison to urban wetlands. In certain areas, the blanket legislations covering wetland protection contradict the demands of the specific wetlands. The national wildlife laws ban 'grazing' within all National Parks which are protected areas. However, grazing in a controlled way is essential to control alien species invasion and eutrophication of wetlands.

<sup>&</sup>lt;sup>46</sup> GUWAHATI PLUS, Guwahati : Locals Protest As NF Railway Starts Electrification Work Through Deepor

*Beel*, https://www.guwahatiplus.com/guwahati/guwahati-locals-protest-as-nf-railway-startselectrification-work-through-deepor-beel

<sup>&</sup>lt;sup>47</sup> Vellore Citizens' Welfare Forum v. Union of India, 1996(5) SCC 647.

<sup>&</sup>lt;sup>48</sup> M. C. Mehta vs Kamal Nath & Ors, (1997)1SCC388.

To add on, it is a matter of concern that while the Ramsar Convention of 1971 provides for wetland loss compensation in a limited way (Article 4.2), it does-not provide for wetland restoration in a stringent manner. This is where the specific targeted legislation should fill the gap. The legal regime should provide for issuance of restoration orders by competent authority.

Also, provisions should be inserted so as to ensure that breach of these restoration orders constitute criminal offence and be subject to financial or other punitive penalties. 'The Spanish Water Act ,1985' and 'The Uganda's National Environment Statute, 1995' is an example in this regard.

As postulated by the Ramsar Convention, laws should also ensure inclusive approach for increased participation of the indigenous local communities, NGOs, environmental activists and ecologists in the decision making and development process. Such accommodative approach also facilitates traditional, scientific and technical knowledge sharing practices that help in conservation and management of the wetlands keeping its integrity intact.

Eviction of current encroachments and formulation of ways to contain further encroachment is another clarion call of the hour. As such, it is very important that ministries under the umbrella of the State Level Wetland Authority execute concerted plans to demarcate the wetlands according to the Ramsar Fact Sheet Map. Moreover, strict action should be taken to carry out eviction of the current illegal encroachments and legal formulations should be constructed to contain further encroachment in the core greater wetland area or any buffer zone surrounding the greater wetland area that has the potential of choking the wetland. The ones flouting such norms should not only be imposed with heavy compensation but also should be slapped with criminal sanctions. Deterrent modes of punitive sanctions should be inserted into specifically framed wetland laws with careful note of the legal loopholes used for land grabbing and inappropriate land use.

Firm and expeditious legal action should be taken to re-align the railway track through the sensitive areas of the Deepor Beel. This should be designed in a way a way that it donot cross through the animal corridor or cause disturbance to the wetland-reserve forest biodiversity. Attempts to execute further works in the disputed Railway tract including electrification of the railway track should be strictly monitored, criminalised and heavily penalised by legal arrangements.

Further, the existing laws and administrative policies should be moulded in a way that the Railway's 'Right of way' under Sec. 11 of the Railways Act 1989 should be made available subject to approval from the Central Government under Sec. 2 of the Forest Conservation Act,1980<sup>49</sup>. A Civil Appeal 3166/2014, involving the question as to the right to maintain or execute railway works within railway owned land under Railway's 'Right of Way' is pending in the Supreme Court of India. A decision on the same will give a clear picture to the entire scheme of things pertaining to intrusion on sensitive environmental norms by other legislations.

### REFERENCES

- 1. B. Mayanglambam, S.S Neelam, 'Geochemistry and Pollution Status of Surface Sediments of Loktak Lake, Manipur, India' (2020) 2 SN APPL SCI 2097
- 2. CAG, Performance Audit of Environmental Degradation in Greater Guwahati Area with Special Emphasis on the Role of Pollution Control Board Assam (2016)
- 3. Central Public Health and Environment Engineering Organization, Ministry Of Urban Development, Government Of India, Municipal Solid Waste Management Manual, chrome extension://efaidnbmnnnibpcajpcglclefindmkaj/http://cpheeo.gov.in/upload/uploadfiles/files/Pa rt2.pdf.

<sup>&</sup>lt;sup>49</sup> Sec.2 of the Forest Conservation Act ,1980, Act 69 of 1980 deals with the restrictions on de-reservation of forests or use of forest land for non-forest purpose. Sec.11 of The Railways Act, 1989, Act No. 24 Of 1989 empowers Railway Administration to erect and construct structures for the purpose of constructing and maintaining a Railway.

## \*\*\*\*\*

- 4. Clare Shine and Cyrille de Klemm, Wetlands, Water and the Law: Using law to advance wetland conservation and wise use (IUCN: Gland, Switzerland, Cambridge, UK and Bonn, Germany, 1999) 37
- 5. David Farrier, Linda Tucker, 'Wise Use of Wetlands Under the Ramsar Convention: A Challenge for Meaningful Implementation of International Law' (2000) 12 Journal of Environmental Law 24
- 6. Donald Hook, 'Wetlands, History, Current Status, And Future' (1993) 12 Environmental Toxicology and Chemistry 2157\
- 7. Dr. Avinash Chiranjeev, Er. Anil Kumar Jamwal, Environmental Law and Protection, (Jnanada Prakashan : New Delhi, 2008)
- 8. Dr. S.C. Tripathi, Environmental Law, 5th ed. (Central Law Publications: Allahabad, India, 2012) 124
- 9. GUWAHATI PLUS, Guwahati : Locals Protest As NF Railway Starts Electrification Work Through Deepor Beel, https://www.guwahatiplus.com/guwahati/guwahati-locals-protest-as-nf-railway-startselectrification-work-through-deepor-beel
- 10. HY News, Illegal Encroachment and Fishing Using Illegal Means Around The Premises Of Loktak Lake Should Be Stop Immediately: JYDC, http://hynews.in/article/state/illegal-encroachment-andfishing-using-illegal-means-around-the-premises-of-loktak-lake-should-be-stop-immediatelyjydc/3950
- 11. IUCN, New report highlights the loss of wetlands in the Lower Mekong region and the consequences for biodiversity, climate and the well-being of 250 million people, https://www.iucn.org/press-release/202211/new-report-highlights-loss-wetlands-lower-mekong-region-and-consequences
- 12. IUCN, Indo Burma Wetland Outlook,2022, chromeextension://efaidnbmnnnibpcajpcglclefindmkaj/https://www.iucn.org/sites/default/files/2022-11/indo-burma-wetland-outlook-2022\_v4.5\_pages-compressed.pdf.
- 13. <sup>1</sup> Malabika Kakati Saikia, Prasanta Saikia, Ramesh Bhatta, 'Management Perspective for Avian Population Conservation and enrichment in Deepor Beel Ramsar Site, North-East India' (2014) 3 Journal of Global Bio-Sciences 428
- 14. Planning Commission, Government of India, Report on Visit to Deepor Beel in Assam a wetland included under National Wetland Conservation and Management Programme of the Ministry of Environment & Forests, 13(2008)
- 15. Priyanka Gogoi, 'Saving Deepor Beel, Assam's Lone Ramsar Site' (2016) 1 Journal for Environmental Law, Research and Advocacy 35
- 16. R. S. Khoiyangbam, 'Wetlands in Loktak: Issues and challenges of merging Wildlife conservation and Hydropower generation An Overview' (2021) 14 IJLR 223
- 17. S.N. Prasad, et al., 'Conservation of Wetlands of India A Review', (2001) 43Trop Ecol 178\
- 18. THE LEAFLET, For Those Dependent on The Loktak Lake, Sustainable Development Is an Elusive Goal, https://theleaflet.in/for-those-dependent-on-loktak-lake-sustainable-development-is-an-elusivegoal/
- 19. The Ramsar Convention on Wetlands of International Importance Especially as Waterfowl Habitat, Feb2, 1971, T.I.A.S. No. 1084, 996 UNTS 245.
- 20. <sup>1</sup> Vanessa Reis et al., 'A Global Assessment of Inland Wetland Conservation Status' (2017)6. BioScience 524