BALANCING RISK AND RESPONSIBILITY: A STUDY OF INDIA'S NUCLEAR LIABILITY INSURANCE FRAMEWORK

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I. ABSTRACT

A specific kind of insurance intended to handle the substantial risks connected to nuclear power generation and associated operations is nuclear liability insurance. The legal foundation for creating a global liability regime is provided by the Convention on Supplementary Compensation for Nuclear Damage (CSC).[1] The CSC's Preamble highlights the objective of fostering international collaboration to enhance nuclear safety and expand the amount of compensation available for nuclear damage.

In particular, "nuclear damage," which is separated into two categories, mandatory compensation for loss of life, personal injury, and property damage, and discretionary economic losses decided by the competent court under national law, is defined in *Article I* of the CSC.[2] Additionally, *Article II* aims to complement national liability regimes like the Vienna and Paris Conventions and makes it clear that the CSC applies to nuclear damage caused by installations used for peaceful purposes. As a crucial component of the Convention, the Annexe to the CSC guarantees consistency in application.[3]

The Civil Liability for Nuclear Damage (CLND) Act, 2010, which creates nuclear operators' liability and ensures victims receive timely compensation, is how India implements the international framework. Subject to certain limitations, the operator of a nuclear installation is held strictly liable for nuclear damage under Section 6 of the CLND Act, regardless of fault.[4] The Act puts the public interest first by guaranteeing that victims of a nuclear accident receive prompt and sufficient compensation. On June 12, 2015, the Indian government established the Indian Nuclear Insurance Pool (INIP), headed by the General Insurance Corporation of India (GIC Re) and a number of domestic insurers, to carry out this framework and address issues encountered by suppliers and operators. With an initial capacity of ₹1500 crore, the INIP offered insurance coverage in compliance with the CLND

[1] Convention on Supplementary Compensation for Nuclear Damage (CSC), Sept. 12, 1997 INFCIRC/567.
[2] Article I, Convention on Supplementary Compensation for Nuclear Damage (CSC), Sept. 12, 1997 INFCIRC/567.
[3] Article II, Convention on Supplementary Compensation for Nuclear Damage (CSC), Sept. 12, 1997 INFCIRC/567.
[4] Section 6, The Civil Liability for Nuclear Damage Act, 2010.

> Act's regulations. By guaranteeing adherence to liability commitments, this mechanism helps nuclear operators transfer risk, shields suppliers and stakeholders from possible financial exposure, and makes it easier to establish new nuclear projects.[5]

II. Body

2.1 Important features of the insurance product, insured risks and excluded risks as released by the Indian Government Press.

The nuclear liability insurance product under the INIP is designed to implement the liability rules outlined in the CLND Act, 2010. A key feature is the no-fault liability principle, which makes the operator of a nuclear installation strictly and exclusively liable for any nuclear damage, regardless of negligence or fault. To cover this liability, every operator must maintain insurance or financial security up to the statutory limit prescribed by the Act. For reactors above 10 MW, the operator's liability is capped at ₹1,500 crore, and additional compensation, if needed, is provided by the Central Government. The insurance pool combines contributions from several Indian insurers, which helps spread the high-risk exposure across the industry. The scope of insured risks is broad and includes damage defined under the CLND Act. This encompasses loss of life or personal injury (immediate or long-term health effects), loss of or damage to property, and environmental harm caused by radioactive releases. Economic losses related to property damage, loss of income due to impaired environmental use, and costs of preventive measures or environmental restoration are also covered.

Furthermore, the insurance applies to nuclear incidents occurring not only at the installation site but also during the transportation of nuclear material, as long as the operator remains legally responsible. However, there are certain exclusions in the liability framework. The operator is not liable for damage directly caused by severe natural disasters of an exceptional nature or by acts of armed conflict, war, insurrection, or terrorism. Exclusions also apply to damage suffered by the nuclear installation itself, any other installation on the same site, connected property, or the transport means carrying the nuclear material at the time of the incident. Additionally, if damage results from the negligence or wrongful acts of the claimant, compensation is denied. The nuclear liability insurance product thus offers broad coverage that

[5] Nuclear Insurance Pool, Press Information Bureau, Department of Atomic Energy, Government of India, Jul 12, 2019.

meets statutory obligations, while balancing risks through specific exclusions that account for the exceptional and uninsurable nature of certain events.

Provisions of CLND Act.

Provision	**Policy Terms**
Title	Civil Liability for Nuclear Damage Insurance Policy issued under the Civil Liability for Nuclear Damage Act, 2010
Territorial Scope	Extends to the whole of India, including maritime zones, exclusive economic zones, Indian-registered ships and aircraft, and offshore installations/structures under Indian jurisdiction
Insured Party	Operator of a nuclear installation owned or controlled by the Central Government (directly, through authority, corporation, or Government company)
Notification of Incident	Atomic Energy Regulatory Board (AERB) to notify a nuclear incident within 15 days; wide publicity to be given unless the risk is insignificant
Liability of Operator	Operator strictly and exclusively liable (no-fault liability) for nuclear damage arising from nuclear incidents at installations or involving nuclear material in transit; liability may be joint and several where multiple operators are involved
Exclusions	No liability for: (i) grave natural disasters of exceptional character; (ii) war, armed conflict, terrorism, insurrection, civil war; (iii) damage to installation, site property, or transport carrying material; (iv) the victim's own negligence
Limits of Liability	Operator liability: ₹1500 crores (major reactors ≥10 MW); ₹300 crores (reprocessing plants); ₹100 crores (small reactors <10 MW, transport); overall cap: 300 million SDRs (or higher if notified)

Government Liability	Central Government liable: (i) for amounts exceeding operator liability; (ii) for government-owned installations; (iii) for incidents arising from exempted causes, the Government may establish the Nuclear Liability Fund.
Insurance Requirement	Operator must maintain insurance/financial security covering statutory liability before commencing operations
Claims Eligibility	Eligible claimants: (i) injured persons; (ii) owners of damaged property; (iii) legal representatives of deceased; (iv) duly authorised agents
Claims Procedure	Claims to be filed with Claims Commissioner within 3 years of knowledge of damage; prescribed form and documents required
Award& Settlement	Claims Commissioner to dispose within 3 months; awards are final; compensation not reduced by insurance recoveries; injunctions possible to prevent evasion of liability
Right of Recourse	Operator may recover from suppliers/third parties if: (i) right provided by contract; (ii) defective equipment/material/service supplied; (iii) intentional acts caused incident
Extinction of Claims	Property damage claims: within 10 years; Personal injury claims: within 20 years; Nuclear material theft/loss/jettison: capped at 20 years

2.2 Procedure for Buying the Policy under the CLND Act, 2010.

To guarantee that the operator of a nuclear installation has sufficient financial protection against nuclear risks, the nuclear liability insurance application process is rigorously regulated

under the Civil Liability for Nuclear Damage (CLND) Act, 2010. According to Section 8 of the CLND Act, each nuclear operator must secure insurance or maintain financial stability adequate to cover the statutory liability specified by the Act prior to starting operations.[6] The nuclear operator is solely responsible for obtaining the insurance and must work with an authorised insurer that has been specially approved by the Insurance Regulatory and Development Authority of India (IRDAI) and the Government of India. Only insurers with adequate financial stability and technical know-how are authorised to offer nuclear liability insurance due to the particular risks involved.

According to Section 1 of the CLND Act, the policy must fully cover the operator's liability for any economic loss, property damage, environmental harm, and bodily injury resulting from a nuclear incident.[7] The liability limits outlined in Section 6 of the Act are used to determine the policy's terms, including sum insured, exclusions, and premiums:

- For nuclear reactors with a capacity of 10 MW or more, 1500Cr
- 300Cr for plants that reprocess spent fuel, and
- 100Cr for nuclear material transportation and research reactors under 10 MW. Before the nuclear installation can start up, proof of coverage must be submitted to the Nuclear Damage Claims Commissioner and the appropriate regulatory bodies. This guarantees adherence and safeguards the public interest right away.[8]

2.3 Procedure for Settlement of Claims under the CLND Act, 2010

In the event that a nuclear accident results in nuclear damage, the CLND Act of 2010 offers a precise, organised process for resolving claims. According to Sec 14 of the Act, injured parties, property owners, the solicitors for departed victims, or duly authorised agents may all file a claim.[9]

2.3.1 Claim Submission: In accordance with Section 15, the claimant has three years from the date of discovery of the damage to submit a comprehensive claim to the Nuclear Damage

[6] Section 8, The Civil Liability for Nuclear Damage Act, 2010.
[7] Section 1, The Civil Liability for Nuclear Damage Act, 2010.
[8] Section 6, The Civil Liability for Nuclear Damage Act, 2010.
[9] Section 14, The Civil Liability for Nuclear Damage Act, 2010.

Claims Commissioner.[10]

2.3.2 Claim Evaluation: The Claims Commissioner assesses the claim's eligibility by looking over supporting documentation, including environmental impact studies, property damage assessments, and medical reports. To determine the connection between the alleged damage and the nuclear incident, an investigation is carried out.

2.3.3 Compensation Determination: The Commissioner bases the compensation on the provisions of the Act and, if required, carries out technical investigations. Section 6 caps the operator's liability. The Central Government is held accountable under Section 7 if the claim exceeds the operator's liability; if not, the Nuclear Liability Fund will cover the difference.[11]

2.3.4 Award and Payment: In accordance with Section 16, the Claims Commissioner must settle the claim within three months, and the award is final and enforceable. After issuing the nuclear liability policy, insurers are required to pay the operator, who then gives the money to the claimant. Crucially, the compensation due under this framework is unaffected by any separate insurance benefits the claimant may have received.[12]

2.3.5 Right of Recourse: Subject to the terms of the contract, the nuclear operator may have a right of recourse under Section 17 against suppliers or contractors if the incident was caused by faulty machinery, poor services, or deliberate actions.[13]

2.4 Summary Of Key Regulations Issued By IRDAI

To ensure the successful implementation of nuclear liability insurance in India, the Insurance Regulatory and Development Authority of India (IRDAI) has released important regulations to operationalise the Civil Liability for Nuclear Damage (CLND) Act. By enforcing strict requirements, these regulations aim to protect the interests of the public and operators while preserving the financial stability of insurers. First, due to the high risk and specialised nature of nuclear liability insurance, only insurers who have been specially approved by IRDAI are allowed to underwrite such policies. For these insurers to manage the intricacy of nuclear risk, they must have adequate financial stability and technical know-how. Furthermore, strict

[10] Section 15, The Civil Liability for Nuclear Damage Act, 2010.
[11] Section 7, The Civil Liability for Nuclear Damage Act, 2010.
[12] Section 16, The Civil Liability for Nuclear Damage Act, 2010.
[13] Section 17, The Civil Liability for Nuclear Damage Act, 2010.

guidelines for risk assessment and premium calculation are prescribed by the regulations. To ensure that the risk is sufficiently capitalised and that solvency margins are maintained so the insurer can withstand potentially large claims, insurers must base premium calculations on thorough technical and actuarial analysis.

Given the catastrophic potential of nuclear damage, IRDAI requires insurers to set up suitable reinsurance coverage, frequently using the global reinsurance market because the domestic market is not strong enough to handle such risks on its own. In order to ensure appropriate risk capital allocation and prevent commingling with other insurance lines, insurers must keep distinct accounts for nuclear liability policies in order to foster accountability and transparency. Insurers are also required by the regulatory framework to submit information on their exposure, reinsurance agreements, solvency status, and claims history on a regular basis. By providing continuous reporting, IRDAI is able to keep a close eye on the state and performance of the nuclear liability insurance market, protecting the public from the financial risks associated with nuclear accidents as well as nuclear installation operators.

2.5 Recent Proposal on Diversion of Terror Insurance Funds.

The General Insurance Corporation of India (GIC Re) has suggested allocating excess funds to nuclear and oil risk pools from the Indian Market Terrorism Risk Insurance Pool. Due to the lack of significant terrorist claims following the 2008 Mumbai attacks, the terrorism insurance pool, which was established in 2002, has amassed more than 15,000 crores in unused funds. In order to support India's planned nuclear expansion from 7,480 MW to 22,480 MW by 2031, the proposal seeks to strengthen the Indian Nuclear Insurance Pool (INIP), whose risk capacity is 1500 crore. Though they need robust insurance mechanisms to invest in India, foreign companies like General Dynamics are interested in small modular reactor (SMR) technologies.

Although official instructions have not been given, the Finance Ministry and IRDAI support this strategic move. To enable the transfer of funds between pools, the proposal would necessitate changes to the governing statutes. Other under-capacitated pools, such as the marine cargo risk pool, would also profit from the diversion. This plan contributes to long-term energy security and sustainable development by bolstering India’s nuclear capacity expansion while

guaranteeing suitable risk coverage and investor confidence.[14]

2.6 Shortcomings with respect to the insurance product in India.

For international suppliers of nuclear technology, India's goal to greatly increase nuclear power capacity as part of its clean energy and decarbonisation strategy presents significant business opportunities. However, several issues with the liability framework still prevent foreign companies from fully participating in the Indian market, especially with regard to the application of supplier liability under the 2010 Civil Liability for Nuclear Damage (CLND) Act. The inability of Indian insurers to underwrite high-risk, high-value nuclear liability policies is one of the main issues. Even though they are uncommon, nuclear accidents can cause devastating losses worth thousands of crores of rupees. Indian insurers are largely reliant on the global reinsurance market because they typically lack the financial resources and technical know-how to handle such complicated risks on their own. However, because nuclear risks are so complex and unpredictable, obtaining reinsurance for nuclear liability is still costly and challenging. This dependence raises insurance premiums, adding to nuclear operators' financial strain.

The absence of a thorough risk assessment framework tailored to India is another significant flaw. India's nuclear liability system lacks adequate historical data and reliable risk evaluation models specific to Indian nuclear installations, in contrast to other industrial sectors with substantial data and statistical models. Both insurers and operators experience uncertainty as a result of this absence, which makes it challenging for them to appropriately set premiums or evaluate exposures. Because of this, insurance policies may be underpriced, which could make coverage unaffordable or insufficient to cover possible risks.

Another issue has been the application of the CLND Act's Clause 17 supplier liability clause. The actual operationalisation of this provision is left to contractual agreements between the operator (like NPCIL) and the suppliers, even though the Act permits the operator to seek remedies against suppliers in the event of faulty equipment or subpar services. Global suppliers are still concerned, even though the Indian government and its important agencies (DAE, MEA, and NPCIL) have released thorough FAQs and answers to allay fears. One reason is that, even

[14] GIC wants to divert terror insurance money for oil and nuclear risks, GIC News and Media, General Insurance Council, Nov. 14, 2023 https://www.gicouncil.in/news-media/gic-in-the-news/gic-wants-to-divert-terror-insurance-money-for-oil-and-nuclear-risks/

with clarifications, it is still unclear whether these rules are legally enforceable and practically applicable, especially if disagreements go to court.

Further complicating matters is the operator's ability to waive supplier liability, which leaves room for uncertainty regarding the precise timing and manner of suppliers' liability. There are major procedural obstacles in the claim settlement process as well. It involves a number of parties, including the Nuclear Damage Claims Commissioner, insurers, operators, and government officials, and is frequently cumbersome and slow. Despite the CLND Act's requirement that claims be decided within three months of filing, in reality, there are delays and ambiguity due to a lack of efficient procedures or precise, legally binding deadlines. This defeats the goal of providing victims of nuclear accidents with timely compensation.

The liability cap set by Section 6 of the CLND Act, which restricts the operator's liability to ₹1500 crore for reactors larger than 10 MW and less for other installations, is another structural restriction. This cap creates a moral hazard where victims of significant nuclear disasters might not receive full compensation, even though its goal is to make insurance economically viable. Rather, under Section 7, the government is held accountable for making up the difference, creating uncertainty about who will ultimately pay for the compensation. In addition, there is little competition and little demand in the Indian nuclear liability insurance market. There is little incentive for new insurers to enter the market because there are so few nuclear installations operating and each policy is very specialised. As a result, operators have fewer options and prices are less competitive, which hinders the sector's ability to grow and develop further. Finally, even though India established the Indian Nuclear Insurance Pool (INIP) to handle operator and supplier liability, its ₹1500 crore capacity is not enough to keep up with the expanding nuclear industry. In fact, GIC Re has suggested using excess money from the terrorism risk pool to support the nuclear insurance pool, highlighting how inadequate the current setup is. There is still a high chance that the pool will be depleted in a significant nuclear accident unless capacity is greatly increased. [15]

2.7 Suggestions for possible reforms.

2.7.1 Remove or Increase the Liability Cap on Nuclear Operators - We suggest that the

[15] Radhakrishnan, Srivatsan, and Vishnuraj Subramaniyan. "The Legal Responsibilities of Insurance Companies in the Event of Natural Disasters and Catastrophic Events in the Context of India." *International Journal of Law Management & Humanities* 6 Issue 3 (2023): 1639.

existing liability cap on nuclear operators be significantly increased or removed altogether. This will ensure that nuclear operators remain fully accountable for any damages caused in the event of a nuclear accident. A realistic liability framework reflects the true risks involved and prevents the public from bearing the burden of insufficient compensation. Without an adequate cap, insurers and the public are exposed to disproportionate risk, which undermines the credibility of the system.

2.7.2 Establish a Centralized Nuclear Risk Pool or Reinsurance Mechanism - We propose setting up a centralized Nuclear Risk Pool or a government-supported reinsurance mechanism. Such an institution would aggregate nuclear risks and distribute them among insurers, reducing dependency on expensive foreign reinsurance markets. This approach will stabilize the insurance market, lower premiums, and encourage private insurers to offer coverage in the nuclear sector.

2.7.3 Create a Specialized Regulatory Body under IRDAI - It is necessary to establish a specialized regulatory body under the Insurance Regulatory and Development Authority of India (IRDAI) focused solely on nuclear insurance. This body should employ technical experts to develop actuarial models specific to India's nuclear industry, enabling fair pricing of insurance products. Such expertise is currently lacking and has prevented accurate risk assessment and sustainable pricing.

2.7.4 Implement Strict Timelines for Claim Settlement - To address the issue of slow claim settlements, we suggest imposing strict timelines for the processing and disbursement of nuclear liability claims. Further, an independent Nuclear Claims Tribunal should be established to ensure impartial adjudication and to avoid lengthy litigation. This will provide transparency and give victims timely compensation, thereby improving public trust in the system.

2.7.5 Mandate Transparency in Insurance Terms - We recommend mandating the full disclosure of insurance policy terms, conditions, and exclusions in a clear and accessible manner. Transparency will allow policyholders, stakeholders, and regulators to better understand the coverage and limitations of nuclear liability insurance, reducing disputes and increasing accountability.

2.7.6 Encourage Public-Private Partnerships (PPP) - We propose promoting public-

private partnerships to develop and operate the nuclear liability insurance framework. This approach leverages private sector efficiency and capital, while allowing government involvement to safeguard public interest. A PPP model will attract more private insurers into the market, encouraging competition and innovation in coverage.

2.8 Comparable jurisdiction of India and Russia.

The Russian Nuclear Insurance Pool (RNIP), established JSC-MAKS as its original leader and subsequently led by JSC-SOGAZ, forms the foundation of the Russian nuclear liability insurance system. In Russia, the RNIP is essential to the insurance coverage of civil nuclear liability risks. Strong institutional mechanisms have been established over time by the system, including reinsurance agreements and partnerships with a number of international nuclear insurance pools from nations like the UK, France, China, Belgium, and Ukraine.

International cooperation has long been a part of Russia's nuclear insurance system. In 2007, RNIP entered into reinsurance agreements with the Ukrainian Nuclear Insurance Pool, and by 2009, it was a capable participant in the International Pooling System. Reinsurance of nuclear risks from several foreign nuclear power plants, including those in China, Ukraine, Hungary, Belgium, and the Czech Republic, is a crucial component of the Russian model. As RNIP's management organisation, the Russian Association of Nuclear Insurers (RANI), which was established in 2011, oversees insurance operations, international inspections, and technical risk assessments. Russia has placed a strong emphasis on technical and regulatory oversight in its insurance regime through regular international inspections of nuclear facilities, recurring training programs, and the creation of standardised risk assessment methodologies. By prioritising risk pooling through numerous reinsurance contracts, Russia's model facilitates greater risk-sharing with foreign parties. From USD 120 million in 2012 to USD 600 million per claim by 2013, the system's capacity has steadily increased, and its participation in international insurance cooperation has grown as well.[16]

[16] Russian Federation, Russian Nuclear Insurance Pool, Nov. 27, 1997, https://atompool.ru/eng/RNIP/rniphistory/.

Comparison Between Russia And India.

Key Aspect	**Russia**	**India**
Institutional Framework	Well-developed structure with RNIP and RANI, active in international cooperation, risk assessment, and technical oversight. Strong ties with other nuclear insurance pools globally.	INIP is relatively young and government-backed, with minimal private sector participation. International cooperation is limited, with focus on domestic risk pooling.
Supplier Liability	Generally, follows standard product liability models with extensive reinsurance and international collaboration, reducing ambiguity in supplier recourse.	Supplier liability under **Section 17 of the CLND Act** remains ambiguous. Operator has discretion to waive supplier liability; recourse handled via commercial contracts.
Liability Caps and Coverage	No explicit statutory cap. Pool capacity has increased significantly (up to USD 600 million per claim), providing greater flexibility for catastrophic risks.	Explicit liability cap under **Section 6 of the CLND Act** (₹1500 crore for major installations). Government intervenes under **Section 7** if damages exceed cap.
Technical Oversight	Strong technical assessment system with international experts, regular inspections of nuclear facilities to assess risks and improve safety.	AERB handles technical regulation and incident notification under **Section 3 of the CLND Act**, but lacks frequent third-party technical inspections by insurers or independent bodies.
Market Maturity	More mature market with multiple international reinsurance relationships, growing reinsurance capacity, and several foreign pools participating in risk-sharing.	Smaller market, limited by few nuclear installations, low demand, and reliance on government-run INIP. Less competitive and innovative.

III. Case Laws

In G. Sundarrajan v. Union of India, the appellant, an environmental activist and trustee of a public trust, challenged the environmental and Coastal Regulation Zone (CRZ) clearances granted for the Kudankulam Nuclear Power Plant (KKNPP), specifically for Units 1–6. The appellant alleged that the Environmental Impact Assessment (EIA) for Units 3 to 6 was carried out by consultants not properly accredited for nuclear power projects, that mandatory procedure under the CRZ Notification (2011) was violated—especially concerning cumulative study in erosion-prone coastal stretches—and that certain assumptions in the EAC's assessment (like freshwater needs being met by an existing desalination plant) were inconsistent or misleading. These contentions were raised despite prior judicial decisions addressing similar issues for Units 1 and 2.

The Supreme Court, after reviewing the relevant clearances, expert appraisal committee reports, prior High Court and Division Bench judgments, held that the clearances—including the CRZ clearance for Units 3 to 6—were valid. It found that the EIA procedures, environmental clearances, and site clearances were in conformity with statutory requirements. The Court emphasised that many issues raised were already considered in past litigation; that the earlier decisions (including on Units 1 and 2) were not merely obiter dicta but binding on subsequent proceedings under Article 141 of the Constitution. It therefore dismissed the challenge, holding that the clearances could not be reopened.[17]

In Yash Thomas Mannully v. Union of India (2015 SCC OnLine Ker 25670), two advocates filed a public interest litigation before the Kerala High Court challenging the constitutional validity of several provisions of the Civil Liability for Nuclear Damage Act, 2010. They argued that provisions such as Sections 3, 4, 5, 6, 9, 15, 16, 18, 19, 20, 32, 35, and 38 violated Articles 14 and 21 of the Constitution by granting arbitrary powers to the Atomic Energy Regulatory Board (AERB), limiting the liability of nuclear operators, and placing restrictions on compensation claims. The petitioners contended that the Act diluted the principle of absolute liability established in M.C. Mehta v. Union of India, imposed unreasonable limitations on future generations' rights to claim damages, allowed government-appointed Claims Commissioners without judicial independence, and barred civil courts from reviewing awards,

[17] G. Sundarrajan v. Union of India, (2014) 6 SCC 776.

thereby infringing the doctrine of judicial review which is part of the basic structure of the Constitution.

The High Court, however, dismissed these challenges and upheld the validity of the Act. It was observed that the statute was enacted with the object of ensuring prompt compensation to victims of nuclear incidents through a no-fault liability regime while also balancing the economic and technological requirements of operating nuclear facilities. The Court held that the AERB, being a statutory body constituted under the Atomic Energy Act, 1962, had the requisite expertise and independence to determine when an incident qualifies as a "nuclear incident." It further reasoned that liability caps and exclusions under the Act were supported by rational policy considerations and supplemented by the Government's own responsibility to provide compensation beyond the operator's liability. The appointment of Claims Commissioners and the establishment of specialised tribunals were also justified as consistent with constitutional principles, as judicial review by High Courts remained available under Article 226. Thus, the Court found no arbitrariness or unconstitutionality in the impugned provisions and dismissed the writ petition.[18]

IV. Summary and Conclusion

A liability scheme for nuclear damage that is operator-only and no-fault is established under India's Civil Liability for Nuclear Damage (CLND) Act, 2010. Under this arrangement, the operator's liability is limited to ₹1,500 crore, and if more money is needed, the Central Government will step in to pay. With a ₹1,500 crore capacity, the Indian Nuclear Insurance Pool (INIP) was established in 2015 to operationalise this system. The pool helps operators and suppliers to obtain the required coverage, which supports the growth of nuclear projects and increases investor confidence. It is run by GIC Re in partnership with domestic insurers.

The insurance coverage extends to death and personal injury (including long-term health effects), property damage, environmental impairment, economic loss linked to property or environmental harm, as well as costs of prevention and remediation. Importantly, it also applies to incidents occurring during the transport of nuclear material, provided liability remains with the operator. Certain exclusions apply. These include exceptional natural disasters, war, armed conflict, insurrection, terrorism, and damage to the nuclear installation itself, co-sited

[18] Yash Thomas v. Union of India, 2015 SCC OnLine Ker 25670.

installations, or associated property. Damage to the transport vehicle itself is excluded, and claims arising from the claimant's wrongful acts are also denied.

Operators are required to obtain coverage from approved Indian insurers through the INIP and its reinsurance arrangements. They must negotiate policy terms within the statutory limits and provide proof of insurance to the authorities, including the Nuclear Damage Claims Commissioner, before commencing operations. In the event of an incident, claims are lodged with the Nuclear Damage Claims Commissioner. The Commissioner is responsible for verifying causation, determining quantum, and confirming eligibility. Awards are paid by the insurer to the operator, who in turn disburses compensation to the claimants. If damages exceed the operator's cap, the government provides the balance.

In India, the Insurance Regulatory and Development Authority (IRDAI) is a crucial regulatory body. Approving qualified insurers, establishing standards for risk assessment, premiums, and solvency, guaranteeing distinct accounting for nuclear risk, and promoting reinsurance—often in collaboration with foreign partners—are among its duties. Additionally, IRDAI establishes procedures for coordinating claims and mandates regular reporting on exposures, solvency, and claims history. Several difficulties still exist despite this organised framework. There are substantial data and modelling gaps for Indian conditions, reinsurance is costly, and domestic underwriting capacity is constrained. The system is further complicated by the operator liability cap, which can lead to moral hazard and undercompensation, procedural delays in claims resolution, and a thin market that inhibits competition and innovation.

Reform proposals focus on addressing these weaknesses. Suggestions include raising or removing the operator liability cap, creating a government-supported nuclear risk pool or central reinsurance backstop, and establishing a specialised IRDAI unit to build actuarial expertise. Other recommended measures are stricter timelines for claims processing, setting up a dedicated tribunal, enhancing transparency, and encouraging public–private partnerships to expand market capacity.

A comparative perspective with Ukraine is instructive. Both India and Ukraine follow an operator-channelled liability model supported by national pools. Ukraine, however, is aligned with the Vienna Convention, sets liability caps through its Cabinet, and benefits from a state backstop. India, while aligning with the Convention on Supplementary Compensation (CSC), faces additional friction due to the supplier's right of recourse under the CLND. This has raised

concerns among foreign suppliers, prompting calls to limit recourse to contract value and duration. Foreign suppliers have expressed worry over this, leading to requests to restrict recourse to the duration and value of the contract.

In conclusion, India's nuclear liability insurance system, which is founded on the CLND Act and operationalised through the INIP, provides an open and insurable framework that strikes a compromise between the expansion of the nuclear business and public safety. However, there are still legally mandated limitations, such as capped operator liability, restricted underwriting capacity, inadequate data, and claims processing delays. Clarifying supplier liability, deepening the market, and putting reforms like higher or uncapped operator liability, a government-backed reinsurance layer, and speedier adjudication through a dedicated tribunal into place would all help to improve compensation adequacy, decrease uncertainty, and lower the cost of capital. India is generally compatible with Ukraine's more conventional strategy, but it needs to address its supplier liability concerns, expand its market capacity, and guarantee prompt compensation for victims to fully unleash investment and achieve energy security and climate goals.