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# Environmental Disasters as Catalysts for Risk Regulation in India

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## ABSTRACT

*This paper aims to evaluate and analyze the risk regulations and legislations around disaster management in India and speculate whether the existing laws and regulations are efficient in achieving the goal of mitigating impacts and losses caused by the disasters both natural and man-made. Through this paper I will also attempt to observe whether environmental disasters have been catalysts in bringing about risk regulations in India. I was inspired to explore this topic after watching a documentary that was centered around how the world, particularly our natural environment was and what it has become post industrialization, specifically in the 21st Century. It was appalling to see how much damage human intervention had inflicted on the environment, the result of which we are all facing now and will continue to face more intensely if we don't stop immediately. This intrigued me to explore these issues to see where our country stands in terms of environmental legislations. Further, due to the limited of scope of this paper, only a few legislations, acts and case laws will be discussed.*

Environmental disasters - natural and man-made - have always acted as a litmus-test for the efficiency of governance before, during and after the incident.<sup>2</sup> Legislation is the first step towards mitigating uncertainty during a disaster as it provides the foundation for developing strategies to implement while dealing with the disaster. Being one of the most disaster-prone countries in the world, India has had to evolve and progress towards an objective of reducing losses and impacts of disasters.<sup>3</sup> The vulnerability to disaster risks in India, relating to environmental degradation, unplanned urbanization, development within high-risk zones, geological hazards etc. are increasing manifold.<sup>4</sup> The increased exposure to risks involving disasters caused by Chemical, Biological, Radiological and Nuclear origin in India can be attributed to socio-economic development.<sup>5</sup> In terms of natural disasters, floods, earthquakes

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<sup>2</sup> Indrajit Pal, Rajib Shaw, Disaster Risk Governance in India and Cross Cutting Issues (Springer Nature 2018).

<sup>3</sup> Mihir R. Bhatt, Chapter 2, Disaster Risk Reduction: The Indian Landscape, Disaster Risk Governance in India and Cross Cutting Issues (Springer Nature 2018).

<sup>4</sup> Id.

<sup>5</sup> Id.

and storms have been reported to be the leading killers in India.<sup>6</sup> Therefore there was a need for strong legislations to protect the environment and human rights thus, the government enacted the Indian Disaster Management Act in 2005.<sup>7</sup> Prior to the implementation of this Act, the regulations were mostly post-disaster oriented and there were no risk regulations involved.<sup>8</sup>

At this juncture it is pertinent to distinguish between regulations governing natural disasters and man-made disasters. Natural disasters can be understood as sudden and distressing event caused by the abnormal intensity of a natural agent (flood, earthquakes, tornadoes etc.).<sup>9</sup> “They can be geophysical, hydrological, climatological, meteorological or biological.”<sup>10</sup> The Indian Disaster Management Act, 2005 among many other legislations largely covers all the above-mentioned disasters as well as man-made disasters.<sup>11</sup> Man-made disasters on the other hand, being self-explanatory, are events like “explosions, fires, accidents, spillage, building collapse, electricity failure, chemical and nuclear radiation, bomb blasts, terrorism, war, insurgency etc.”<sup>12</sup> These disasters are also governed by specific legislations like the Fatal Incidents Act, 1855, The Factories Act, 1948, The Explosives Act, 1884, Hazardous Wastes Management Rules to name a few.<sup>13</sup>

Due to India’s high vulnerability to these disasters, disaster management is an important aspect of the country’s legislative framework.<sup>14</sup> Here, the question arises whether these regulatory mechanisms have only been enacted after these disasters have occurred hence making them a catalyst for more proactive involvement in determining the risks – which can be understood better by observing the scenario in the backdrop when some of these environmental acts were enacted. The Great Famine of 1876-78 led to the formulation of the Famine Relief Code.<sup>15</sup> The cyclone in Orissa in October 1999 and the earthquake Bhuj in Gujarat in 2001 was the stimulus for adopting a “multi-disciplinary and multi-sectoral

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<sup>6</sup> The International Disaster Database, <https://www.emdat.be/> (last visited on Oct 10, 2020).

<sup>7</sup> Mihir R. Bhatt, *supra* note 3.

<sup>8</sup> *Disaster Management in India*, CHAPTER-VII, Shodhganga.

<sup>9</sup> MERRIAM-WEBSTER DICTIONARY, <https://www.merriam-webster.com/dictionary/natural%20disaster> (last visited on 10 Oct. 2020).

<sup>10</sup> INTERNATIONAL FEDERATION OF RED CROSS, TYPES OF DISASTERS, <https://www.ifrc.org/en/what-we-do/disaster-management/about-disasters/definition-of-hazard/> <https://www.merriam-webster.com/dictionary/natural%20disaster> (last visited on 10 Oct. 2020).

<sup>11</sup> The Disaster Management Act, 2005, Acts of Parliament, 1949 (India).

<sup>12</sup> CHAPTER 1, SHODHGANGA, [https://shodhganga.inflibnet.ac.in/bitstream/10603/9356/4/04\\_chapter%201.pdf](https://shodhganga.inflibnet.ac.in/bitstream/10603/9356/4/04_chapter%201.pdf) (last visited Oct 11, 2020).

<sup>13</sup> Compendium of Laws on Disaster Management, National Disaster Management Authority Government of India, January 2015.

<sup>14</sup> *Legal Framework for Disaster Management in India*, Chapter 5, Shodhganga.

<sup>15</sup> *Id.*

approach and incorporation of risk reduction in the development plans and strategies.”<sup>16</sup> However, over the last few years there has been a shift in the way the Indian government is approaching disaster management.<sup>17</sup> In 2005, the GOI enacted the Disaster Management Act, which paved the way for the formation of the National Disaster Management Authority – headed by the Prime Minister and several other state and district level management authorities to adopt an integrated approach to disaster management.<sup>18</sup> “Recently, pre-disaster risk regulations and moderations have also been assimilated. In this respect it is interesting to note that analyses related to disaster issues recurringly have a chronology of pre and post Bhopal Gas Incident.”<sup>19</sup>

The Constitution of India, the supreme law governing the country recognizes the right to have a clean and healthy environment and provides for sustainable development under the ambit of Article 21.<sup>20</sup> “Thus, the COI enforces a duty on the Central and State Governments to compose effective disaster management strategies<sup>21</sup> and this position has been substantiated post the judiciary’s engagement with several tragedies, including the Bhopal Gas Tragedy.”<sup>22</sup> Prior to the Bhopal Gas incident, although legislations like Water (Prevention and Control of Pollution) Act, 1974 and Air (Prevention and Control of Pollution) Act, 1981 were enacted along with the 42<sup>nd</sup> Amendment to the Constitution,<sup>23</sup> (making India the only country to include provisions relating to the environment in the constitution) disaster management primarily involved post-disaster measures until the Bhopal Gas Incident brought these issues- especially industrial hazards- to the spotlight.<sup>24</sup>

“The Bhopal Gas tragedy of December 1984, one of the worst industrial disasters in human history, claimed the lives of over 3000 people and rendered 8000 people permanently disabled when a poisonous gas emanated from the Union Carbide Factory<sup>25</sup> – the adverse effects of which are experienced even today. The consequences and causes that led to this incident reflected many defects in the legal system, following which legislations like the Environment Protection Act, 1986, Public Liability Insurance Act, 1991 and National

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<sup>16</sup> *Id.*

<sup>17</sup> *Id.*

<sup>18</sup> *Id.*

<sup>19</sup> *Supra* note 8.

<sup>20</sup> *VELLORE CITIZENS WELFARE FORUM v. UNION OF INDIA* 1996 AIR 2715.

<sup>21</sup> *T. Damodhar Rao v. S.O.Municipal Corpn., Hyderabad* AIR 1987 AP 171.

<sup>22</sup> *Supra* note 14.

<sup>23</sup> The 42<sup>nd</sup> Amendment incorporated two significant Articles- Articles 48-A and 51-A(g) to protect and improve the environment.

<sup>24</sup> *Supra* note 14.

<sup>25</sup> *Supra* note 14.

Environment Tribunal Act, 1995 were enacted.”<sup>26</sup> “The lack of risk regulations were apparent in the causes that led to this catastrophe – firstly, the governmental agencies did not take into consideration the relevant factors before granting permission to establish the Union Carbide factory; Secondly, they were unable to regulate the management through strict rules and regulations; Thirdly, the apathetic and incautious ignorance of the company of the preventative actions and measures despite being issued several warnings; Fourthly, the legislature failed to ensure safe occupational and environmental conditions; Lastly, the judiciary was inefficient in addressing and providing compensation and justice to the victims.”<sup>27</sup> The disaster’s magnitude led the government to realise that means of preventing similar tragedies were of utmost importance given the increasing scale and frequency of natural disasters which had irreversible impacts on the environment and eco-system.<sup>28</sup> While the Environment Protection Act, 1986 was the central legislation for protecting air, water and land from environmental pollution and mismanagement, Environmental Impact Assessments were not mandated under this law until 1994 through an EIA notification which made EIA’s compulsory for industries and projects that were likely to endanger the environment or people.<sup>29</sup> EIA mandated that the industry must submit a “detailed report on the potential adverse impact on the environment by the setting up of the proposed industrial unit.”<sup>30</sup>

Further, in the judicial aspect post the Bhopal Gas Incident, the Supreme Court in the Oleum Gas leak case, pronounced the “absolute liability” principle – not subject to any exceptions and the non-delegable duty of industries dealing with inherently dangerous and hazardous activities.<sup>31</sup> The court further reiterated this principle in the case of *Indian Council for Enviro-Legal Action v Union of India*.<sup>32</sup> In 1989, the government framed the “Manufacture, Storage and Import of Hazardous Chemical Rules” under EPA to harmonise various control measures and agencies to prevent and limit major accidents.<sup>33</sup> Another legal milestone was the establishment of the Coastal Regulation Zone (CRZ) Notification, 1991 to protect the ecosystem of coastal areas from unregulated activities.<sup>34</sup> The Public Liability Insurance Act, 1991 was enacted to provide immediate relief to the persons affected by accidents while

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<sup>26</sup> S.S.TACHAKRA AND S.M.ROBINSON, “THE BHOPAL GAS INCIDENT: LESSONS FOR THE FUTURE”, “ENVIRONMENTAL PROBLEMS AND PROSPECTS IN INDIA, 218. (Oxford and IBH Publishing Co. Pvt. Ltd., 1993)

<sup>27</sup> *Supra* note 8.

<sup>28</sup> *Supra* note 8.

<sup>29</sup> *Supra* note 8.

<sup>29</sup> *Supra* note 8.

<sup>30</sup> *Supra* note 14.

<sup>31</sup> *M.C.Mehta v. Union of India*, (1987) 1SCC 395; and (1986) 2 SCC 325; AIR 1987 SC 1088; and AIR 1987 SC 982.

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

<sup>33</sup> *Supra* note 14.

<sup>34</sup> *Supra* note 14.

handling hazardous substances.<sup>35</sup> “The Act imposes a duty on the part of the industrial units to take up insurance policies to compensate the victims in the event of industrial disasters. Further a National Environment Appellate Authority consisting of retired judicial officers was established to hear appeals on orders granting environmental clearance for carrying out hazardous activities in prohibited areas.”<sup>36</sup> Similarly, the tsunami in 2004 in the Indian Ocean,<sup>37</sup> was also a catalyst in setting up the NDMA.<sup>38</sup> Following the revelations of the limitations of the preparedness of the country during the Asian Tsunami and the Bhuj earthquake, the government realised the importance of crisis management by way of introducing the Disaster Management Act, 2005.<sup>39</sup> “This act provided for the NDMA and SDMA<sup>40</sup> which was responsible for the mitigation, prevention and timely response of authorities during disasters. Thus, this act provided a holistic approach by including not only post-disaster measures but also included techno-legal and preventive measures. However, the act does leave some grounds inadequately covered such as keeping the involvement of disaster experts non-mandatory and to a bare minimum – which promotes bureaucratic functioning. There is also very little or no mention of the local authorities, victims, NGO’s and vulnerable sections of the society hence completely ignoring community participation and traditional methods of warning, hence making disaster management a purely administrative activity, rather than involving and engaging the community.”<sup>41</sup>

In the sphere of criminal laws, although the IPC and Cr.P.C have provisions for environmental protection, one of the limitations is that the punishments meted out do not act as deterrents on the wrong-doer due to their meagre nature.<sup>42</sup>

The Environment Protection Act, 1986 is the most comprehensive policy regarding environmental protection and the EIA assists decision makers to take into account the environmental costs and benefits of the proposed projects.<sup>43</sup> However, EIA Notification of 1994 did not curb the environmental problems as the EPA did not focus on the source or prevention of the problem, rather it focuses on cushioning the impact.<sup>44</sup>

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<sup>35</sup> *Supra* note 14.

<sup>36</sup> *Supra* note 14.

<sup>37</sup> *Indian Ocean Tsunami: Then and Now*, BBC NEWS, (Oct. 12, 2020.). <https://www.bbc.com/news/world-asia-30034501>

<sup>38</sup> *Supra* note 8.

<sup>39</sup> *Supra* note 8.

<sup>40</sup> National Disaster Management Authority and State Disaster Management Authority.

<sup>41</sup> *Supra* note 8.

<sup>42</sup> *Supra* note 8.

<sup>43</sup> *Supra* note 8.

<sup>44</sup> *Supra* note 8.

Industrial Laws such as the Factories Act, 1948, Indian Explosives Act, 1884, Chemical Accident Rules, 1996, etc., have been instrumental in regulate the “safety, discharge of pollutants, hazardous substances, occupational health and welfare of the workers in the factory. The Factory Act, which is quite comprehensive in nature regarding the responsibility and liabilities that come with industrial activities, has been referred to by the Supreme court in various cases relating to harmful industrial pollutions like, the Taj Trapezium case, Kanpur Tanneries case, Oleum Gas Leakage case, Modi Distillery case, Asbestos Industries case, etc.”<sup>45</sup> While acts like PLIA<sup>46</sup> and the Factories Act adopt the principle of strict liability to lay down guidelines and provide relief to victims, it is also important to punish the offenders for the environmental and personal harm caused. Thus, the judiciary has been developing an “environmental jurisprudence” through Public Interest Litigations to prevent the activities harming the environment and the people in it. The judiciary has achieved this through landmark cases such as the Vellore Citizens Welfare Forum v. UOI, where the court introduced the “Precautionary Principle” and “Polluter Pays Principle” – which the court elaborated on further in the case of AP Pollution Control Board v. Prof. MV Nayadu.<sup>47</sup> “The precautionary principle shifts the burden of proof on the polluter- to prove that his activity is not a health hazard and his action is “environmentally benign.””<sup>48</sup> The polluter-pays principle that once a hazardous activity has caused harm to the environment or any other person, he is absolutely liable to compensate for the harm and pay for the restoration of the damaged ecology.”<sup>49</sup> Further, in the case of MC Mehta v. Kamal Nath, the SC laid that under Article 32, the court can “also impose exemplary damages on the person held guilty of causing pollution, so that it may act as deterrent for others not to cause pollution.”<sup>50</sup> These principles have formed a very important part of environmental jurisprudence and its evolution in India.

Apart from national level legislations and committees, India has also decentralised disaster management and risk reduction to a certain extent but the engagement at the local level needs to be supported more.<sup>51</sup> However, over the course of certain calamities and legislations due to the calamities, it can be observed that India has moved from a reactive approach to a

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<sup>45</sup> *Supra* note 8.

<sup>46</sup> Public Liability Insurance Act, 1991, Acts of Parliament, 1949, (India).

<sup>47</sup> A.P. Pollution Control Board vs Prof. M.V. Nayudu 1999(2) SCC 718.

<sup>48</sup> International Law Documents Environment, Rio Declaration 1992, Principle 15, UN Doc. A/CONF.151/26 (vol. I), 31 ILM 874 (1992).

<sup>49</sup> *Supra* note 32.

<sup>50</sup> MC Mehta v. Kamal Nath (1997)1 SCC 388.

<sup>51</sup> ANIL KUMAR GUPTA, DISASTER GOVERNANCE AND LEGAL SYSTEMS IN INDIA. DISASTER RISK GOVERNANCE IN INDIA AND CROSS CUTTING ISSUES, (Springer Nature 2018.)

proactive approach towards environmental disaster management. Initiatives like the ‘risk sensitive land-use planning’ are being promoted to facilitate the preventative approach towards causing environmental harm.<sup>52</sup> Another significant step that is being taken is to move towards a community disaster management approach (by including public-private partners) rather than an entirely governmental approach.<sup>53</sup>

When we observe the legislative reforms and the factors leading up to it, it can be seen that disasters have played a crucial part in bringing about risk regulations. However, the government has been taking steps, gradually, towards being more proactive as opposed to their previous strategy of only being reactive. In my opinion, the need of the hour in terms of legislations concerning environmental disasters is an audit of the institution, the policies and laws with a backdrop of how well major disasters have been managed, prevented or mitigated during the past. Another observation through my research was the lack of institutions that cater to sector/geographic specific needs – like coastal, industrial, agricultural etc. Promoting research and innovation in these fields will help mitigate the loss and prevent further destruction in the future. Further, there should be better clarity in the roles of the authorities to boost effectiveness and involvement of the community, voluntary organisations, local experts will definitely increase the potency of India’s capability to deal with environmental disasters. However, irrespective of our actions, nature and the environment will definitely find a way to survive and rebuild itself, as seen in case of Chernobyl – where humans haven’t been able to inhabit the city, but nature has. Researching and engaging with this topic has made me rethink the way I feel about big corporates and big conglomerates. Therefore, the key takeaway for me is that we can continue to exist in harmony with the environment only if we, as humans act in a mindful and responsible manner by mitigating the damage we inflict on the environment, and because we are a civilized society, legislations are the first step towards achieving this goal.

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<sup>52</sup>Id.

<sup>53</sup> Id.



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