Bhopal Gas Tragedy: Four Decades of Justice and Corporate Accountability

Prof. Vinod Shankar Mishra*

Abstract

The Bhopal gas disaster (1984) remains the most searing illustration of how weak industrial governance, fragmented regulation, and corporate evasion can converge into large-scale human suffering. Forty years on, Bhopal is not only a historical catastrophe but a continuing public-health and environmental crisis with intergenerational impacts. This article traces India's legal-policy evolution from strict/absolute liability to a prevention-oriented, principle-driven regime (precautionary principle, polluter pays, sustainable development), the rise of specialized fora such as the National Green Tribunal, and the recent move toward graded civil penalties and administrative adjudication under the Jan Vishwas (Amendment of Provisions) Act, 2023 and the Water (Prevention and Control of Pollution) Amendment, 2024. Grounded in Article 21 and related directive principles, it evaluates consent systems, monitoring and disclosure, remediation finance, and survivor rehabilitation, while identifying persistent gaps in capacity, deterrence, and cross-border corporate accountability. It advances a risk-priced, people-centred governance model linking land-use discipline, real-time transparency, independent audits, and market-facing Environmental, Social and Governance (ESG) duties to credible sanctions and accessible no-fault compensation. It also sets out a practical reform agenda to align industrial growth with the non-negotiable right to life and a healthy environment.

Key Words: *Bhopal, Hazardous Industries, Article 21, Absolute Liability, Polluter Pays, Precautionary Principle, National Green Tribunal, Jan Vishwas, Administrative Penalties, Esg, Environmental Governance.*

*Professor, Faculty of Law, Banaras Hindu University, Varanasi- 221005.

I. Introduction

The Bhopal tragedy is as much a constitutional story as an industrial one. A midnight leak of methyl isocyanate from the Union Carbide plant turned dense neighbourhoods into a gas chamber, killing thousands and injuring hundreds of thousands. Decades on, survivors continue to face chronic respiratory, neurological, ocular, reproductive, and mental-health morbidities. Groundwater and soil contamination around the abandoned site has added what activists call "the second disaster[1]." Bhopal therefore spans three planes: (i) immediate mass tort and compensation; (ii) long-tail health and environmental remediation; and (iii) structural reform of how the Indian state prevents and governs industrial risk.

This article offers a legal–policy reconstruction that pairs doctrinal clarity with institutional realism. Section 3 maps the shift from ad hoc responses to a principle-driven architecture that emerged after Bhopal and contemporaneous public interest litigation—anchored in absolute liability[2], polluter pays[3], precautionary principle[4], sustainable development[5], and the public trust doctrine[6]. Section 4 examines corporate accountability and state responsibility, including cross-border and successor liability, and the transition from penal to administrative enforcement. Section 5 distils the judiciary's role, especially the Supreme Court's movement from rights recognition to systems governance. Section 6 sets out a practical reform checklist: a risk-priced consent system; land-use and siting discipline; real-time disclosure and community right-to-know; independent audits; survivor-centred health financing; and credible, swiftly administered sanctions. Recent reforms mark another turn. Recognising

[1]Bhopal Medical Appeal, "Bhopal's Second Disaster: The Facts" (briefing paper), available at https://www.bhopal.org/continuing-disaster/second-poisoning/bhopal-second-poisoning/water-contamination-briefing-paper/ (accessed 30 Oct 2025); Colin Toogood, "The Second Bhopal Disaster," Crisis Response Journal 10(2) (Dec. 2014): 48–50; Rachna Dhingra & Madhumita Dutta, "Neend Udaao Andolan: Bhopali women's responses to the ongoing environmental and health disaster surrounding the abandoned Union Carbidse factory, Bhopal, India," Gender & Development 32(3) (2024): 727–748, doi: 10.1080/13552074.2024.2415248; also available at Oxfam Policy & Practice, posted 12 Feb 2025 (accessed 30 Oct 2025).

[2]M.C. Mehta v. Union of India (Oleum Gas Leak), 1987 SC 1086 (absolute liability for hazardous industries; departure from Rylands v. Fletcher).

[3]Vellore Citizens' Welfare Forum v. Union of India, (1996) 5 SCC 647.

[4]Ibid.

[5]Ibid.

[6]M.C. Mehta v. Kamal Nath, (1997) 1 SCC 388 (public trust doctrine).

that criminal prosecution alone is slow and often ineffective, Parliament has begun to move routine non-compliance towards administrative adjudication and graded civil penalties (for example, the Jan Vishwas (Amendment of Provisions) Act, 2023 and the Water (Prevention and Control of Pollution) Amendment Act, 2024 aiming for quicker, predictable sanctions while reserving imprisonment for wilful or repeat offences[7].

Two framing propositions guide this work. First, Article 21's guarantee of life and personal liberty includes the right to pollution-free air and water, as well as freedom from avoidable technological risks. Secondly, doctrines matter only if institutions can deliver them. India's success in governing hazardous industries will turn on the nuts-and-bolts of administration—staffing, laboratories, inspection cadence, data systems, and the political economy of enforcement—not on elegantly phrased norms alone.

II. Historical Background: Bhopal and the Evolution of Hazardous-Industry Regulation

Before delving into doctrinal and institutional shifts, it is essential to situate the Bhopal disaster within its historical and regulatory context. The tragedy did not occur in a legal vacuum, but rather against a backdrop of fragmented environmental statutes, limited industrial safety oversight, and minimal public awareness of chemical hazards. In many ways, Bhopal became the crucible in which India's environmental jurisprudence, administrative systems, and constitutional doctrines on industrial accountability were forged. The evolution that followed—spanning liability principles, statutory reforms, and judicial creativity—illustrates how a single catastrophe transformed the trajectory of environmental governance in India[8].

[7]On administrative adjudication and graded civil penalties: Environment (Protection) Act, 1986, Ss. 15C–15E (Adjudicating officer; appeal; penalties credited to Environmental Protection Fund) as inserted by the Jan Vishwas (Amendment of Provisions) Act, 2023; The Air (Prevention and Control of Pollution) Act, 1981, Ss. 39A–39C (Adjudicating officer; appeal; credit to EPF); The Water (Prevention and Control of Pollution) Act, 1974, S. 45B (Adjudicating officer) and substituted Ss. 41, 41A (civil penalties).

[8]See M.C. Mehta v. Union of India (Oleum Gas Leak), (1987) 1 SCC 395 (foundational absolute liability); Vellore Citizens' Welfare Forum v. Union of India, (1996) 5 SCC 647 (precautionary principle; polluter pays; sustainable development); Indian Council for Enviro-Legal Action v. Union of India, (1996) 3 SCC 212; (2011) 8 SCC 161 (remediation/restoration under polluter pays); The Environment (Protection) Act, 1986, Ss. 3, 5–6 (central rule-making and directions); The Public Liability Insurance Act, 1991, Ss. 3–4, 7A (no-fault relief; Environment Relief Fund); Manufacture, Storage and Import of Hazardous Chemical Rules, 1989; EIA Notification, 2006 (S.O. 1533(E)); The National Green Tribunal Act, 2010, Ss. 14–20 (specialised forum/jurisdiction).

A. From catastrophe to principle

In the decade following Bhopal, Indian environmental law underwent a rapid conceptual expansion. Through public interest litigation, the Supreme Court read environmental quality into Article 21, acknowledging that the right to life implies a right to clean air and water[9]. In parallel, the Court articulated a distinctly Indian doctrine of absolute liability for enterprises engaged in hazardous or inherently dangerous activities—the obligation to compensate for harm without proof of fault or negligence, coupled with a non-delegable duty of care (departing from the narrower *Rylands v. Fletcher* strict-liability[10] rule). The Court further held that harm from such activities forms part of the "social cost" of doing business, which the enterprise must absorb as an item of overheads, with the quantum of compensation linked to the magnitude and capacity of the enterprise[11]. In the Bhopal proceedings, the Court also warned against "exploitative and hazardous industrial adventurism," underscoring the State's obligation to maintain an adequate legal system to protect citizens[12].

Polluter pays, precautionary principle, and sustainable development soon joined absolute liability as the jurisprudential quartet structuring environmental adjudication. Polluter pays moved beyond damages to include remediation and restoration costs[13]; precaution shifted the burden of proof to industry to show safety ex ante[14]; sustainable development insisted that economic claims account for ecological limits and intergenerational equity[15].

Although the doctrine of absolute liability crystallised in the wake of Bhopal, the broader framework of polluter pays, the precautionary principle, and sustainable development evolved through the early 1990s and was firmly articulated by the Supreme Court in the mid-1990s.

B. Building the statutory scaffolding

Legislation prior to Bhopal—the Water (Prevention and Control of Pollution)

[9]Subhash Kumar v. State of Bihar, (1991) 1 SCC 598 (right to enjoyment of pollution-free water and air under Article 21).
[10]Rylands v. Fletcher (1868) LR 3 HL 330.
[11]M.C. Mehta v. Union of India (Oleum Gas), AIR 1987 SC 1086,1099.
[12]AIR 1990 SC 273 (order dated 4 May 1989)
[13]Indian Council for Enviro-Legal Action v. Union of India, (1996) 3 SCC 212; followed in (2011) 8 SCC 161 (remediation/restoration costs; liability).
[14]M.C. Mehta (Badkhal and Surajkund Lakes Matter) v. Union of India, (1997) 3 SCC 715 — Follow-up directions to protect the lakes; reiterated that only a very small area, if at all, could be permitted for tourism/recreation with prior approvals.
[15]Narmada Bachao Andolan v. Union of India, (2000) 10 SCC 664.

Act, 1974 and the Air (Prevention and Control of Pollution) Act, 1981—created boards and consent regimes but lacked teeth and integration[16]. Post-Bhopal, the Environment (Protection) Act, 1986, emerged as an umbrella enabling statute, empowering the Union government to set rules and standards across air, water, and land—and across sectors (see ss. 3, 5–6)[17]. Public Liability Insurance Act, 1991 (PLIA) creates a fast, no-fault route[18] for immediate relief after accidents involving hazardous substances: the unit must carry insurance, the District Collector processes claims summarily, and payouts can draw on the Environment Relief Fund (ERF)[19]. This does not replace civil claims or NGT-ordered restoration; it bridges the gap until fuller compensation and clean-up are secured. Its limits—statutory caps and narrow focus on immediate injury/property loss—mean PLIA should be paired with EPA/NGT remedies for remediation and long-term health surveillance.

Policy instruments complemented the statutes—Minimum National Standards (MINAS) under the Environment (Protection) Rules, 1986 (Schedule VI), the Environmental Impact Assessment Notification, 2006 (S.O. 1533(E)), siting guidelines, major-hazard rules, and, later, continuous online monitoring requirements for specified industries (Online Continuous Emissions/Effluents Monitoring Systems—OCEMS)[20]

---

[16]lacked teeth" (enforcement) and "lacked integration" (fragmented design): The Water (Prevention and Control of Pollution) Act, 1974, ss. 25–26 (consent to establish/operate), ss. 41–45 (criminal offences—no swift civil penalties in the original text); The Air (Prevention and Control of Pollution) Act, 1981, s. 21 (consent), ss. 37–39 (criminal offences). Pre-1986, there was no cross-media umbrella; coordination and stronger rule-making came with the Environment (Protection) Act, 1986, ss. 3, 5–6, later supported by the MSIHC Rules, 1989, and the Chemical Accidents Rules, 1996.

[17]The Environment (Protection) Act, 1986—see ss. 3, 5–6 (rule-making; directions including closure, prohibition, or regulation).

[18]The Public Liability Insurance Act, 1991, ss. 3–4 (no-fault liability; duty to take out insurance).

[19]Environment Relief Fund—The Public Liability Insurance Act, 1991, s. 7A; Environment Relief Fund Scheme, 2008

[20]Environment (Protection) Rules, 1986, Sch. VI (MINAS: general and industry-specific air/effluent standards); EIA Notification, 2006 (S.O. 1533(E)) (prior environmental clearance; screening/scoping; public consultation; appraisal); Manufacture, Storage and Import of Hazardous Chemical Rules, 1989 (safety reports; on-site/off-site emergency plans; threshold quantities—Schs. I–III); Chemical Accidents (Emergency Planning, Preparedness and Response) Rules, 1996 (off-site plans; Central/State/District Crisis Groups); Central Pollution Control Board (CPCB) directions on OCEMS (mandatory online continuous emissions/effluents monitoring for specified sectors).

The statutory consent architecture—principally Sections 25–27 and 27A of the Water (Prevention and Control of Pollution) Act, 1974 and Sections 21-21A of the Air (Prevention and Control of Pollution) Act, 1981—anchors State control over hazardous industrial operations[21]. These provisions require prior consent to establish and operate, empower regulators to impose conditions, collect samples, and revoke authorisations, and criminalise non-compliance. Yet, as Bhopal and subsequent industrial accidents show, consent processes often devolve into paperwork rather than ongoing risk assessment and process-safety verification. Modern governance, therefore, requires consent to be a living mechanism linked to third-party safety audits, real-time emissions data, automated alerts, and community-accessible dashboards.

C. From punishment to prevention—and now to compliance orchestration

If the 1980s and early 1990s were about establishing rights and liability, the following decades tended toward institutionalisation: specialised green benches culminating in the National Green Tribunal under the NGT Act, 2010 (jurisdiction and powers: ss14–20); tighter emissions norms; and court-supervised clean-up and compliance programmes[22]. The 2010s and 2020s have added a further turn: administrative adjudication and graded civil penalties, seeking speed, predictability, and deterrence without the latency of criminal prosecution for minor infractions—the Jan Vishwas (Amendment of Provisions) Act, 2023 and the Water (Prevention and Control of Pollution) Amendment Act, 2024 exemplify this shift.[23] This does not abandon prosecutions. Rather, it adopts a triage model: prosecutions are limited to wilful, recidivist, or catastrophic harm, while routine non-compliance draws swift, risk-priced administrative penalties.

D. The unfinished agenda

Despite these advances, familiar weaknesses persist: reactive inspections,

[21]The Water (Prevention and Control of Pollution) Act, 1974, S. 27A (2024): Central Government may issue binding directions to State Boards and prescribe uniform consent standards, monitoring protocols, and compliance-verification (including digital trails/third-party certification). The Air (Prevention and Control of Pollution) Act, 1981 Act, S. 21A (2023): Central Government may frame rules for consent conditions, technology-based continuous emission monitoring and digital reporting, and intervene where State implementation is deficient.

[22]See section 18 of the The Water (Prevention and Control of Pollution) Act, 1974 and CPCB directions on Online Continuous Emissions/Effluents Monitoring Systems (OCEMS/CEMS).

[23]The Jan Vishwas (Amendment of Provisions) Act, 2023; The Water (Prevention and Control of Pollution) Amendment Act, 2024 (introducing adjudicating-officer model and graded civil penalties).

understaffed boards, limited laboratory capacity, poor data discipline, and fractures between central and state authorities. Survivors' movements—often led by women—kept Bhopal in public consciousness and pushed for clean water supply, hospital resourcing, site remediation, and transparent accounting of claims[24]. The enduring lesson is that prevention cannot be outsourced to litigation; it must be embedded into design, siting, operations, and disclosure—using instruments such as the Manufacture, Storage and Import of Hazardous Chemical Rules, 1989; the Chemical Accidents (Emergency Planning, Preparedness and Response) Rules, 1996; Factories Act provisions on major accident hazards; and CPCB siting guidance[25].

E. Corporate Accountability and State Responsibility

The transformation of India's environmental governance after Bhopal was not only institutional but also moral. It forced a rethinking of how corporate entities and the State share responsibility for industrial hazards. The tragedy revealed deep fissures in regulatory vigilance, the asymmetry of power between transnational corporations and affected communities, and the inadequacy of existing compensation mechanisms[26]. Over time, this led to a redefinition of accountability—from punitive blame and ex gratia relief toward structured liability, restoration, and preventive responsibility[27]. Against this backdrop, the liability architecture that emerged reflects the country's gradual shift from compensation alone to a broader obligation of environmental restoration and long-term care.

---

[24]Goldman Environmental Prize, 'Rashida Bee & Champa Devi Shukla' (Laureate profile, 2004), available at: https://www.goldmanprize.org/recipient/rashida-bee-champa-devi-shukla/ (Last visited: Nov 2, 2025); Bridget Hanna, "Bhopal: Unending Disaster, Enduring Resistance," in Michel Feher (ed.), Nongovernmental Politics 488–523 (Zone Books, New York, 2007); Amnesty International, 'Clouds of Injustice: Bhopal Disaster 20 Years On' (AI Index: ASA 20/015/2004, London, 2004); Amnesty International, 'Injustice Incorporated: Corporate Abuses and the Human Right to Remedy' (POL 30/001/2014, London, 2014); International Campaign for Justice in Bhopal (ICJB), 'Our Demands', available at: https://www.bhopal.net/our-demands/ (Last visited: Nov 2, 2025).

[25]Factories Act, 1948, Ch. IV and state rules under s 41B (major accident hazards; safety/health).

[26]Research Foundation for Science, Technology and Natural Resource Policy v. Union of India (Ship-Breaking), (2007) 16 SCC 186 — hazardous waste handling; compliance costs and safeguards placed on operators.

[27]Goa Foundation v. Union of India, (2014) 6 SCC 590 — intergenerational equity; creation of funds for ecological restoration from extractive industry revenues.

F. The Settlement and Its Limits (1989)

The 1989 settlement approved by the Supreme Court (orders dated 14–15 February 1989) delivered quick relief to some families but capped the company's liability and shifted the struggle from courts to claims processing. This outcome reflected a humanitarian settlement on quantum rather than an adjudication under Absolute Liability; later orders clarified that the doctrine remained intact for future litigation. Many survivors argue that a lump-sum model could not capture delayed illnesses, under-reported exposure, or the true cost of long-term care. Later review proceedings clarified that the Court did not reject M.C. Mehta's liability doctrine; it only treated the settlement as a practical response to an urgent humanitarian crisis. The result, however, was that "full and final" language narrowed room for future claims and placed a heavy burden on administrative schemes to do justice[28]. The 1989 compromise produced finality and cash flow, not a Mehta-based damages judgment. Later benches reiterated that Absolute Liability governs hazardous enterprises, but Bhopal's quantum cannot be retrofitted through curative jurisdiction[29].

G. Criminal Accountability: From Promise to Paralysis

The criminal track began soon after the leak but has moved unevenly. Charges were diluted over time, and eventual convictions of some officials carried limited sentences. Key questions—parent-company responsibility, extradition of foreign accused, and the State's duty to pursue serious offences in mass-harm events—remained unresolved or stalled. The slow pace reduced deterrence and signalled that corporate crime in complex disasters risks being treated as ordinary negligence rather than as a grave public wrong[30]. The critique here is not of criminal law's legitimacy, but of its slow and diluted application in complex corporate disasters.

H. The Curative Petition and the Question of Finality (2023)

Decades later, the Union sought additional compensation through a curative petition, arguing that the original settlement underestimated injuries and environmental damage. In 2023, the Supreme Court declined to reopen the settlement, stressing finality and the government's role in the terms agreed. This outcome shows a structural issue: when a global compromise is sealed without a strong scientific baseline on exposure and health effects, revisiting

[28]Union Carbide Corporation v. Union of India, (1989) 1 SCC 674,676.
[29]Infra note 60.
[30]Union Carbide Corporation v. Union of India, AIR 1992 SC 248,309.

it becomes legally and politically difficult even when later evidence suggests deeper harm[31].

I. Health Surveillance: The Unfinished Agenda

Survivors continue to report chronic respiratory disease, ocular damage, reproductive disorders, mental-health impacts, and multi-system illnesses. A durable public-health response needs (i) a registry of all exposed persons with unique IDs, (ii) standard treatment protocols across government hospitals, (iii) periodic cohort studies tracking morbidity and mortality, and (iv) portable benefits so care follows the patient across States and workplaces. These steps are essential for fair compensation and targeted rehabilitation[32].

J. Second-Generation and In-Utero Exposure

Studies indicate possible congenital anomalies and developmental delays among children born to exposed parents, but monitoring is uneven. Law and policy should recognise inter-generational harms by funding paediatric screening, neuro-developmental therapy, nutritional support, and scholarships. Financing should come from a dedicated health and remediation fund consistent with the polluter-pays principle, with transparent governance and community oversight[33].

---

[31]Infra note 60

[32]Report on Population Based Long Term Epidemiological Studies on the Health Effects of Bhopal Toxic Gas Exposure (1985 – 1994)', available at: https://nireh.icmr.org.in/docs/Long%20Term%20Epidemiological%20Studies.pdf (Last visited: Nov 2, 2025); V R Dhara & D Kriebel, 'The Union Carbide Disaster in Bhopal: A Review of Health Effects' (2002) 57(5) Archives of Environmental Health: An International Journal 391–404, available at: https://pubmed.ncbi.nlm.nih.gov/12641179/ (Last visited: Nov 2, 2025); E Broughton, 'The Bhopal Disaster and Its Aftermath: A Review' (2005) 4(6) Environmental Health Perspectives 6, available at: https://pubmed.ncbi.nlm.nih.gov/15882472/ (Last visited: Nov 2, 2025); Amnesty International, 'Clouds of Injustice: Bhopal Disaster 20 Years On' (AI Index: ASA 20/015/2004, London, 2004); Amnesty International, 'Bhopal: 40 Years of Injustice' (News Release, 2 Dec. 2024), available at: https://www.amnesty.org/en/documents/asa20/7817/2024/en/ (Last visited: Nov 2, 2025); Sambhavna Trust Clinic, 'About Sambhavna' (Webpage, n.d.), available at: https://sambhavnabhopal.org/about-sambhavna/ (Last visited: Nov 2, 2025).

[33]ICMR–National Institute for Research in Environmental Health (NIREH), 'Health Effects of the Toxic Gas Leak from the Union Carbide Factory, Bhopal: Long-Term Epidemiological Studies (ICMR, various rounds, cohort follow-ups)', available at: https://nireh.icmr.org.in/MIC%20Report.php (Last visited: Nov 2, 2025); B. B. Ganguly et al., 'Effect of age at exposure on chromosome abnormalities in MIC-exposed Bhopal population detected 30 years post-disaster' (2018) 809 Mutation Research 32–50, available at: https://pubmed.ncbi.nlm.nih.gov/29684722/ (Last visited: Nov 2, 2025); G. C. McCord et al., 'Long-term health and human capital effects of in utero exposure to the Bhopal gas disaster' (2023) 13(6) BMJ Open e066733, available at: https://bmjopen.bmj.com/content/13/6/e066733 (Last visited: Nov 2, 2025); Amnesty International, 'Bhopal: 40 Years of Injustice' (Report, AI Index: ASA 20/7817/2024, 2024), available at: https://www.amnesty.org/en/documents/asa20/7817/2024/en/ (Last visited: Nov 2, 2025); Vellore Citizens Welfare Forum v Union of India (1996) 5 SCC 647 (SC), available at: https://api.sci.govin/jonew/judis/15202.pdf (Last visited: Nov 2, 2025).

K. Environmental Remediation and Site Safety

Human injury cannot be addressed in isolation from the contaminated site. Authorities should publish inventories of stored waste, soil and groundwater test results, and a time-bound clean-up plan. Remediation must follow clear standards, third-party audits, and community monitoring until exposure pathways are fully closed. Without verified clean-up, low-dose exposures may continue for years, undermining "closure" and public trust[34].

III. Corporate Accountability, Enforcement Mechanisms, and Innovative Responses

The Bhopal disaster did more than expose regulatory gaps—it fundamentally reshaped the discourse on corporate accountability in India. While the early years were dominated by questions of compensation and criminal culpability, the evolving jurisprudence since M.C. Mehta (Oleum Gas Leak) and subsequent environmental cases has broadened the inquiry towards systemic responsibility, preventive obligations, and the duty to restore affected communities and ecosystems. This section, therefore, moves from the historical experience of Bhopal to the wider legal framework that governs hazardous industries today, examining how liability norms, enforcement mechanisms, and judicial innovations seek to address both immediate harms and long-term public health and environmental consequences.

A. Liability architecture: from compensation to restoration

Absolute liability for hazardous enterprises remains the doctrinal backbone, aligning with polluter pays to authorise compensation, remediation, and restoration costs.[35] Over time, courts have clarified that "compensation" is not limited to individual tort damages; it includes the costs of returning commons—air, water, soil—to pre-injury baselines, as well as funding for health surveillance of affected populations.[36]

To operationalise polluter pays, orders should state the method of calculating environmental compensation, including (i) quantification of ecological injury

[34]Amnesty International, 'Bhopal: 40 Years of Injustice' (Report, AI Index: ASA 20/7817/2024, 2024), available at: https://www.amnesty.org/en/documents/asa20/7817/2024/en/ (Last visited: Nov 2, 2025).

[35]Supra note 13

[36]Indian Council for Enviro-Legal Action v. Union of India (1996) 3 SCC 212 (polluter pays; remediation costs); Vellore Citizens' Welfare Forum v. Union of India (1996) 5 SCC 647 (polluter pays; precautionary principle); M.C. Mehta v. Union of India (1997) 2 SCC 353 (monitoring; restoration duty).

and restoration costs; (ii) time-value adjustments for delayed compliance; and (iii) disgorgement of economic gains from illegality (e.g., operating without consent or disabling control systems). A published penalty/compensation grid aligned to hazard category and enterprise capacity would improve predictability and deterrence, while keeping judicial discretion for egregious facts.

B. Successor responsibility and cross-border gaps

Bhopal exposed a structural problem: multinational parent entities and successors can shield themselves from host-state jurisdictional reach. While company law recognises successor liability in principle, enforcing it across borders relies on treaties, comity, and the willingness of home jurisdictions to cooperate.[37]The Bhopal case also exposes a wider gap in international law: there is no binding global mechanism to hold companies liable across borders for industrial disasters. In the absence of a mandatory civil liability regime, enforcement depends on domestic law and cross-border cooperation. Soft-law instruments—such as the UN Guiding Principles on Business[38] and Human Rights and the OECD Guidelines for Multinational Enterprises[39]—offer direction but have limited enforceability.

A practical way to organise accountability is to spell out when Indian courts can reach foreign parent companies and when the corporate veil may be set aside. Jurisdiction should follow control: where a parent directs or closely supervises hazardous operations here, or the group functions as one integrated enterprise, courts can take notice of that reality. In exceptional cases of environmental mass harm, a narrowly framed veil-piercing rule—and successor liability where the same business and assets continue in substance—would close obvious escape routes while keeping ordinary corporate separateness intact.

Cross-border enforcement should then move on well-marked tracks. The Code of Civil Procedure already provides a route for decrees from reciprocating

[37]Dow acquired UCC as a wholly owned subsidiary on Feb. 6, 2001. Indian courts have since issued summons in Bhopal-related proceedings while Dow has contested jurisdiction; and the Supreme Court in March 2023 dismissed the Union's curative petition to reopen the 1989 settlement—illustrating both the principle of successor liability in theory and the practical limits of cross-border enforcement in fact.

[38]United Nations Human Rights Council, Guiding Principles on Business and Human Rights: Implementing the United Nations "Protect, Respect and Remedy" Framework, UN Doc. A/HRC/17/31 (21 March 2011), endorsed by UN HRC Res. 17/4 (16 June 2011).

[39]OECD, OECD Guidelines for Multinational Enterprises on Responsible Business Conduct (Paris: OECD Publishing, 2023) (adopted 1976; updated 2000, 2011, 2023).

territories (sections 13–14, 44A), and the Arbitration and Conciliation Act, 1996 enables enforcement of New York Convention awards under Part II. Clear court practice directions can prioritise environmental claims and trim repetitive proceedings, so victims do not have to fight the same battle at every stage simply to turn a decision into real relief.

Finally, risk needs to be priced in at the point of entry. Project approvals for hazardous activity should require disclosure of foreign liabilities and any legacy contamination, and should be backed by escrow or environmental bonds sized to the project's risk and the operator's capacity. For listed companies, securities-market disclosure—such as SEBI's BRSR[40] Core—should flag contingent environmental liabilities and set out credible funding for clean-up and long-term care, so regulators and investors can see whether the promises on paper are matched by resources on hand.[41]

This three-lever design makes cross-border accountability operational: assert jurisdiction when warranted, ensure judgments travel, and lock in funds upfront so remediation and survivor-centred relief are actually delivered.

C. From criminalisation to graded civil penalties

India's environmental statutes long relied on prosecution for deterrence. Experience showed that over-criminalisation with low conviction rates and prolonged trials did not produce compliance. The emerging model—reflected in the Jan Vishwas (Amendment of Provisions) Act, 2023 and the Water (Prevention and Control of Pollution) Amendment Act, 2024—is to reserve imprisonment for egregious, wilful, or repeat violations while moving routine infractions to administrative penalties imposed by designated adjudicating officers, with appeals to specialised tribunals such as the NGT. Properly designed, this risk-priced approach aligns sanction severity with hazard profile and enterprise capacity, improves speed, and preserves criminal law for genuinely culpable conduct. Clear guidelines on penalty quantification and due-process safeguards should be issued to avoid arbitrariness.

---

[40]It refers to the core set of Key Performance Indicators (KPIs) prescribed by SEBI under the Business Responsibility and Sustainability Report (BRSR) framework for listed companies in India. These core metrics focus on ESG-linked disclosures, including supply-chain due diligence, emissions, workforce practices, and community impact.

[41]For successor and cross-border accountability issues generally, see The Code of Civil Procedure, 1908, s. 13 (conclusiveness of foreign judgments and grounds for refusal), s. 44A (execution of decrees from reciprocating territories); The Arbitration and Conciliation Act, 1996, Part II (Enforcement of Foreign Awards, specifically s. 48 on grounds for refusal).

D. Siting, Land-Use Planning, and ALARP (As Low As Reasonably Practicable)

Bhopal's density amplified harm. Hazard management begins not at the factory gate but on the land-use map. A modern regime embeds siting discipline—no new major-accident-hazard units in dense urban precincts without defensible risk modelling; buffer/green belts; off-site emergency plans with credible evacuation capacity; and routine, drill-verified readiness. The operational standard should be ALARP (as low as reasonably practicable)—that is, risk reduced until further reduction would be grossly disproportionate to the sacrifice required—supported by independent third-party safety audits and public consultation[42].

E. Disclosure, data, and the people's right-to-know

Deterrence improves when communities can see[43]. A comprehensive right-to-know framework should include (i) public chemical inventories; (ii) online real-time emissions (air/water) from OCEMS; (iii) incident and near-miss reporting; and (iv) neighbourhood-level hazard mapping and siren/SMS alert protocols. These are not merely transparency tools; they are preconditions for informed risk governance and credible emergency response[44].

F. Survivor-centred remedies

Regulatory closure after an accident is not the end of justice. A mature system provides medical-surveillance registries, funded clinics, inter-generational health research, and no-fault compensation that is swift, simple, and adequate. Orders and settlements should specify the accountable administrative node (e.g., District Collector or a dedicated portal), time-bound disbursal, and public dashboards tracking claims in real time. Statutes and schemes already enable

---

[42]Amnesty International, 'Bhopal: 40 Years of Injustice' (Report, AI Index: ASA 20/7817/2024, 2024), available at: https://www.amnesty.org/en/documents/asa20/7817/2024/en/ (Last visited: Nov 2, 2025).

[43]Manufacture, Storage and Import of Hazardous Chemical Rules, 1989 (safety reports; emergency plans; thresholds). See also; Amnesty International, 'Bhopal: 40 Years of Injustice' (Report, AI Index: ASA 20/7817/2024, 2024), available at: https://www.amnesty.org/en/documents/asa20/7817/2024/en/ (Last visited: Nov 2, 2025).

[44]See the Chemical Accidents (Emergency Planning, Preparedness and Response) Rules, 1996—requiring off-site emergency plans, crisis groups, and district-level mechanisms; and the Environmental Impact Assessment Notification, 2006, S.O. 1533(E)—mandating prior appraisal and public consultation before project commencement.

parts of this (The Public Liability Insurance Act[45]; Environment Relief Fund; NGT's remedial powers); they should be made routine in orders and settlements[46].

Mass-exposure incidents demand a survivor-centred health statute: life-long registries, periodic screening protocols, cause-linked treatment packages, and funding that blends PLIA/ERF with dedicated budget lines. Orders should designate a single administrative node (e.g., the District Collector) for claims and care coordination, with public dashboards on registrations, disbursals, and health outcomes. This anchors constitutional relief in durable administration rather than episodic litigation.

G. From Strict to Absolute Liability—and Why It Matters After Bhopal

Rylands v. Fletcher tied liability to "non-natural use" and allowed several defences. In M.C. Mehta (Oleum Gas Leak) (1987), the Supreme Court adopted an Indian rule: enterprises engaged in hazardous activity owe an absolute, non-delegable duty to prevent harm; classic defences do not apply. The Bhopal settlement (1989) avoided a full merits ruling on quantum. In the mid-1990s, the Court firmly articulated the polluter-pays and precautionary principles (alongside sustainable development), confirming that absolute liability and polluter-pays are part of Indian law. This framework supports full remediation and survivor-centred relief in comparable toxic disasters.

H. Polluter Pays in Practice: Compensation + Restoration (with a Survivors' Grid)

Courts interpret polluter pays to cover two heads: (A) compensation to individuals for injury, loss of earnings, and disability; and (B) restoration/remediation of the commons—air, water, and soil—back to pre-injury baselines, including health surveillance and safe water. A practical way to deliver this is a graded Survivors' Health and Compensation Grid linking (i) exposure zones, (ii) certified conditions, and (iii) disability levels. Benefits should combine a base amount, a disability add-on, and periodic review where health worsens.

[45]The Public Liability Insurance Act, 1991, ss. 3–4 — imposes no-fault liability (s. 3) and requires owners handling hazardous substances to maintain insurance cover (s. 4).

[46]Environment Relief Fund and the NGT's remedial jurisdiction under the NGT Act, 2010—ss. 15 (relief, compensation, restitution) and 17 (liability to pay)—should be applied as a routine in orders and settlements, with directions framed in light of the Environment (Protection) Act, 1986, as amended by the Jan Vishwas Act, 2023, where s. 16 now establishes the Environmental Protection Fund and ss. 15A & 15E provide for company penalties and crediting of penalties to that Fund.

The grid can be notified by rules under the Environment (Protection) Act or under a special scheme, with an independent medical appeals board to reduce repetitive litigation. Financing should draw on ring-fenced remediation and health funds consistent with polluter pays, administered with transparent community oversight[47].

I. Measuring Harm at Scale: Epidemiology, Presumptions, and Burden-Shifting

Individual proof of causation is hard when exposure is mass, mixed, and long-tailed. Claims authorities can rely on epidemiology—exposure levels, relative risk, dose-response—to define presumptions of causation for listed diseases. Where a listed disease is diagnosed in an exposure zone, the burden should shift to the enterprise to rebut. This approach aligns with constitutional tort principles and internalises the social cost of hazardous activity[48].

J. Designing a Survivors' Health and Compensation Grid

A practical model is a graded grid linking (a) exposure zones, (b) certified conditions, and (c) disability levels. Benefits can combine a base amount, a disability add-on, and periodic review if health worsens. The grid should be notified through statutory rules[49] (e.g., under the Environment (Protection)

---

[47]Indian Council for Enviro-Legal Action v. Union of India, (1996) 3 SCC 212; (2011) 8 SCC 161 (remediation/restoration)

[48]ICMR–NIREH, Health Effects of the Toxic Gas Leak from the Union Carbide Factory, Bhopal: Long-Term Epidemiological Studies (technical report; population-based cohorts, exposure–disease linkages, periodic follow-ups); G C McCord et al., 'Long-term health and human capital effects of in utero exposure to the Bhopal gas disaster' (2023) BMJ Open 13(6): e066733; B B Ganguly et al., 'Effect of age at exposure on chromosome abnormalities in MIC-exposed Bhopal population detected 30 years post-disaster' (2018) Mutation Research 809: 32–50; The Public Liability Insurance Act, 1991, ss 3–4, 7A (no-fault relief; duty to insure; Environmental Relief Fund); Public Liability Insurance Rules, 1991, r 11 (owner's ERF contribution equal to, and payable with, the premium).

[49]The Environment (Protection) Act, 1986, ss 3(1), 3(3), 6 (rule-making power; creation of implementing authorities); Bhopal Gas Leak Disaster (Registration and Processing of Claims) Scheme, 1985 (category-wise registration; appeals to Additional Commissioner) (Govt of India, 1985); The Employees' Compensation Act, 1923, Sch I (percentages of loss of earning capacity for graded benefits); Employees' State Insurance Act, 1948, s 55 (review by Medical Board on aggravation—periodic reassessment); The Rights of Persons with Disabilities Act, 2016, ch X (guidelines, certifying authorities, and appeals in disability certification) and DEPwD Guidelines for Assessment (latest notified); UDID programme (unique disability ID and portability of benefits); cf NDMA guidelines on chemical emergencies/medical management (surveillance and zonation in mass-exposure events

Act) or a special scheme, with an independent medical appeals board to avoid repetitive litigation.

K. Insurance and Risk-Pricing for Hazardous Industries

Mandatory environmental liability insurance exists, but it is often too small for catastrophic losses. A stronger model would require (i) compulsory primary coverage, (ii) an excess-of-loss pooled reinsurance layer across hazardous sectors, and (iii) a public backstop for ultra-catastrophic events funded by risk-rated levies. Premiums should reflect actual risk, so firms invest in prevention and continuous monitoring[50].

IV. Response of the Judiciary to Hazardous Industries in India

The Indian judiciary's engagement with hazardous industries evolved through distinct but interrelated phases. Each phase reflected not only the Court's response to particular crises but also a deepening understanding of constitutional environmentalism

A. Phase I (1980–1990) — Genesis of Environmental Jurisprudence: The Post-Bhopal Catalyst

Prior to the mid-1980s, India relied largely on common-law principles, notably the doctrine of strict liability from Rylands v Fletcher. In M.C. Mehta (Oleum Gas Leak), the Supreme Court articulated absolute liability and also advanced the capacity-linked compensation rationale: the quantum of compensation must be proportionate to the magnitude and financial capacity of the enterprise to ensure deterrence—"the larger and more prosperous the enterprise, the greater must be the amount of compensation payable by it[51]. This reliance

[50]The Public Liability Insurance Act, 1991, ss 3–4, 7A (mandatory insurance; Environmental Relief Fund); Public Liability Insurance Rules, 1991, r 11 (owner contribution to ERF equals premium); Public Liability Insurance (Amendment) Rules, 2024, r 10 (substituted) (raising the overall limit under s 4(2A) to ₹ 250 crore per incident and ₹ 500 crore aggregate per policy year); IRDAI, Circular on the Indian Market Terrorism Risk Insurance Pool (IMTRIP) (2019) (pool structure); GIC Re, IMTRIP Reinsurance Programme—EOI (12 Feb 2025) (pool management and renewal); Price–Anderson Act, 42 U.S.C. § 2210; see also NRC, Report to Congress on the Price–Anderson Act (2021) and CRS, Price–Anderson Act: Nuclear Power Industry Liability Limits (2025). For critiques of low limits and coverage design, see T R Subramanya & Aaditya Dighe, 'Public Liability Insurance: Its Relevance, Application, Shortcomings and the Way Forward' (2018) JELPD 5; cf Amnesty International, Clouds of Injustice: Bhopal Disaster 20 Years On (2004).

[51]Post Mehta jurisprudence treats environmental harm as a social cost to be internalised by hazardous enterprises; deterrence is a legitimate aim. Union Carbide Corporation v. Union of India AIR 1990 SC 273,283.

proved catastrophically insufficient when tested by the 1984 Bhopal Gas Disaster. The handling of the Bhopal tragedy, particularly the final settlement of $470 million upheld by the Supreme Court in 1991[52], drew widespread criticism. The review judgment upheld the settlement and clarified that compromise cannot quash criminal proceedings[53].

Victim support organizations pointed out that this amount, when distributed among over 550,000 successful claims for death and injury, resulted in "paltry" compensation for the victims, galvanizing the need for a radically different legal standard[54]. The lesson critics drew was not that Absolute Liability failed in doctrine, but that a crisis-driven settlement can deliver speed at the cost of deterrence-calibrated quantum. The Bhopal incident served as the catalyst that forced judicial and public consensus that a more robust, indigenous legal standard was imperative for addressing mass industrial harm.

B. Phase II rights and doctrines (1990–2000)

In the foundational phase, the Supreme Court transformed environmental protection from aspiration to enforceable right. Reading Article 21 to include pollution-free air and water, the Court ordered polluting units to install treatment systems or face closure.[55] (e.g., Ganga industrial clusters), By the mid-1990s, the Court consolidated precaution, polluter pays, and sustainable development as governing canons, and articulated the public trust doctrine limiting alienation of natural resources. A classic example of its stringent application is the Bichhri Ground Water Pollution Case, where the Supreme Court directed the closure of chemical industries operating without effluent treatment plants. Crucially, the court attached the property of the polluter and mandated the Department of Environment and Forests to recover the full cost of eco-restoration from those responsible for contaminating the wells of 14 villages in Rajasthan. In Vellore Citizens' Welfare Forum (1996), the Court located these principles within Articles 21, 47, 48A and 51A(g), shifting the burden

[52]Union Carbide Corporation v. Union of India, (1989) 3 SCC 38.
[53]Union Carbide Corporation v. Union of India, (1991) 4 SCC 584.
[54]India, Lok Sabha, Starred Question No. 70, "Bhopal Gas Tragedy," 29 July 2010, Answer (reporting 5,74,376 claimants awarded original compensation), Parliament Digital Library, available at https://eparlib.sansad.in/bitstream/123456789/588166/1/92067.pdf (last visited 3 Nov. 2025);Government of India, Ministry of Chemicals & Fertilizers, "Bhopal Gas Leak Disaster," updated 31 July 2024 (noting original compensation of ₹ 1,549.33 crore to 5,73,959 claimants till 31.7.2024), available at https://chemicals.gov.in/bhopal-gas-leak-disaster (last visited 3 Nov. 2025).
[55]M.C.Mehta v. Union of India AIR 1988 SC 1037.

to industry to demonstrate safety ex ante and obliging polluters to fund remediation—not merely pay private damages.

In *M.C. Mehta v. Kamal Nath*[56] (1997), the Court articulated the public trust doctrine, limiting the State's ability to alienate commons and requiring restoration where trust resources are impaired. Together, these holdings hardened the normative spine for hazardous-industry control.

The principle also includes the concept of exemplary damages; the court imposed a fine of Rs 10 Lakhs (later converted to restoration cost) on a motel for illegal construction on forest land. These exemplary damages serve a punitive and deterrent function, aligning PPP with the goal of sustainable development. By rigorously enforcing PPP, the judiciary ensures that industries can no longer treat pollution costs as externalities borne by the public or the environment. This action is not merely an economic correction but a constitutional duty, reinforcing the Directive Principles of State Policy mandate for public health and resource preservation. This rigorous requirement forces hazardous industries toward highly accurate internal accounting and mandatory capital expenditure on pollution control and abatement facilities.

By the mid-1990s, the Supreme Court made explicit that the precautionary principle and the polluter-pays principle are part of Indian law, integral to sustainable development.

(i) Relocation and Zoning in Urban and Sensitive Areas

The courts have frequently taken preemptive and corrective actions regarding the location of hazardous operations. In the *M.C. Mehta v. UOI* (Antop Hill)[57] case, the Supreme Court took preventive action by halting the proposed establishment of a large-scale storage center for hazardous chemicals in the heart of Mumbai, prioritizing the safety of the 1.5 million surrounding residents over industrial logistical needs.

Perhaps the most famous example is the Taj Trapezium Case.[58] The

[56]M.C. Mehta v. Kamal Nath, (1997) 1 SCC 388.

[57]M.C. Mehta v. Union of India, W.P. (C) No. 12179 of 1985 (Supreme Court, order dated 17 Dec 1986), challenging proposed chemical-storage godowns at Antop Hill, Mumbai. Supporting government action followed via the MoEF notification S.O. 136(E), 9 Feb 1990, issued under the Environment (Protection) Act/Rules, prohibiting storage of chemicals in Antop Hill; the notification itself cites the above writ and a connected Bombay HC writ.

[58]See M.C. Mehta v. Union of India, (Taj Trapezium Matter) (1997) 2 SCC 353 (W.P. (C) No. 13381/1984, decided 30-12-1996); see also (1996) 4 SCC 351, (1996) 4 SCC 750 (earlier TTZ orders).

Supreme Court identified 292 polluting industries operating in the zone around the Taj Mahal. The ruling directed these industries to either switch to cleaner fuel sources (natural gas) or relocate outside the critical zone to mitigate environmental damage. The Court underscored that unemployment and revenue generation are incomparable to the paramount need for public health.

C. Phase III—Institutional governance & contemporary controls

Subsequent jurisprudence shifted from episodic redress to systems design: continuous monitoring directions, specialised benches, and ultimately the National Green Tribunal (2010) to deliver speed and expertise. The Supreme Court later recognised the NGT's ability to act on its own motion in suitable cases, reflecting the preventive logic of environmental protection[59].

The Court has rejected ex-post-facto environmental clearances, insisting that appraisal must precede operations. It has not hesitated to impose significant compensation for damage while balancing closure orders against wider public interests in specific contexts.[60]

In Vedanta Limited v. State of Tamil Nadu & Ors,[61] On 29 Feb 2024, a Supreme Court bench of CJI D.Y. Chandrachud and Justices J.B. Pardiwala and Manoj Misra dismissed Vedanta Ltd.'s SLP and refused permission to reopen the Sterlite copper smelter at Thoothukudi, citing "repeated breaches" and "serious violations," and affirming the Madras High Court's August 2020 judgment upholding closure and related TNPCB actions. Emphasizing sustainable development, the polluter-pays principle, and the public trust doctrine, the Court held there was no ground for interference under Article 136, noting the High Court's multiple fact findings—accepted after Vedanta consented to a full merits review including renewal permissions—and rejecting Vedanta's plea that regulatory delay excused operation without valid hazardous-waste authorisation. Although the bench briefly explored appointing an expert committee to consider a way forward, it ultimately declined, prioritizing residents' health

[59]The Supreme Court affirmed that the NGT can act suo motu on credible information (including media/letters), strengthening preventive environmental governance: Municipal Corporation of Greater Mumbai v. Ankita Sinha, 2021 SCC OnLine SC 897.
[60]Alembic Pharmaceuticals Ltd. v. Rohit Prajapati, (2020) 17 SCC 157. It described ex post facto EC as alien to environmental law. Post-facto regularisation may be permitted only in rare, exceptional situations—never as a routine course.See, Pahwa Plastics Pvt. Ltd. v. Dastak NGO, (2022) 13 SCC 588, is a narrow exception and does not dilute the rule in Alembic Pharmaceuticals Ltd. v. Rohit Prajapati, (2020) 17 SCC 157.
[61]2024 LiveLaw (SC) 211.

and welfare; it also dismissed TNPCB's appeals against critical High Court observations, terming them justified.

The Supreme Court refused to issue notice on a plea filed by LG Polymers against the order passed by NGT, which directed the South Korean company to pay 50 crores and constituted a fact-finding committee[62].

These governance controls and appellate principles frame prevention and enforcement. The next phase concerns rehabilitation and restoration—medical surveillance, compensation disbursal, and site remediation—where the Court has repeatedly treated survivor welfare as an ongoing constitutional duty.

D. Phase IV – Restoration and Rehabilitation (2010–Present)

By 2010, the accumulated litigation revealed persistent gaps in the Bhopal settlement: compensation shortfalls, ignored health needs, and unremediated pollution. The Supreme Court's subsequent interventions aimed to bridge these gaps—for example, directing medical insurance, establishing specialised facilities, and overseeing claims processing (2010–2014).

In *Union of India v. Union Carbide Corp.*[63] (2023), the Supreme Court dismissed the curative plea to reopen the 1989 settlement, reaffirming finality absent fraud and emphasising the systemic importance of closure to avoid endless relitigation. Recalling its 1991 review directions, the Court placed responsibility on the Union of India, as a welfare State, to make good shortfalls and obtain insurance, faulting the Union's failure to do so as gross negligence. It directed that ¹ 50 crore lying with the RBI be used to satisfy pending claims under the 1985 Act/Scheme and emphasized the systemic importance of closure in mass-tort litigation to avoid endless relitigation.

In late 2024, renewed judicial scrutiny came from the Madhya Pradesh High Court, which pressed state authorities to initiate the long-pending removal of toxic waste from the former Union Carbide site. The Court emphasised that environmental remediation is not symbolic compliance but a continuing constitutional and statutory obligation. Although initial action involved removing only a limited quantity of waste, the Court treated the exercise as a first step in a larger, enforceable process aimed at full remediation and protection of groundwater. It sought periodic compliance reports, independent oversight,

[62]In re: Gas Leak at LG Polymers Chemical Plant in RR Venkatapuram Village, Visakhapatnam in Andhra Pradesh.Original Application No. 73/2020.Available at https://www.livelaw.in/pdf_upload/pdf_upload-374450.pdf

[63]2023 LiveLaw (SC) 200.Curative Petition (C) Nos. 345–347/2010.

and transparency in disposal plans, reflecting a judicial attempt to convert decades of assurances into verifiable progress on site-clean-up[64].

The Court has become more explicit that the state bears an ongoing duty to victims' welfare, beyond penal enforcement of corporate crime. Legislative responses (Public Liability Insurance Act, Environment Relief Fund, PLIA claims, NGT remedies) create channels for relief, but consistent enforcement remains an issue. The emerging judicial stance is that constitutional remedies must translate into effective rehabilitation and restoration, not just theoretical pronouncements.

V. Conclusion

Article 21's promise is not abstract; it is a design brief. Governing hazardous industries is a constitutional duty to prevent avoidable harm, to respond wsith care and compensation when harm occurs, and to restore the commons we hold in trust. The reforms set out above do not trade away development; they define its lawful path. Bhopal's call, heard across four decades, is simple and stern: mourn the dead, fight for the living—by building institutions that keep them safe.

A. What Bhopal teaches—again

Bhopal shows that strong doctrines—absolute liability, polluter pays, the precautionary principle, and the public trust doctrine—protect people only when institutions can use them in real time. Three weaknesses recur: poor siting and design, weak routine oversight, and slow post-incident response. Prevention must be built into land-use plans, licensing, monitoring, drills, and open data—not left to post-facto litigation.

B. Practical reform agenda

The following controls are specific, measurable, and budgetable, so regulators, local bodies, and enterprises know what to do and when.

C. Prevention by design

No major-hazard units in dense urban areas without defensible risk models, buffer zones, and off-site emergency plans verified by periodic drills. Mandate

[64]Alok Pratap Singh (Deceased) v. The Union Of India and Others, (2024) SCC OnLine MP 8053.(Madhya Pradesh High Court) (directing initiation and supervision of toxic-waste removal from the Union Carbide site; requiring periodic reporting and independent oversight).

third-party process-safety audits at licensing and renewal; publish plain-language summaries. Adopt ALARP (as low as reasonably practicable) standards for siting and operations.

(i) Data, disclosure, and deterrence

Publish plant-wise chemical inventories, real-time Online Continuous Emission Monitoring System (OCEMS) dashboards, incident/near-miss logs, and neighbourhood hazard maps. Stream OCEMS to control rooms with anomaly flags that trigger timely inspections. Use risk-priced administrative penalties linked to turnover; add disgorgement for illegal gains; escalate to suspension/ closure for repeat violations; reserve criminal law for wilful, serious harm.

(ii) Institutions that can deliver

Strengthen boards with toxicology, process-safety, and GIS capacity; ring-fence unit budgets; and accredit regional labs with service timelines. Appoint adjudicating officers with technical support; issue penalty guidelines; fix timelines for orders and NGT appeals; and publish all orders online. Run quarterly multi-agency drills with independent observers and public reports.

(iii) Survivor-centred justice

Create life-long health registries with unique IDs, standard treatment packages for listed conditions, mental-health services, and inter-generational screening. Make PLIA (Public Liability Insurance Act, 1991)/ERF (Environment Relief Fund) claims simple, digital, and time-bound through a single-window district node; show real-time dashboards of registrations and disbursals. Require environmental bonds/escrows sized to hazard to fund clean-up and medical care.

(iv) Market and cross-border levers

At market entry, require disclosure of legacy liabilities and foreign claims; mandate environmental bonds; and align securities disclosures—such as Business Responsibility and Sustainability Reporting (BRSR) Core—with accident rates, OCEMS uptime, and remediation spend. Clarify limited veil-piercing and successor liability for environmental mass harm; streamline recognition and enforcement of foreign judgments and arbitral awards.

D. The constitutional bottom line

Risk governance is the daily work of Article 21: prevent, remedy, and restore (reinforced by Article 48A and Article 51A(g)). A State that prices risk

honestly, discloses data, and enforces promptly protects both the vulnerable and genuine enterprise. Bhopal's charge is clear: mourn the dead, protect the living—through institutions that work every day, not only in court.

E. A framework for closure that isn't premature

"Closure" should mean four verifiable outcomes: (i) site remediation certified to published standards; (ii) a functioning, funded health registry; (iii) claims settled with an appeal route for late-manifesting injuries; and (iv) a public confirmation that exposure pathways are eliminated. Anything less risks new cycles of protest, litigation, and distrust.

F. Ethics of development: social limits on economic adventurism

Growth cannot externalise catastrophic risk. Hazardous enterprises must internalise safety, remediation, and long-tail health costs—through bonds/escrows, insurance, and transparent provisioning. Clear, predictable rules make investment credible because they make harm unlikely, aligning enterprise with the non-negotiable right to life and a healthy environment.

Bhopal's enduring lesson is institutional, not rhetorical. Article 21 demands prevention before harm, care and compensation when harm occurs, and restoration until exposure pathways are closed. The reforms outlined above make that duty operational,through better siting, real-time disclosure, swift administrative enforcement, survivor-centred health systems, and credible cross-border accountability. If these become routine practice rather than emergency improvisation, hazardous industry can coexist with a healthy environment and lawful growth. The moral test is simple: people and the commons must be safer tomorrow than they were yesterday.