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## Comparative Analysis of Sustainability Laws in India

Rishikaa Handa<sup>a</sup>

<sup>a</sup>OP Jindal Global University, Sonipat, India

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*Environmental pollution has been a major upcoming issue worldwide. The environment is in the process of replenishing due to the speedy development of the world by humankind. It is tough to tackle environmental issues with greed to develop and expand their industry or business. To save costs and make profits, people let the environment suffer. In India, the environment has been degrading at a fast rate. Sustainable laws play a major role in shaping the country's approach to tackling pollution. Even though India is working towards making itself sustainable, the steps taken have not met the desired results and have not been impactful for the visible betterment of the nation. We have reached an alarming stage where people need to unite and start working towards saving the environment. In this paper, a brief overview is provided of the evolution of India's environmental regulations and the current status of India in dealing with environmental pollution. Moreover, an environmental overview is provided for other nations that excel in achieving sustainability in their nations and what India can learn and implement from them.*

**Keywords:** *environment, environmental law, sustainability.*

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## INTRODUCTION

Mohandas K. Gandhi said, 'There is sufficiency in the world for man's need but not for man's greed.'<sup>1</sup> Due to the utilisation of the earth's resources by human beings, the resources are excessively depleting. This is due to emerging technology that has made humans blindly exhaust resources to earn money and development. Ignoring the environment in this race can cause a major setback for humans since the environment provides us with air to breathe, food to consume, a balance in the climate, and other necessary things to support to lives. Due to the upsurging development and rigorous utilisation of resources in the era of industrialization, protecting the environment has become the utmost priority of the whole world.

Due to this, sustainability regulations were introduced in many nations, since it had become essential to halt the excessive use of resources and to maintain balance. Environmental laws cover many different regulations to safeguard different components of the environment and prevent different types of pollution. These laws teach us ways to find a way to work for our environment as well as our community. Issues pertaining to the environment, unlike political issues, are not domestic issues, since their effects are not limited to a particular geographical parameter. The absence of these laws would have resulted in grave destruction around the world.

## HISTORY OF INDIA

Before 1972, known as the colonial era, had no specialised regulations pertaining to the environment. India mainly depended on an amalgamation of tort laws, criminal laws, regulations related to water and forests, and specialised legislation to look into environmental protection matters.<sup>2</sup> The Indian Penal Code 1860<sup>3</sup> punishes a person who causes contamination of a reservoir or public spring with imprisonment or a fine. The Indian Easements Act, 1882<sup>4</sup>

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<sup>1</sup> 'Awareness -Environmental Quotes | Maharashtra Pollution Control Board' (MPCB)

<<https://mpcb.govin/awareness/environmental-quotes>> accessed 02 January 2024

<sup>2</sup> 'Environmental Law: Definition, History, Principles, Examples' (Lloyd Law College, 28 September 2023)

<<https://www.lloydlawcollege.edu.in/blog/environmental-law.html>> accessed 02 January 2024

<sup>3</sup> Indian Penal Code 1860

<sup>4</sup> Indian Easements Act 1882

protects riverside owners from undue contamination by upstream activities. Section 12<sup>5</sup> required all factories to make effective arrangements for waste disposal and empowered state governments to frame rules implementing this directive.<sup>6</sup> After this act, multiple states have legislated the Factories Act. In 1956, river boards established the River Boards Act for the prevention of water pollution.

The Stockholm Declaration, the first international document to recognise the protection of the environment as a major global issue, was born at the first United Nations Conference on the Human Environment in 1972.<sup>7</sup> It was attended by many countries, including India. The conference was held to globally educate the nations about controlling and reducing pollution and saving the environment at national and international levels. After gaining Awareness of the importance of saving the environment, India introduced regulations and policies mandating the same. It was the first country to insert an amendment into its Constitution allowing the state to protect and improve the environment by safeguarding public health, forests, and wildlife. The 42<sup>nd</sup> amendment<sup>8</sup> to the constitution established DPSP Article 48A<sup>9</sup> for the protection of forests and wildlife in the country and Article 51A(g)<sup>10</sup> as part of the Fundamental Duties to safeguard natural environments like rivers, forests, etc. Article 21<sup>11</sup> of the Right to Life and Liberty was interpreted to live in a clean, pollution-free environment after the conference. This era ended as a new one, begun after a tragic event that the whole world heard about. On one early morning in December 1984, a poisonous gas leaked from the Union Carbide India Ltd. plant in Bhopal and killed almost 4000 people and affected lakhs of others.<sup>12</sup> This was one of the world's most

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<sup>5</sup> Factories Act 1948, s 12

<sup>6</sup> 'Environmental Legislation in India' (*Indian Institute of Ecology and Environment*) <<https://www.ecology.edu/environmental-legislation.html#:~:text=The%20country%20has%20had%20a>> accessed 02 January 2024

<sup>7</sup> Laura Lu, 'The Evolution of International Environmental Law' (*St Andrews Law Review*, 29 March 2022) <<https://www.standrewslawreview.com/post/the-evolution-of-international-environmental-law>> accessed 02 January 2024

<sup>8</sup> Constitution of India 1950

<sup>9</sup> Constitution of India 1950, art 48A

<sup>10</sup> Constitution of India 1950, art 51A

<sup>11</sup> Constitution of India 1950, art 21

<sup>12</sup> Shonotra Kumar, 'Environment Law and Policies in India: A Historical Overview' (*Nyaaya*, 14 February 2022) <<https://nyaaya.org/guest-blog/environment-law-and-policies-in-india-a-historical-overview/#:~:text=The%20policies%20from%20the%20colonial>> accessed 02 January 2024

hazardous disasters. It not only affects humans but also causes the death of animals and the degradation of trees. After this event, many other acts were legislated in India to prevent any environmental disaster.

## **CURRENT ACTS ASSOCIATED WITH SUSTAINABLE LAWS**

**The Wildlife (Protection) Act 1972:** It protects wild animals, birds, and plants. It allows the state government to declare any area as a national park or sanctuary. Hunting is prohibited unless licensed by the state government for a reason like scientific research.

**The Water (Prevention and Control of Pollution) Act 1974:** It aims to prevent water pollution, which is changing the physical, chemical, and biological properties of water due to the discharge of a pollutant into the water. It formed the Central Pollution Control Board (CPCB) and State Pollution Control Boards (SPCBs) as regulatory authorities.

**The Forest Conservation Act 1980:** prohibits deforestation or forests from being used for other purposes unless allowed by the central government. It also prohibits the state from reserving reserved forests.

**The Air (Prevention and Control of Pollution) Act 1981:** this act aims to reduce air pollution. It establishes boards to implement acts at the state and central levels.

**The Environment (Protection) Act 1986:** This act was formed after witnessing the Bhopal gas leak and Shriram Foods and Fertilizers in Delhi. It was launched for the collective safety of water, air, land, and living organisms, including human beings. The act was in line with the UN Conference of 1972, and it provides protection to the environment from hazardous substances.

**The Public Liability Insurance Act 1991:** the act provides minimum relief to victims against hazardous substances.

**The Ozone Depleting Substances (Regulations and Control) Rules, 2000:** The acts regulate the licensing and avoiding Ozone Depleting Substances like chlorofluorocarbons (CFCs), hydrochlorofluorocarbons (HCFCs), halons, methyl bromide, carbon tetrachloride,

hydrobromofluorocarbons, chlorobromomethane, and methyl chloroform. ‘Ozone Cell’ was formulated to implement ODS inspired by the Montreal Protocol provisions. The Indian government, through the Directorate General for Foreign Trade (DGFT), manages the import-licensing mechanism for regulating international trade in ozone-depleting substances.<sup>13</sup>

**The Energy Conservation Act 2001:** It was implemented to attain energy, efficiency, conserve energy and reduce waste.

**The Biological Diversity Act, 2002:** This Act broadly sets forth to protect and conserve biological diversity, control the utilization of resources, and maintain equality in the distribution of its resources and benefits arising from it.<sup>14</sup>

**Schedule Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Acts 2006 (FRA):** The act seeks to conserve forest land under Forest Dwelling Scheduled Tribes (FDST) and Other Traditional Forest Dwellers (OTFD).

**The National Green Tribunal Act 2010:** It was established in concurrence with the Rio Summit of 1992 to provide judicial and administrative remedies for the victims of pollutants and other environmental damage. The act has formed the NGT to dispose of cases pertaining to issues related to the environment. The act has formed NGT to dispose of cases pertaining to issues related to the environment.

**Compensatory Afforestation Fund (CAF) Act 2016:** It obligates a company that deals with forest land for other purposes to plant forests over a non-forest area of the same size.

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<sup>13</sup> ‘Regulation of Ozone-Depleting Substances in India’ (2013) 4(1) Environmental Law Institute <[https://www.elr.info/sites/default/files/files-pdf/india\\_update\\_2013\\_06\\_indiaupdate4.1.pdf](https://www.elr.info/sites/default/files/files-pdf/india_update_2013_06_indiaupdate4.1.pdf)> accessed 02 January 2024

<sup>14</sup> Shoronya Banerjee, ‘Overview of Biological Diversity Act, 2002’ (*iPleaders*, 19 May 2020) <<https://blog.iplayers.in/overview-biological-diversity-act-2002/#:~:text=This%20Act%20broadly%20sets%20forth,and%20benefits%20arising%20from%20it>> accessed 02 January 2024

## CASE LAWS

**In the 1980s and onwards, the Supreme Court of India started to highlight the right to live in a pollution-free environment. Some of the landmark cases are discussed below:**

*J.C. Galstaun v Dunia Lal Seal*:<sup>15</sup> This was the first case in India to report an environmental pollution incident in Calcutta. In this case, the accused had discharged a liquid pollutant into the municipal drainage that passed through the plaintiff's garden. The liquid was foul-smelling and harmful to your health. The Calcutta High Court held that the defendant is guilty of his actions in causing environmental pollution.

*Vellore Citizen's Welfare Forum v Union of India*:<sup>16</sup> This case is also known as the Tamil Nadu Tanneries Case, where a petition was filed by the Vellore Citizens Welfare Forum seeking direction for the tanneries and other industries that caused pollution by the enormous discharge of untreated effluent in the State of Tamil Nadu. It highlighted the concept of sustainable development.

*M.C. Mehta v Kamal Nath & Ors*:<sup>17</sup> It is an important case that recognises the Public Trust Doctrine. It rules to protect the environment and diverge it from its natural discourse. It served as a precedent for many cases, like *Majra Singh v Indian Oil Corporation*<sup>18</sup> and *M.I. Builders v Radhey Shyam Sahu*<sup>19</sup>.

*Jagannath v Union of India*:<sup>20</sup> The case was about commercial shrimp farming in coastal areas and how it was affecting the mangrove ecosystem, the depletion of the plantation, the discharge of highly polluting effluents, and the pollution of potable as well as groundwater. The Supreme Court, in this case, held that sea beaches and sea coasts are gifts of nature and any activity polluting the same cannot be permitted.<sup>21</sup>

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<sup>15</sup> *J.C. Galstaun v Dunia Lal Seal* (1905) 9 CWN 612

<sup>16</sup> *Vellore Citizen's Welfare Forum v Union of India* (1996) 5 SCC 647

<sup>17</sup> *M.C. Mehta v Kamal Nath & Ors.* (1997) 1 SCC 388

<sup>18</sup> *Majra Singh v Indian Oil Corporation* AIR 1999 J&K 81

<sup>19</sup> *M.I. Builders v Radhey Shyam Sahu* (1999) 8 SRJ 105

<sup>20</sup> *S. Jagannath v Union of India* (1997) 1 KER LT 32

<sup>21</sup> *Ibid*

*Murli S. Deora v Union of India*:<sup>22</sup> The case held smoking illegal in public spaces. The judges applied the right to life to the non-smoking community and said that they should not be deprived of the side effects of smoking if they aren't smoking.

*Karnataka Industrial Areas Development Board v C. Kenchappa*:<sup>23</sup> The Supreme Court held that if any land is acquired for its development, then it must be properly analyzed to determine whether it will deeply damage the environment or not.

*Vardhman Kaushik v Union of India*:<sup>24</sup> The National Green Tribunal directed that all vehicles that are more than 15 years old will not be permitted to ply in Delhi. The transport commissioner shall ensure that such vehicles are not registered in NCR Delhi because of the increasing pollution in Delhi. The transport Commissioner shall ensure that such vehicles are not registered in NCR Delhi because of increasing pollution in Delhi.<sup>25</sup>

## THE CURRENT POSITION OF INDIA

India was placed at 112th position out of 166 countries in Sustainable Development Goal Report 2023.<sup>26</sup> India was ranked the lowest in the Environmental Performance Index 2022, measured by Yale and Columbia universities. Some of India's rankings are the second lowest out of 180 countries in Ozone Exposure, Biodiversity & Habitat, and Air Quality Indexes.<sup>27</sup> It also ranked 174 and 172 out of 180 countries in PM2.5 and Carbon monoxide exposure Indexes.<sup>28</sup> According to Yale's index, the Projected Greenhouse Gas Emissions in 2050 in India will be 171 which is the last rank shared with 10 countries.<sup>29</sup>

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<sup>22</sup> *Murli S. Deora v Union of India* 2001 (8) SCC 765

<sup>23</sup> *Karnataka Industrial Areas Development Board v C. Kenchappa* (2006) 5 SCJ 171

<sup>24</sup> *Vardhman Kaushik v Union of India* (2016) SCC OnLine NGT 4176

<sup>25</sup> Rupali Agrawal, 'Analysis of Prevention and Control Mechanism of Air Pollution Act, 1981 with Penalty Provision' (*Legal Service India*) <<https://www.legalserviceindia.com/legal/article-13137-analysis-of-prevention-and-control-mechanism-of-air-pollution-act-1981-with-penalty-provision.html>> accessed 02 January 2024

<sup>26</sup> United Nations, *Sustainable Development Report 2022* (2022)

<sup>27</sup> Yale Centre for Environmental Law & Policy, *Environmental Performance Index* (2022)

<sup>28</sup> *Ibid*

<sup>29</sup> *Ibid*

The evolution of the environmental regulations in India has been excellent, but they still failed to excel in terms of environmental performance. This implies that India lacks in some areas, which pushes it down completely, irrespective of how good the laws are. To look into this matter, let's go ahead and analyse the environmental laws of countries that are succeeding in their endeavour toward sustainability

## JAPAN

Japan was ranked 21 out of 166 countries on the Sustainable Development Goals Index in 2023.<sup>30</sup> It also ranked 12 out of 180 countries in Yale's Environmental Performance Index. The Basic Environment Law approved by the Ministry of the Environment Government of Japan in December 1994 lays down environmental regulations. It articulates basic principles, clarifying the responsibilities of the State, local governments, corporations and citizens, and prescribing the basic policy considerations for environmental conservation.<sup>31</sup> The government of Japan has implemented policies and regulations to encourage people to live a sustainable life. They have laid down multiple acts and laws under each heading- Environmental policy, Global Environment, Waste & Recycling, Air & Transportation, Water & Soil & Ground Environment, Nature & Parks and Health and Chemicals. Apart from the strict acts, the country also provides subsidies and incentives in the form of financial credits for those companies that invest in sustainable practices and renewable energy. For example, green finance is one such form of economic assistance.

**To tackle the surge of greenhouse gases and climate change, Japan has taken advantage of green IT and AI technologies:**

- **Manufacturing Sector:** Green IT and AI help in production by reducing energy consumption and waste, which can lower the rate of emissions. A great example is

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<sup>30</sup> *Ibid*

<sup>31</sup> Basic Environment Law 1993



Siemens, a multinational technology powerhouse that has leveraged these technologies to manage energy more efficiently, reducing carbon emissions by 54% since 2014.<sup>32</sup>

- **Retail Sector:** Stores can control energy to produce cooling, heating, and lighting functions by using Green IT and AI. For example, Amazon's sustainable packaging initiative also reduces waste by optimizing package sizes and using recycled materials.<sup>33</sup>
- **Supply Chain Sector:** Energy is mainly used for transportation in the form of fuel. Fuel consumption can be reduced with the help of AI-powered green IT. The use and promotion of eco-friendly vehicles can also support sustainability practices. Green IT and AI have the ability to reduce the environmental impact of processes that lead to emissions. Japan's ambitious climate goals and commitment to green technologies serve as an inspiration to the rest of the globe.

## SWEDEN

The first country in the world to pass an environmental protection act in 1967, also hosted the first UN conference on the global environment in 1972.<sup>34</sup> In today's time, Sweden is the world's most sustainable country. Sweden has a Swedish Environmental Code to promote sustainable development and preserve the environment. This code has replaced the previous 15 acts. It recognises doctrines like the precautionary principle, the polluter pays principle, the product choice principle, and principles regarding resource management, recycling, and suitable localization of activities and measures.<sup>35</sup>

The act provides penalties for environmental crimes and sanctions charges for other specific acts. Sweden has three environmental protection authorities: the Swedish Environmental Protection Agency (EPA) and the Swedish Chemicals Agency for Marine and Water Management. There are eight agencies, like the Swedish Radiation Safety Authority, the

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<sup>32</sup> Mark Minevich, 'Japan's Green IT: A Game Changer in Environmental Sustainability' (*Forbes*, 18 July 2023) <<https://www.forbes.com/sites/markminevich/2023/07/18/japans-green-it-a-game-changer-in-environmental-sustainability/>> accessed 02 January 2024

<sup>33</sup> *Ibid*

<sup>34</sup> 'Lowering emissions is key to saving the climate. Find out how Sweden does it' (*Sweden and sustainability*) <<https://sweden.se/climate/sustainability/sweden-and-sustainability>> accessed 02 January 2024

<sup>35</sup> Swedish Environmental Code 1998

Swedish National Board of Housing, the Swedish Forest Agency, etc., for all relevant sectors of society to provide environmental protection to various degrees.<sup>36</sup>

The country's environmental protection schemes enact stringent regulations and policies to reduce carbon emissions, meaning in 2012 they already reached their 2020 target of making 50 percent of their energy renewable.<sup>37</sup> They have heavily relied on biomass and hydropower as alternative and renewable sources of energy. The cities within have extensive cycling lanes developed, which has played a role in motivating citizens to use bicycles as a mode of transportation. Sweden has also engrained sustainability in its education system. From an early age, sustainability is taught. It is also a curriculum for younger children. This has caused people to integrate their lives with sustainability and environmental protection. Cities are pedestrian-friendly, with green spaces, parks, and recreational areas seamlessly integrated into the civil design.<sup>38</sup> The buildings in this country are energy efficient, and the transportation is cleaner.

## DENMARK

Denmark has been a society that relies primarily on agriculture and fishing. Due to this, Denmark is determined to save its environment and promote the use of clean energy. Denmark introduced the Climate Act in 2020 to reduce greenhouse gas emissions. Denmark is the 6<sup>th</sup> biggest shipping nation in the world, and the Danish company Maersk Line is the world's largest container shipping operator, shipping 12 million containers every year.<sup>39</sup> The country is working towards green shipping.

**To protect the country's environment and lead it on the path of sustainable development, Denmark has established many other laws -**

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<sup>36</sup> *Ibid*

<sup>37</sup> 'How Sweden continues to set the benchmark as one of the world's most sustainable countries' (*Insight Vacations*, 1 June 2023) <<https://www.insightvacations.com/blog/sweden-worlds-most-sustainable-countries>> accessed 02 January 2024

<sup>38</sup> *Ibid*

<sup>39</sup> 'Sustainability and the Danes' (*Denmark.dk*) <<https://denmark.dk/innovation-and-design/sustainability#:~:text=For%20hundreds%20of%20years%2C%20Denmark>> accessed 02 January 2024

- **The Environmental Protection Act:** It aims to mainly prevent all types of pollution and limit the waste of resources. According to this act, it can be achieved by using cleaner technology and waste management through recycling.
- **Nature Protection Act:** it aims to protect the flora and fauna of the country and preserve it for humans to experience nature.
- **Planning Act:** it focuses on land use, like constructing buildings, urban environments, natural landscapes, etc. It also focuses on preventing pollution.
- **The Water Basin Management Planning Act:** It focuses on maintaining a good sea ecosystem in Danish sea zones.
- **Coastal Protection Act:** it aims to obtain protection for the Danish Coastline and reduce floods and erosion.
- **Environmental Objectives Act:** This act focuses on groundwater and surface water protection.
- **Environmental Assessment Act:** The Act comprises many other acts that help in the regulation of plans, programs, and specific projects. The acts under this act are:
  - **Contaminated Soil Act:** The purpose of this Act is to prevent, eliminate, or/and reduce land contamination to avoid adverse effects from soil contamination through technical inspection projects.
  - **Freedom of Access to Environment Information Act:** The Act implements the Directive on public access to environmental information and appeal and the Aarhus Convention and ensures that everyone has the right to access environmental information.<sup>40</sup> Under the Environmental Damage Act, any person can be held liable to compensate for the damage.

## RECOMMENDATIONS

Man has a special responsibility to safeguard and wisely manage the heritage of wildlife and its habitat, which are now gravely imperilled by a combination of adverse factors.<sup>41</sup> India majorly

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<sup>40</sup> *Ibid*

<sup>41</sup> Apurva Agarwal, 'Environmental Laws in India' (*LinkedIn*, 16 August 2022)

<<https://www.linkedin.com/pulse/environmental-laws-india-apurva-agarwal/>> accessed 02 January 2024

lacks in the implementation of environmental laws. India could adapt some of the initiatives established in other countries to improve upon its success in saving the environment.

- India should make stricter penalties for enforcing environmental laws, like heavy fines and imprisonments. India must also establish some acts against the environment as environmental crimes. For example, India must establish an act especially to counter GHGs.
- India must provide education to children regarding the importance of sustainability. A proper course must be formed and incorporated to make the new generation feel responsible for the environment and act to protect it. Education programs must be provided from an early age for children to engrain the notion of environmental protection in their minds.
- Like the three countries mentioned above, which have multiple laws covering each aspect and layer in which the environment can be damaged, India should cover multiple aspects of the environment to save it from any kind of damage.
- Along with the acts, different bodies must also be formed to conduct surveillance and strictly implement the laws and regulations.
- The government of India should start multiple subsidy and incentive policies for people or companies investing in the environmental protection of the country.
- India can reach its sustainability goal better with the use of green IT and AI technologies. India should focus its scientific research and engineering on making every process and machine green and environmentally friendly.
- India should replace non-renewable sources of energy with renewable sources of energy. The replacement must be done with strict orders, and heavy penalties must be placed on people or companies that fail to follow them.
- India must replace the vehicles with cleaner gas vehicles and establish green vehicles. For example, green shipping in Denmark. India must also promote non-fuel transportation methods like cycling. India, like in Europe, should form cycling lanes and pedestrian-friendly lanes.

## CONCLUSION

Even after an increase in environmental legislation, the toxicity of the environment has increased with time. It is past the time when India needs to convert its weaknesses into strengths and harness them to develop the environment. The gift of nature has to be used as a possession, not ownership. India has been an agriculture-dominated nation, and people with the right education and motivation towards its natural resources can be strongly determined to save it. Since people are not able to follow their moral duty, the adoption of strict protocols is necessary to safeguard the environment. By adopting the above-mentioned recommendations, India can fix the damage that has already occurred and save from the damage that can happen in the future as well.