

The Legal Justifications For State Participation In Compensating For Nuclear Damage

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Abstract:

This study addressed the legal justifications for state participation in compensating for nuclear damage, by discussing the principle of state intervention in nuclear damage compensation and the controversy surrounding it, followed by clarifying the extent of the state's financial responsibilities in compensation amounts.

The study recommended the importance of national nuclear laws specifying the circumstances of state intervention and its participation in compensating for nuclear damages, as this would instill confidence among operators and investors in the nuclear field. It also advocated for strict enforcement in obliging the nuclear operator and insurance companies to fulfill all their obligations and duties towards the nuclear facility or those harmed, so as not to turn the principle of state intervention into a gateway for nuclear operators or insurance companies to shirk the responsibility placed upon them. Furthermore, it emphasized the necessity of activating the principle of nuclear safety and security oversight, and maintaining nuclear security and safety, as this is considered the most important means to reduce the occurrence of nuclear accidents.

Keywords: State, Compensation, Nuclear Accidents, Nuclear Operator.

Introduction:

Nuclear energy has become a top priority in the strategies of both advanced and emerging countries, due to its significance in meeting the increasing demand for electricity and energy in general, providing sustainable and clean energy sources, reducing greenhouse gas emissions and their environmental impact, in addition to creating job opportunities and advancing technology.

Given the importance of nuclear energy to the state and its inhabitants, international agreements and national nuclear laws have stipulated the necessity for the state to share with the nuclear operator in bearing a portion of the compensation in the event of nuclear accidents.

This study examines the legal justifications for state participation in compensating for nuclear damages by exploring the principle of state intervention in nuclear damage compensation and the controversy surrounding it, followed by detailing the extent of the state's financial responsibilities in compensation amounts.

The study aims to elucidate the foundations and justifications upon which the principle of state participation in compensating for nuclear damages is based.

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Research Methodology:

The research methodology in insurance for nuclear damage relies on utilizing an analytical approach to understand the foundations and justifications upon which the principle of state intervention and participation in compensating for nuclear damages is based. This is achieved through the analysis of legal texts in both international conventions and national laws, as well as elucidating and analyzing legal trends and opinions regarding the principle of state participation in compensating for nuclear damages. The aim is to reach a sound evaluation of this principle and the justifications that were relied upon in its determination.

Search concepts:

The Principle of State Intervention in Nuclear Damage Compensation:

The principle of state intervention in compensating for nuclear damages does not enjoy consensus within the domain of legal scholarship, with opinions sharply divided between those opposing and those supporting state involvement, deeming it an unavoidable necessity. This divergence is articulated as follows:

First Perspective: Opposition to State Intervention in Nuclear Damage Compensation:

Proponents of this stance draw upon a series of rationales, including: The adoption of the state intervention principle essentially acts as a form of favoritism towards private nuclear projects, facilitating these projects under the guise of encouragement and protection by the state. Critics of this viewpoint argue that such state support should be preemptive, occurring before a nuclear incident, rather than reactive (Fath El Bab, 2016).

Legally, the state is not obliged to compensate for damages resulting from nuclear incidents, regardless of their scale. As a general principle, the state does not commit to compensating victims of a nuclear accident caused by a private entity (Abdel Aal, 2008). If insurance coverage proves insufficient for the victims, their only recourse is to seek compensation from the assets of the nuclear project, similar to practices in other industries.

The state's use of its authority to grant licenses for nuclear activities that serve the public good, despite their inherent risk potential, does not justify a state obligation to compensate for damages incurred by individuals as a result of these activities (Mohamed, 1993). The global practice of mandatory licensing for vehicle operation has not led to an expectation of state compensation for damages caused by such vehicles.

State intervention in the realm of nuclear damage compensation introduces a novel and unparalleled convention, involving the state in the distribution of these damages across the entire society. This approach raises multiple issues, particularly concerning the criteria for such intervention and its application scope (Abdel Aal, 2008).

Finally, proponents of this approach have advocated for the potential of state intervention to compensate for nuclear damages based on its social responsibility towards its citizens during crises and disasters, without necessarily invoking its legal liability towards the victims (Mar'i, 2003). This perspective has faced significant criticism (Abdel Latif, 2016), especially regarding its conception of state intervention from a social standpoint, as it fails to specify the form and scope of such intervention. Moreover, this approach unjustifiably discriminates among the victims of the same nuclear incident, where some are compensated on a legal basis, fully satisfying their rights, while others are compensated on a social basis. Additionally, this perspective implies discrimination based on political grounds, whereby the state compensates its nationals but not foreign nationals affected by the incident, establishing an unjust distinction for the same harm.

Second Perspective: Support for State Intervention in Nuclear Damage Compensation:

Proponents of this perspective defend the principle of state intervention in compensating for nuclear damages by refuting the arguments presented by those opposing the principle. Their support for state intervention is based on several reasons, including:

1. The claim made by opponents of the principle, that state intervention merely serves as a gesture of favoritism towards nuclear projects, is unfounded. In reality, state intervention in the realm of nuclear damages acts as an incentive for nuclear investments. This is achieved by instilling a sense of security among nuclear activity operators, reassuring them of the state's support and standing by them. Such intervention benefits society as a whole by attracting private industrial sectors into the nuclear industry and overcoming obstacles in their path (Fath El Bab, 2016).
2. The assertion that state intervention constitutes a deviation from traditional principles of liability represents a rigid interpretation of the law, overlooking the potential for its evolution. The modern form of the principle of concentration does not preclude legislative action under the pretext of preserving traditional liability principles, which have been shown to be inadequate for addressing the unique legal challenges posed by civil liability for nuclear damages (Abdel Aal, 2008).
3. The responsibility lies with the legislator to permit the engagement in certain activities for the public benefit, despite the inherent risks faced by the beneficiaries of such activities. It is incumbent upon those who provide sufficient guarantees for the continuity of these activities, along with the necessary protection for those harmed by them. The legislator has deemed that general civil liability rules are inadequate for achieving this, as they either impose unspecified obligations on the practitioners of these activities or neglect the rights of the harmed to compensation. This led to the adoption of the principle of state obligation to compensate (Mohamed, 1993).
4. The assertion that there are other projects which do not involve state intervention for compensating damages despite their dangers is flawed. Nuclear activities or projects are characterized by a significant degree of risk and specificity, considering the unique nature of nuclear damage, as well as the catastrophic effects and severe consequences of nuclear damages. This distinguishes them from other activities and projects, which, though potentially hazardous, do not reach the level of risk associated with nuclear activities or projects. This justifies state intervention in compensating for the damages resulting from them (Fath El Bab, 2016). Therefore, the magnitude, catastrophic nature, and severe consequences of nuclear damages are the foundation upon which the principle of state intervention in compensation for such damages, to the exclusion of others, is based. Consequently, there are several considerations supporting this principle, representing the justifications for state participation in compensating for nuclear damages, summarized as follows:

First, Legal Considerations: Given the unique nature of nuclear damages, characterized by their spatial and temporal expansiveness, it is incumbent upon the legislator to define the financial responsibility of the operator to prevent operators from shying away from engaging in the nuclear energy sector. However, this limitation of the operator's liability in terms of compensation amount may result in not all damages being compensated, especially those exceeding the operator's maximum financial liability. This situation represents an exception to the general rules of civil liability, which mandate compensation for all damages resulting from a harmful act (Al-Heli, 2019).

Since the state can restrict individuals' rights in some respects, these individuals are entitled to satisfaction from the state to mitigate their deprivation of this enjoyment. The executive authority is granted the right to expropriate individual property for public benefit, and correspondingly, the state is obligated to compensate for the deprivation of their property rights. By analogy, exempting the nuclear operator from the obligation to compensate for damages exceeding their maximum financial guarantee deprives the victim of their right to claim compensation from the nuclear operator for incurred damages. This constitutes a withdrawal of the victim's right to compensation for the public benefit of developing the nuclear industry. Therefore, the state must intervene financially to

compensate the victim (Mohamed, 1993). This legal balancing act is sought by the state to maintain the equilibrium of justice and rights within the state.

Secondly, Political Considerations: Among the critical factors for state intervention in compensating for nuclear damages is the political consideration. If victims of a nuclear incident are left uncompensated, the result could destabilize the political stability within the state or the regional area, which serves no party's interest. This concern, among others, has led to the establishment of an international system for supplementary financing to compensate for nuclear damages (Tony, 2019). Therefore, it is imperative for the state to fulfill its national and regional duties and responsibilities.

Thirdly, Economic Considerations: It is widely acknowledged that the primary factor for establishing a specific regime for civil liability for nuclear damages is the necessity to promote the peaceful uses of nuclear energy. However, the nuclear industry, investors therein, and the insurance sector, which lacks the capacity to bear the substantial amounts that the operator of a nuclear facility insured therein incurs, as well as bilateral commercial contracts in the nuclear energy field, have made states more willing to contribute to compensating for nuclear damages. This willingness stems from a fear of losing the economic advantages associated with their nuclear industries. Therefore, major countries promote the benefits of nuclear energy. Consequently, the International Atomic Energy Agency's system, under the United Nations Security Council, stipulates that its goal is to accelerate and expand the contribution of nuclear energy to peace, health, and prosperity worldwide (Khairuddin, 2013).

Fourthly, Social Considerations: The social consideration lies in that defining the nuclear operator's obligation to compensate can lead to some victims receiving compensation while others do not, creating a social imbalance due to the failure to redress the harm suffered. Even in cases where the maximum financial guarantee of the nuclear operator's liability to compensate is shared among the victims of nuclear damage, proportionate to the harm each has suffered, there will still be damages left uncompensated. Therefore, the state must intervene financially to compensate for the damages not covered by the nuclear operator's liability, as a remedy for this social imbalance (Mohamed, 1993).

From the foregoing, it becomes evident that state intervention in compensating for nuclear damages is beyond dispute; this is due to the significance of nuclear energy and its various peaceful benefits, which necessitates a state commitment to encourage and develop this form of energy. Given the benefits derived by the state and its inhabitants from nuclear energy across all aspects of use, it is incumbent upon the state to bear the costs associated with these benefits, by participating in compensating those harmed by the resultant damages.

The Extent of State Liability for Compensation Amounts:

It has been previously mentioned that state intervention in compensating for nuclear damages is one of the principal tenets of civil liability for nuclear damages. The Saudi regulator has stipulated this obligation, where Article (10) of the Nuclear Damages Civil Liability System states: The amount borne by the government under any obligation of it for the purpose of compensating for nuclear damages towards the liability of more than one operator shall be limited to the difference between the total amounts of liability referred to in Article (Eighth) of the System and the amount of liability stated in Article (Twenty-first) of the System, based on the principle that each nuclear incident is considered separately, regardless of the number of responsible operators.

Furthermore, Article (11) of the Nuclear Damages Civil Liability System stipulates that: With regard to what is mentioned in Article (Tenth) of the System, if several nuclear facilities belonging to a single operator are involved in a single nuclear incident; then the operator shall bear the liability for compensation within the limits of the amount of liability

according to Articles (Twenty-first) and (Twenty-second) of the System for each facility separately, and the government - whenever it is responsible under an obligation from it - shall bear the difference between the total limits of the operator's liability and the liability limit specified in Article (Twenty-first) of the System, regardless of the number of facilities.

In light of the foregoing provisions, it is necessary to highlight the cases identified by nuclear law scholars for state intervention and its obligation to compensate, according to the following:

Firstly, the situation where the compensation value exceeds the nuclear operator's maximum total liability: The funds allocated for the operator's liability for nuclear accident damages may be available, but sometimes the accident is catastrophic, with compensations exceeding the maximum liability limit. In such cases, state intervention to cover the shortfall in compensations becomes essential. However, some view this intervention, based on public opinion considerations and state responsibility, as optional or permissive, constituting a form of assistance or aid (Abdel Aal, 2008). The Saudi regulator has not specified this intervention, although the American law has adopted it despite moving away from the concept of state intervention (Mar'i, 2003).

Secondly, state intervention in the event of the depletion of the mandatory insurance value or the financial guarantee provided by the nuclear operator: This intervention is among the most important and effective mandatory state interventions for the legal protection sought for the victims of the nuclear accident. It establishes a direct responsibility for the state to compensate for the remaining damages from the nuclear accident within another maximum limit. This responsibility is primary, not secondary, making the state the principal debtor of compensation after the exhaustion of the financial guarantee or mandatory compensation (Abdel Aal, 2008). Article (7) paragraph (1a) of the Protocol to Amend the Vienna Convention on Civil Liability for Nuclear Damage, 1997, Vienna, states: "The operator shall maintain insurance or other financial guarantee covering his liability for nuclear damage in the amounts, types, and terms specified by the state of the facility. The state of the facility must ensure the payment of compensations for nuclear damages charged to the operator, to the extent that the insurance or other financial guarantee falls short of covering these compensations..."

Thirdly, state intervention in case of insolvency or bankruptcy of the nuclear operator, insurer, guarantor, or cessation or cancellation of insurance: The state, as a guarantor of fulfillment in the majority of nuclear legislation and laws, ensures the nuclear operator's compliance with compensating the victims within the limits of the financial guarantee or mandatory insurance against liability. The state is held accountable as a guarantor for fulfillment in cases of incapacity or bankruptcy of the operator, insurer, or financial guarantor, as well as in instances of insurance cessation or cancellation. The state commits to compensating the victims for their rights within the pre-determined value of the financial guarantee or insurance against liability whenever the operator, insurer, or guarantor, for any reason, fails to fulfill or complete this obligation. The state may reclaim the amount it expended as a result of this from the operator according to general rules. State intervention in this scenario or case is precautionary, serving as a guarantee for the nuclear operator's inability to fulfill its compensation obligation and thus only arises in situations where the operator fails to meet this obligation, in protection of the victims' rights (Abdel Latif, 2016; Abdel Aal, 2008).

The Moroccan law explicitly stipulates this obligation, where Article (24) of the Moroccan Civil Liability Law in the field of nuclear damages states: "If the operating party is unable to fully or partially cover its civil liability, the state is qualified to offer its guarantees to the said party to cover all or part of its civil liability not covered by insurance, within the limits of the amount provided for in Article (22) of this law."

Fourthly, state intervention in cases exempting the nuclear operator from liability: International conventions and national legislations determine situations in which the nuclear operator is exempt from liability, such as natural disasters, wars, armed conflicts, or exceptional circumstances. If a nuclear incident results from any of these causes, the state is obliged to intervene to fulfill the compensation values due to the victims. In this

case, its intervention is mandatory, fulfilling its general responsibility for the security and safety of individuals against dangers and disasters, whether or not a provision in the national nuclear law mandates state intervention (Fath El Bab, 2016).

This obligation is based on the general responsibility of the state, where the state's responsibility derives its rules and provisions from the principles of public law, which is its main source. It is inconceivable for the state to neglect its principal role in society or abdicate its responsibility towards the victims of a nuclear incident arising from any disaster or war (Abdel Aal, 2008).

The Saudi Nuclear Damages Civil Liability System does not stipulate this obligation, and in truth, there is no need to explicitly state this obligation. Even if it were stated, it would merely clarify, not establish a new obligation for state responsibility.

Results:

The study's findings revolve around the provisions of insurance for nuclear damages and the associated difficulties and issues, with the results manifested as follows:

1. Nuclear energy represents a top priority in the strategies and significant projects of states.
2. The foundation for adopting the principle of state intervention in compensating for such damages, to the exclusion of others, is the magnitude, catastrophic nature, and severe consequences of nuclear damages.
3. The principle of state intervention is based on an important rule: to gain is to bear the risk. Given the benefits derived by the state and its inhabitants from nuclear energy across all aspects of use, it is incumbent upon the state to bear the costs associated with these benefits.
4. One of the reasons for state intervention in compensating for nuclear damages is to fulfill its general responsibility for the security and safety of individuals against dangers and disasters.
5. State intervention is grounded in the principle of social welfare, considering compensation for nuclear damages as part of the social care provided by the state to its citizens. This includes offering financial and medical support to the victims and their families.
6. Maintaining public trust through compensation, the state contributes to building public confidence in its ability to handle nuclear incidents and provide support to those affected.

Recommendations:

Based on the conclusions drawn from the study of the legal basis for civil liability in the nuclear field, the following recommendations can be proposed:

1. National nuclear laws should specify the cases of state intervention and its participation in compensating for nuclear damages, as this would foster confidence among operators and investors in the nuclear field.
2. Rigor in enforcing the obligations and duties of the nuclear operator and insurance companies towards the nuclear facility or the affected parties is essential, to ensure that the principle of state intervention does not become a means for nuclear operators or insurance companies to evade the responsibility placed upon their shoulders.
3. The activation of the principle of nuclear oversight and safety, and the maintenance of nuclear security and safety, are considered the most crucial means to minimize the occurrence of nuclear incidents.

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References:

- Tony, Hossam Mohamed Moussa. (2019). *Civil Liability of the Nuclear Operator for Nuclear Damages: A Comparative Study*, Doctoral Dissertation, Faculty of Law, Assiut University.
- Khair Eldeen, Shamama. (2013). *International Civil Liability for Nuclear Damages*, Shamama Khair Eldeen, The Twenty-First Annual Conference "Energy between Law and Economics", United Arab Emirates University, Part Three: 1013-1138.
- Abdel Latif, Mohamed Amin Youssef. (2016). *State Liability for Environmental Pollution Damages by Nuclear and Radiation*. 1st Edition. National Center for Legal Publications, Cairo.
- Abdel Aal, Mohamed Hussein. (2008). *The Legal System of Civil Liability in the Nuclear Field*, Dar Al-Nahda Al-Arabiya, Cairo.
- Elfeky, A. I. M., Najmi, A. H., & Elbyaly, M. Y. H. (2023). The effect of big data technologies usage on social competence. *PeerJ Computer Science*, 9, e1691.
- Elfeky, A. I. M., & Elbyaly, M. Y. H. (2023). THE EFFECT OF E-TUTORIAL PROGRAMS ON IMPROVING THE PRODUCING DIGITAL CONTENT SKILL. *European Chemical Bulletin*, 12, 6581-6587.
- Elfeky, A. I. M., & Elbyaly, M. Y. H. (2023). MANAGING DRILL AND PRACTICE PROGRAMS WITH A MOTIVATIONAL DESIGN AND THEIR EFFECTS ON IMPROVING STUDENTS' ATTITUDES TOWARD INFORMATION AND COMMUNICATION TECHNOLOGY COURSES. *European Chemical Bulletin*, 12, 6567-6574.
- Elfeky, A. I. M., & Elbyaly, M. Y. H. (2023). THE IMPACT OF PROJECT-BASED LEARNING ON THE DEVELOPMENT OF COGNITIVE ACHIEVEMENT IN THE COURSE OF APPLICATIONS IN EDUCATIONAL TECHNOLOGY AMONG STUDENTS OF THE COLLEGE OF EDUCATION AT NAJRAN UNIVERSITY. *European Chemical Bulletin*, 12, 6643-6648.
- Elbyaly, M. Y. H., & Elfeky, A. I. M. (2023). THE EFFECT OF A SIMULATION PROGRAM ON STUDENTS AT THE COLLEGE OF EDUCATION'S ACQUISITION OF HAND EMBROIDERY SKILLS. *European Chemical Bulletin*, 12, 6575-6580.
- Elbyaly, M. Y. H., & Elfeky, A. I. M. (2023). FLIPPED CLASSROOM: ENHANCING FASHION DESIGN SKILLS FOR HOME ECONOMICS STUDENTS. *European Chemical Bulletin*, 12, 6559-6566.
- Elbyaly, M. Y. H., & Elfeky, A. I. M. (2023). THE IMPACT OF PROBLEM-SOLVING PROGRAMS IN DEVELOPING CRITICAL THINKING SKILLS. *European Chemical Bulletin*, 12, 6636-6642.
- Elbyaly, M. Y. H., & Elfeky, A. I. M. (2023). COLLABORATIVE E-LEARNING ENVIRONMENT: ENHANCING THE ATTITUDES OF OPTIMAL INVESTMENT DIPLOMA STUDENTS TOWARDS THE DIGITAL SKILLS COURSE. *European Chemical Bulletin*, 12, 6552-6558.
- Elfeky, A. I. M., & Elbyaly, M. Y. H. (2023). THE IMPACT OF MOBILE LEARNING ON DEVELOPING THE SKILLS OF INTEGRATED SCIENCE OPERATIONS AMONG STUDENTS OF THE OPTIMUM INVESTMENT DIPLOMA. *European Chemical Bulletin*, 12, 6629-6635.
- Elbyaly, M. Y. H., & Elfeky, A. I. M. (2023). THE EFFECTIVENESS OF USING ADVANCED ORGANIZATIONS WITHIN THE VIRTUAL CLASSROOM TO ENHANCE THE ACCEPTANCE OF TECHNOLOGY DURING DISASTERS. *European Chemical Bulletin*, 12, 6603-6612.
- Elbyaly, M. Y. H., & Elfeky, A. I. M. (2023). THE EFFICIENCY OF ONLINE LEARNING ENVIRONMENTS IN FOSTERING ACADEMIC MOTIVATION. *European Chemical Bulletin*, 12, 6622-6628.
- Elbyaly, M. Y. H., & Elfeky, A. I. M. (2023). THE EFFICIENCY OF INSTRUCTIONAL GAMING PROGRAMS IN STIMULATING CREATIVE THINKING. *European Chemical Bulletin*, 12, 6613-6621.
- Elfeky, A. I. M., & Elbyaly, M. Y. H. (2023). THE EFFECT OF SIMULATION PROGRAMS ON ENHANCING SKILLS OF DIGITAL APPLICATIONS. *European Chemical Bulletin*, 12, 6588-6594.

- Elbyaly, M. Y. H., & Elfeky, A. I. M. (2023). THE EFFECTIVENESS OF EMPLOYING MOTIVATIONAL DESIGNED E-LEARNING SITUATIONS ON DEVELOPING ACHIEVEMENT IN COMPUTER SCIENCE CURRICULA FOR OPTIMAL INVESTMENT STUDENTS. *European Chemical Bulletin*, 12, 6595-6602.
- Fath El Bab, Mohamed Rabie. (2016). *State Civil Liability for Nuclear Radiation Pollution Damages*. Dar Al-Nahda Al-Arabiya, Cairo.
- Mohamed, Abdel Hamid Osman. (1993). *Civil Liability for the Harms of Radioactive Material*, Doctoral Dissertation, Faculty of Law, Cairo University.
- Mar'i, Ayman Sulaiman. (2003). *the Legal System for Nuclear and Radiation Licensing*, Dar Al-Nahda Al-Arabiya, Cairo.
- Al-Heli, Ahmed Abdel Ghani. (2019). *Civil Liability for the Peaceful Use of Nuclear Energy*, Doctoral Dissertation, Faculty of Law, Tanta University.