Jus Corpus Law Journal

Open Access Law Journal – Copyright © 2026 – ISSN 2582-7820

Editor-in-Chief – Prof. (Dr.) Rhishikesh Dave; Publisher – Ayush Pandey

From CLNDA to Shanti Act: Recalibrating Risk Responsibility and Compensation in Nuclear Governance

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Received 14 March 2026; *Accepted* 14 April 2026; *Published* 18 April 2026

The enactment of the Sustainable Harnessing and Advancement of Nuclear Energy for Transforming India Act 2025 (SHANTI Act) marks a significant shift in India's nuclear governance framework, extending beyond regulation and safety to recalibrate the architecture of civil liability and compensation for nuclear damage. This article undertakes a doctrinal and comparative analysis of the transition from the Civil Liability for Nuclear Damage Act, 2010 (CLNDA) to the SHANTI Act, with particular focus on the reconfiguration of risk allocation, operator and supplier responsibility, and the role of the State in ensuring prompt and adequate compensation to victims of nuclear incidents. Placing the SHANTI Act in the context of the international liability regime, the research assesses the conformity of the new framework with fundamental principles of international conventions such as the Vienna Convention, Paris Convention, and the Convention on Supplementary Compensation, including the principles of strict and channelled liability, exclusivity of operator liability, financial security, and supplementary public funding. It also assesses whether the new framework promotes a victim-centric approach to compensation, as mandated under India's Constitution through the right to life and protection of the environment under Article 21, or whether the new framework prioritises facilitating the entry of the private sector into the nuclear energy domain through the apportionment of liability risks away from the supplier and the State. This article argues that the new framework under the SHANTI Act represents a qualitative shift in the regulation of nuclear accidents, aiming at conformity with international best practices while raising several normative concerns about accountability, adequate compensation, and the weakening of the principles of absolute liability, which have been established through Indian environmental jurisprudence. It does this by using a comparative and constitutional perspective. It ends with an assessment of the implications of this shift on nuclear justice and sustainable energy governance.

Keywords: *shanti, nuclear damage, nuclear energy, civil liability.*

INTRODUCTION

The issue of nuclear energy expansion has always been complex in India. One argument is that nuclear power is a clean and reliable source of energy and can meet the growing need for power while at the same time addressing climate change. The second argument is that the risks associated with nuclear technology are so huge that a legal framework is necessary to mitigate the effects of a nuclear catastrophe. The issue for policymakers is how to balance technological advancement with the need for a legal framework to safeguard victims of nuclear accidents.

In the past, the nuclear governance regime in India has been shaped by a combination of regulatory control and liability laws. For instance, the Atomic Energy Act of 1962 set the stage for a state-centric nuclear governance regime, where the Central Government and its instrumentalities dominated the nuclear scene. However, the Civil Liability for Nuclear Damage Act, 2010, a specialised regime for ensuring timely and fair compensation to the victims of nuclear accidents, was a significant step in aligning India with the developing international norms on nuclear liability. Thus, in India, regulatory oversight and liability for nuclear damage operated through specific legal regimes.

The enactment of the Sustainable Harnessing and Advancement of Nuclear Energy for Transforming India Act 2025 (SHANTI Act) marks a decisive shift in this structure. The SHANTI Act repeals the Atomic Energy Act 1962 and the Civil Liability for Nuclear Damage Act of 2010, effectively integrating nuclear regulation, licensing, safety, and liability into a single regime. The new law appears to be an attempt to modernise the nuclear law of India in response to technological advancements, increased energy needs, and the rise of private players in the nuclear industry. However, the shift also prompts an inquiry into the apportionment of nuclear risk among nuclear operators, regulators, and the State.

The reconfiguration introduced by the SHANTI Act is particularly significant because it occurs at a moment when India is seeking to expand its nuclear power capacity while also encouraging greater participation by private entities and domestic industry. The involvement of private operators in a sector that has otherwise been dominated by state-

owned organisations changes the institutional dynamics in nuclear liability. In the past decades, the risks associated with nuclear installations were effectively handled by state-owned organisations, which created a link between operational and sovereign liabilities. The new framework expands the range of actors involved in nuclear energy production, thereby recalibrating the relationship between operational control, financial liability, and regulatory supervision.

The aforementioned developments raise several broader normative issues in the context of nuclear liability regimes. The international conventions that regulate nuclear liability regimes, such as the Vienna Convention, the Paris Convention, and the Convention on Supplementary Compensation, have, over time, attempted to strike a balance between the need for nuclear energy development and the need for effective compensation. At the same time, Indian constitutional jurisprudence has emphasised a more expansive conception of responsibility for hazardous activities, particularly through the Supreme Court's articulation of the doctrine of absolute liability in environmental cases.[1] The interaction between these international and constitutional principles provides an important lens through which the evolving structure of nuclear liability in India must be assessed.

In this context, this article aims to explore how the SHANTI Act transforms the current legal framework on nuclear risk in India. It contends that the new legal framework does not simply replace the current regulatory structure but rather reconfigures risk, responsibility, and compensation in the nuclear industry. By consolidating regulatory power, expanding the scope of potential operators, and reconfiguring institutional mechanisms for managing liability, the SHANTI Act establishes a new model of governance that reflects both the economic aspirations and regulatory concerns of a potential expansion of nuclear energy.

The analysis will be carried out in four different parts. The following part will discuss the international framework on liability in relation to nuclear law and the principles that have guided compensation schemes in the past. The following part will discuss the framework of liability in India in the past, its structure, and its shortcomings. The article will then discuss the structural and normative changes that have been made by the SHANTI Act. Finally, it will discuss a comparative and constitutional assessment of the framework, particularly in

[1] *M C Mehta & Anr v Union of India & Ors (Oleum Gas Leak Case)* AIR 1987 SC 1086

relation to its adequacy in protecting victims while promoting further development in nuclear infrastructure.

INTERNATIONAL NUCLEAR LIABILITY ARCHITECTURE

The international legal regime on civil liability for nuclear damage has developed around a set of normative principles that balance the two competing requirements: the promotion of the peaceful use of nuclear energy and the provision of prompt, adequate, and equitable compensation to victims of nuclear incidents. The most important of these principles is the doctrine of strict and no-fault liability of the operator of the nuclear installation for damage caused by nuclear incidents, which relieves the victims of the burden of proof of the involvement of negligence in the causation of the harm. This principle is reflected in the main treaty regimes on the subject, namely the Vienna Convention on Civil Liability for Nuclear Damage and the Paris Convention on Third Party Liability in the Field of Nuclear Energy.[2]

Closely associated with the concept of strict liability is the notion of channelling liability exclusively onto the operator, a structural device aimed at simplifying claims and concentrating financial liability in a manner which ensures the insurability of the risks. By excluding or restricting liability in tort against suppliers, contractors, and designers, international conventions establish a single legally responsible entity in a manner which facilitates efficient mechanisms of compensation. This model is reflected across the Vienna and Paris systems and is further reinforced by the Convention on Supplementary Compensation for Nuclear Damage (CSC), which harmonises minimum national standards while enabling broader international participation.[3]

Another significant aspect of the global nuclear liability regime is the limitation of liability in both amount and time. This ensures a balance between the compensation of victims and the viability of nuclear energy development in light of financial constraints. This limitation is further supplemented by the mandatory requirement for financial security, usually in the form of insurance, to ensure the immediate availability of funds for compensation in the event of a nuclear accident. In cases where the compensation is beyond the liability of the operator and the available financial security, supplementary compensation is provided in the

[2] Vienna Convention on Civil Liability for Nuclear Damage 1963, arts II & IV; Paris Convention on Third Party Liability in the Field of Nuclear Energy 1960, arts 3-4

[3] Convention on Supplementary Compensation for Nuclear Damage 1997, arts II-III

form of state funding, either at the national level or in the form of international funding, as in the CSC's supplementary tier.[4]

Apart from the efficiency of procedures, modern international nuclear liability law is marked by victim-centric and transboundary approaches. Often, the consequences of nuclear incidents are not limited by jurisdiction and affect the environment. Therefore, international nuclear liability law recognises the need for a system that is able to tackle the complexities of jurisdiction. Modern interpretations of treaties and the emergence of international nuclear liability law acknowledge a wider range of compensable damage that includes restoration costs, economic damage related to environmental impairment, and preventive measures.[5]

On the normative front, the interface of nuclear liability with environmental law and human rights law has come to assume greater significance. Environmental norms of prevention of damage, precaution, and polluter pays have a bearing on the development of liability laws and human rights law, including the protection of life, health, and a safe environment, which adds strength to the notion of effective remedies in cases of technological tragedies. While the classical liability laws have a historical record of facilitation of the development of the industry, their contemporary application appears to be in consonance with rights-based governance and sustainable development.[6]

Thus, the international regime of nuclear liability appears to have struck a delicate balance between ensuring liability and ensuring investment in the industry, at the same time providing a framework of strict liability, financial preparedness, and public supplementation of liability. It is in this context of balance in the international regime of nuclear liability that the Indian shift from the Civil Liability for Nuclear Damage Act, 2010 (CLNDA), to the SHANTI Act of 2025 would have to be judged.

THE CLNDA REGIME: RISK AND RESPONSIBILITY

The enactment of the Civil Liability for Nuclear Damage Act 2010 marked India's formal integration into the international nuclear liability framework while simultaneously reflecting domestic constitutional sensitivities shaped by industrial disaster jurisprudence. The statute

[4] *Ibid*, arts III–IV; Carlton Stoiber et al., *Handbook on Nuclear Law* (Intl Atomic Energy Agency 2003)
[5] Protocol to Amend the Vienna Convention on Civil Liability for Nuclear Damage 1997, art I
[6] Philippe Sands and Jacqueline Peel, *Principles of International Environmental Law* (3rd edn, Cambridge University Press 2012)

establishes a regime of strict and no-fault liability channelled to the operator of a nuclear installation. Section 4 explicitly provides that the liability of the operator shall be strict and based on the principle of no-fault liability.[7] This formulation aligns with the foundational international principle that victims of nuclear incidents should not bear the burden of proving negligence in technologically complex cases.

The Act has an expansive definition of 'nuclear damage' to include loss of life, personal injury, property damage, economic loss, costs of environmental reinstatement, loss of income resulting from environmental impairment, and preventive measures.[8] This broadened definition of 'nuclear damage' is an indication of the impact of the 1997 amendments to the Vienna Convention and points to a limited inclusion of environmental damage under various forms of compensable damage. However, the extent of such compensation remains subject to statutory and financial limitations.

An important aspect of CLNDA is that there is a liability cap. Under Section 6, there is a limitation on the liability of the operator, amounting to ₹1,500 crores in respect of certain specified installations, subject to an overall limit of 300 million Special Drawing Rights or any amount that the Central Government may specify.[9] In addition to the liability of the operator, there is an obligation on the Central Government in cases where there is an amount in excess of the operator's liability, or in cases involving grave natural disasters or armed conflicts.[10] This layered structure reflects the international model of primary operator liability supplemented by State backing, consistent with the Convention on Supplementary Compensation for Nuclear Damage.[11]

The Act further mandates that the operator maintain insurance or other financial security to cover its liability.[12] The Civil Liability for Nuclear Damage Rules, 2011, elaborate on this requirement and provide for financial security through irrevocable financial security and pledge modes.[13] The establishment of the Nuclear Liability Fund under section 7(2) further underlines the additional role of the State and lends credence to such guarantees.

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[7] Civil Liability for Nuclear Damage Act 2010, s 4(4)
[8] Civil Liability for Nuclear Damage Act 2010, s 2(g)
[9] Civil Liability for Nuclear Damage Act 2010, s 6(1)-(2)
[10] Civil Liability for Nuclear Damage Act 2010, s 7(1)
[11] Convention on Supplementary Compensation for Nuclear Damage 1997, arts II-III
[12] Civil Liability for Nuclear Damage Act 2010, s 8
[13] Civil Liability for Nuclear Damage Rules 2011, r 3

Despite its apparent compliance with international principles, the CLNDA has sparked controversy along two dimensions. First, under Section 17(b), a right of recourse is granted to the operator against the supplier if damage is caused by the act or omission of the latter or if such a right is provided under contract.[14] The latter provision departs from the classical doctrine of sole operator liability under the Paris and Vienna regimes by extending recourse to a broader range of scenarios.[15] The controversy surrounding Section 17(b) has centred on its potential to expose suppliers to liability and to discourage foreign investors, while its supporters have argued that it is a necessary corrective that is grounded in India's experience of industrial catastrophe and that reflects a perceived failure of supplier liability under the Bhopal settlement.

Secondly, the prescription of a financial limit for liabilities attracted constitutional review in light of the Supreme Court's doctrine of absolute liability enunciated in M.C. Mehta v Union of India. In this case, the Supreme Court held that liabilities for enterprises that engage in hazardous activities are absolute and non-delegable obligations to ensure that no harm is caused to the community; further, the liabilities must correspond with the magnitude and capacity of the enterprise. The CLNDA's prescription of a financial limit for liabilities and its regime for compensation may arguably temper the strength of this constitutional principle by legislatively predetermining the quantum of financial liabilities.

Therefore, the CLNDA can be seen as a calibrated compromise. It incorporates strict and channelled liability in conformity with global standards, includes environmental damage within the category of compensable harm, makes provision for financial security, and furnishes State supplementation; yet at the same time, it modifies the doctrine of constitutional unlimited absolute liability by the imposition of statutory limits and introduces a unique supplier recourse provision. This balanced approach needs to be taken as the starting point for the assessment of the structural changes introduced by the SHANTI Act 2025.

[14] Civil Liability for Nuclear Damage Act 2010, s 17(b)
[15] Vienna Convention on Civil Liability for Nuclear Damage 1963, art X; Paris Convention on Third Party Liability in the Field of Nuclear Energy 1960, art 6(f)

THE SHANTI ACT 2025: STRUCTURAL RECONFIGURATION OF RISK AND RESPONSIBILITY

The Sustainable Harnessing and Advancement of Nuclear Energy for Transforming India Act 2025 (SHANTI Act) represents a decisive restructuring of India's nuclear governance architecture. The SHANTI Act unifies nuclear regulation and civil responsibility under a single statutory framework, in contrast to the previous legal structure. The Atomic Energy Act 1962 and the Civil Liability for Nuclear Damage Act 2010 are both repealed by section 91(1), which is significant because it replaces the previous disjointed system with a comprehensive legal framework that governs nuclear energy development, regulatory oversight, and compensation for nuclear damage.[16] With the repeal, a more comprehensive governance model that combines risk management, investment facilitation, and regulation under a single statutory framework replaces the state-centric and liability-focused regime.

The earlier regime had placed nuclear energy activities largely within the domain of the State through the Atomic Energy Act 1962, whereas the Civil Liability for Nuclear Damage Act of 2010 provided for a specialised regime of liability based on strict and channelled liability of the operator. By repealing both statutes and introducing a consolidated framework, the SHANTI Act reconfigures the institutional context within which nuclear liability operates. The shift is not merely structural but also normative: the Act seeks simultaneously to expand nuclear energy production, attract private sector participation, and maintain regulatory safeguards against the risks inherent in nuclear technology.

Perhaps one of the most important changes introduced by the SHANTI Act is the extension of the scope of licensing of nuclear facilities. In the past, nuclear facilities within India have been run by either the Central Government or its instrumentalities. However, the SHANTI Act has introduced a major change by allowing government companies, private companies, joint ventures, and other such entities to apply for a license to run nuclear facilities.[17] This marks a major shift from the earlier position and indicates a deliberate attempt to bring private capital and domestic industry into the nuclear energy sector of India. The involvement of private players, however, also changes the scope of liability. The scope of

[16] Sustainable Harnessing and Advancement of Nuclear Energy for Transforming India Act 2025, s 91(1)
[17] Sustainable Harnessing and Advancement of Nuclear Energy for Transforming India Act 2025, s 3(1)

liability is no longer limited to the State or its instrumentalities, but could also be extended to the private players.

Intertwined with this is the redefinition of what constitutes an 'operator.' The SHANTI Act redefined operator as an entity licensed to operate a nuclear installation.[18] This is consistent with a system of licensing, and it is consistent with a system of allocating responsibility based on who is functionally in charge of operation. This, in turn, means that there is a direct relationship between liability and the management of nuclear operations, irrespective of whether it is a government operation or a private operation. This, therefore, is a redefining of the traditional model of nuclear governance in India, in which both operational control and financial risk were in the hands of the State.

The SHANTI Act further introduces a comprehensive licensing and regulatory regime governing the entire lifecycle of nuclear facilities. Section 3 mandates licenses for activities such as constructing, operating, decommissioning, and transporting nuclear materials. In contrast, section 7 authorises the Central Government to impose conditions relating to safety standards, financial capability, waste management, and liability coverage throughout the operational life of the installation.[19] This lifecycle-based regulatory approach aligns with international nuclear safety standards that emphasise continuous oversight of nuclear installations rather than episodic regulatory intervention. By embedding safety, financial preparedness, and regulatory compliance within the licensing process itself, the Act attempts to mitigate risk before it materialises into compensable damage.

Financial responsibility provisions under the Act also indicate a shift towards a more integrated approach to risk management. The Act requires licensees to maintain sufficient financial security for the safe decommissioning of facilities, handling radioactive materials, and providing compensation for injury or damage resulting from radiation exposure.[20] Although the previous legislation dealt with financial responsibility mainly in the context of nuclear accidents, the SHANTI Act introduces financial responsibility for a broader array of

[18] Sustainable Harnessing and Advancement of Nuclear Energy for Transforming India Act 2025, s 2(28)
[19] Sustainable Harnessing and Advancement of Nuclear Energy for Transforming India Act 2025, ss 3(2) and 7(1)
[20] Sustainable Harnessing and Advancement of Nuclear Energy for Transforming India Act 2025, s 10(3)(e)

operational risks related to nuclear activities. This is indicative of a preventive approach to nuclear governance.

Institutionally, the Act consolidates regulatory and adjudicatory mechanisms within a more coordinated governance structure. It recognises institutions such as the Claims Commissioner and the Nuclear Damage Claims Commission while strengthening regulatory oversight through the Atomic Energy Regulatory Board and appellate supervision by the Appellate Tribunal for Electricity.[21] The integration of these institutional mechanisms is intended to reduce fragmentation and provide clearer channels for both regulatory enforcement and compensation claims.

Normatively, the SHANTI Act may be seen as an extension of a larger policy approach that strives for the integration of energy security, technological advancement, and environmental protection. The preamble's stress on the need for an increased nuclear power generation capacity, nuclear technological advancement, and the pursuit of sustainable development can be seen as an extension of the Government's strategic approach to the energy shift by increasing the share of nuclear energy. However, the involvement of the private sector in an inherently dangerous field gives rise to several crucial concerns about the liability provisions and the protection of nuclear accident victims.

In this sense, the SHANTI Act does not merely update India's nuclear regulatory framework; it redefines the relationship between the State, private industry, and nuclear risk. By repealing the earlier statutory regime and introducing a unified governance framework, the Act recalibrates the distribution of responsibility for nuclear activities among regulators, operators, and the State. The central challenge for the new regime will be to ensure that this expanded governance architecture continues to deliver effective compensation, maintain stringent safety standards, and preserve the victim-centred orientation that has historically shaped India's approach to industrial risk.

COMPARATIVE AND CONSTITUTIONAL APPRAISAL

The transition from the earlier statutory regime to the SHANTI Act, 2025 must be evaluated against two critical normative benchmarks: the international architecture governing nuclear

[21] Sustainable Harnessing and Advancement of Nuclear Energy for Transforming India Act 2025, ss 2(3), 2(7) and 2(8)

liability and the constitutional framework that protects life, health, and environmental integrity in India. Although the SHANTI Act makes institutional and regulatory reforms and unifies the legal framework for nuclear governance, its effects on risk and responsibility distribution raise significant concerns about the ongoing sufficiency of liability safeguards in the nuclear industry.

From a comparative international law point of view, the principles that have historically guided nuclear liability regimes continue to be an important reference point. International conventions, such as the Vienna Convention on Civil Liability for Nuclear Damage and the Paris Convention on Third Party Liability in the Field of Nuclear Energy, have established a paradigm of strict and channeled operator liability, financial limits, and supplementary state support.[22] The Convention on Supplementary Compensation for Nuclear Damage (CSC) has also entrenched this model by providing an international compensation system that will address damages that exceed national liability limits.[23] These conventions have attempted to balance two conflicting goals: providing timely and certain compensation for victims and ensuring the economic viability of nuclear energy development.

The Indian legal regime has always shown a cautious approach in dealing with these international norms. The Civil Liability for Nuclear Damage Act, 2010, while incorporating strict operator liability and financial security provisions, also concurrently introduced specific features such as the inclusion of supplier provisions. The repeal of the CLNDA and the introduction of the SHANTI Act have changed the foundation of India's liability system. The new framework keeps operator responsibility but places it within a larger regulatory system that focuses on licensing oversight, financial readiness, and lifecycle regulation of nuclear installations. This combined model shows a move from only compensating for damages to a broader risk management approach.

However, the SHANTI Act's extension of licensing eligibility necessitates a substantial reevaluation of accountability in the nuclear industry. The Act modifies the institutional framework for managing nuclear risk by permitting private businesses and joint ventures to run nuclear facilities. Operational accountability was strongly linked to state-controlled

[22] Vienna Convention on Civil Liability for Nuclear Damage 1963, arts II-IV; Paris Convention on Third Party Liability in the Field of Nuclear Energy 1960, arts 3-4
[23] Convention on Supplementary Compensation for Nuclear Damage 1997, arts II-III

companies under the previous regime, which effectively matched sovereign competence with liability risk. The range of players who bear the main responsibility for nuclear risk is increased under the new framework since commercial operators may take direct control of nuclear sites. This development heightens the importance of robust regulatory supervision and adequate financial security mechanisms to ensure that compensation obligations can be effectively discharged.

The constitutional implications of this change are particularly noteworthy. Indian environmental jurisprudence, as reflected by the Supreme Court's ruling in M C Mehta v Union of India, developed the notion of absolute liability of enterprises involved in hazardous activities. The notion of absolute liability holds that the entities involved in hazardous activities have an absolute and non-delegable duty to ensure that no harm is caused to the community and that the compensation must be proportionate to the extent of harm. Although limitations on nuclear liability globally are premised upon the need to ensure insurability and economic viability of such liability, such limitations are at odds with the expansive scope of the right to life as mandated by Article 21 of the Constitution.

The SHANTI Act seeks to address this balance with a focus on preventive regulation and financial preparation. With licensing, safety oversight, and financial security, the act seeks to prevent the possibility of a catastrophic nuclear accident, as well as ensure that operators are ready to deal with damage should an accident happen. However, the effectiveness of a preventive approach cannot completely supplant the effectiveness of remedial solutions. In the case of large nuclear accidents, the effectiveness of compensation mechanisms is a key factor for consideration. This is especially so in light of the long-term damage that can be caused to the environment as a result of nuclear exposure. Environmental factors can also make nuclear liability difficult to assess. The current international practice in nuclear damage compensation includes the costs for restoration of the environment, economic loss due to ecological damage, and preventive measures. These developments reflect the broader evolution of international environmental law, which emphasises precaution, prevention, and the polluter-pays principle. To the extent that the SHANTI Act integrates environmental protection within its regulatory framework, it contributes to aligning nuclear governance with contemporary environmental norms.

Ultimately, the SHANTI Act reflects an attempt to reconcile three competing objectives: the expansion of nuclear energy capacity, the facilitation of private sector participation, and the preservation of public safety and environmental protection. The recalibration of nuclear governance embodied in the Act therefore represents a complex balancing exercise between economic development and legal accountability. Whether this balance succeeds will depend largely on how effectively the regulatory framework ensures that operators maintain sufficient financial capacity, that compensation mechanisms remain accessible and responsive to victims, and that constitutional guarantees of life and environmental protection continue to shape the interpretation of nuclear liability in India.

CONCLUSION

The enactment of the Sustainable Harnessing and Advancement of Nuclear Energy for Transforming India Act 2025 represents a key change in India's nuclear governance system. The SHANTI Act does the job of bringing together the earlier separate legislations on regulation and liability under one single legal framework by replacing both the Atomic Energy Act 1962 and the Civil Liability for Nuclear Damage Act, 2010. This significant modification reflects the government's great ambitions of enhancing the nuclear energy capacity of India while ensuring that the rules overseeing nuclear activities are also updated.

The analysis in this article shows that the SHANTI Act does more than just refresh the legal rules for nuclear energy. It also shifts the distribution of risk, responsibility, and compensation within India's nuclear governance system. In order to do so, it moves from a mainly state-run nuclear sector to a licensing system which now enables the private companies to participate in this sector, changing the structure of nuclear liability. Thus, responsibility for operations, which was once held mostly by state-run businesses, can now be taken on by private operators with regulatory approval. This increase in participants in the nuclear sector raises new concerns about whether liability protections are sufficient and if compensation processes will work effectively in case of nuclear accidents. From a comparative perspective, the recalibrated framework broadly reflects the structural principles embedded in international nuclear liability conventions, including strict operator liability, regulatory oversight, and financial security mechanisms designed to ensure compensation for nuclear damage. At the same time, the Indian constitutional framework imposes a more demanding standard of accountability for hazardous activities. Judicial

decisions such as M C Mehta v Union of India have articulated a doctrine of absolute liability that emphasises the duty of enterprises engaged in dangerous activities to ensure that no harm results to the community. The coexistence of statutory liability structures with this constitutional doctrine creates an enduring tension between economic feasibility and the principle of full compensation for victims of industrial disasters.

In such a context, the effectiveness of the SHANTI Act will not only be determined by the legislative structure of the law but also by the manner in which the regulatory mechanisms provided by the law are implemented. Three key areas of reform will be vital in ensuring that the recalibrated governance structure continues to serve the interests of victims and the environment while promoting the expansion of nuclear energy.

First, financial security requirements must be periodically reassessed to reflect the potential scale of nuclear damage. As the scale of harm that nuclear accidents can cause can be humongous, it becomes essential that the adequacy of insurance and financial securities maintained by the operators be made subject to periodical review by the regulatory authorities. Transparent evaluation of financial preparedness is essential to ensure that compensation mechanisms remain credible and responsive.

Secondly, the claims adjudication framework must prioritise accessibility and efficiency for victims. As a consequence of a nuclear accident, it often gives rise to numerous complex and large-scale claims involving health, environmental, and economic losses. As such, it becomes quintessential that the institutions responsible for the adjudication and determination of compensation must adopt procedures that are capable of processing the claims promptly while ensuring fairness and transparency. Strengthening the institutional capacity of claims authorities will be critical in this regard.

Thirdly, the system of environmental monitoring and health assessments should be incorporated into the liability system. Nuclear accidents often cause effects which become apparent over long periods. The creation of systems for long-term environmental assessments and health monitoring would help ensure that latent effects are properly recorded in the compensation system.

Ultimately, the legitimacy of any nuclear liability regime depends on the confidence it inspires among the public. Nuclear energy stands before us as a promising source offering

benefits in terms not only of energy security but also of climate mitigation. However, these cannot come at the cost of diminishing legal protections for those communities exposed to technological risk. The SHANTI Act represents an ambitious attempt to modernise India's nuclear governance system and support the future expansion of nuclear power. Whether this new framework succeeds will depend on its ability to maintain a careful balance between technological advancement, regulatory accountability, and the fundamental principle that those who bear the risks of nuclear development must be assured effective legal protection.

Hence, the recalibration of nuclear governance under the SHANTI Act should ultimately be judged not by the scale of nuclear expansion it enables, but by the degree to which it preserves the foundational objective of nuclear liability law: ensuring that victims of nuclear harm receive prompt, adequate, and equitable compensation within a framework that upholds both international standards and constitutional guarantees.