

William & Mary Environmental Law and Policy Review

Volume 36 (2011-2012)
Issue 1 *Symposium Issue Looking Beyond the
Deepwater Horizon: The Future of Offshore
Drilling*

Article 8

December 2011

India's Nuclear Civil Liability Bill and Supplier's Liability: One Step Towards Modernizing the Outdated International Nuclear Liability Regime

Arya Hariharan

Follow this and additional works at: <https://scholarship.law.wm.edu/wmelpr>



Part of the [Energy and Utilities Law Commons](#), and the [International Law Commons](#)

Repository Citation

Arya Hariharan, *India's Nuclear Civil Liability Bill and Supplier's Liability: One Step Towards Modernizing the Outdated International Nuclear Liability Regime*, 36 Wm. & Mary Envtl. L. & Pol'y Rev. 223 (2011), <https://scholarship.law.wm.edu/wmelpr/vol36/iss1/8>

Copyright c 2011 by the authors. This article is brought to you by the William & Mary Law School Scholarship Repository.
<https://scholarship.law.wm.edu/wmelpr>

INDIA'S NUCLEAR CIVIL LIABILITY BILL AND SUPPLIER'S LIABILITY: ONE STEP TOWARDS MODERNIZING THE OUTDATED INTERNATIONAL NUCLEAR LIABILITY REGIME

ARYA HARIHARAN*

INTRODUCTION

Energy is the workhorse of any society and the backbone of the global economy.¹ The nuclear industry, in particular, is a marvel of human innovation, but such technological marvel does not give the industry *carte blanche* to mature without a system of checks and balances in place.

The nuclear industry has grown accustomed to the practice of having all liability channeled to the nuclear operator and no liability suffered by the various nuclear suppliers,² regardless of fault.³ With the rise of new global powers, such as India, the nuclear industry and its traditional sovereign supporters find themselves coveting access to lucrative new markets not willing to completely absolve the foreign players of liability in the event of a nuclear accident.⁴ On August 30, 2010, India passed the Civil Liability for Nuclear Damage Bill.⁵ Because India is not a signatory of the

* J.D. Candidate, 2012, College of William & Mary School of Law. B.A., 2007, Law & Society; Minor International Studies, American University. I would like to send my heartfelt thanks to my wonderful parents, Dr. Narayanan & Mrs. Sheela Hariharan, for their high expectations and unwavering support, and to my brother, Girish Hariharan, for his unintended comic relief. I want to thank the great group of people at the *William & Mary Environmental Law and Policy Review* for all their hard work in preparing this Note for publication. Finally, I would like to thank my friends and loved ones for tolerating me while I worked through the stress of law school and Note writing.

¹ See David A. Bagely, *The United States and International Civil Liability*, 18 BROOK. J. INT'L. L. 497, 497 (1992) (explaining the power and fragility of nuclear energy).

² The term "suppliers" in this Note encompasses nuclear manufacturers, contractors, carriers, designers, and any other third parties involved in the creation and establishment of a nuclear installation, prior to ownership being transferred to the nuclear operator.

³ See *infra* Part I.

⁴ See Jayshree Bajoria, *India's Nuclear Liability Dilemma*, COUNCIL ON FOREIGN REL., (Nov. 4, 2010), <http://www.cfr.org/international-peace-and-security/indiasnuclear-liability-dilemma/p23305>.

⁵ The Civil Liability for Nuclear Damage Bill, No. 19 of 2010, INDIA CODE (2010).

Non-Proliferation Treaty,⁶ Paris Convention,⁷ or other major international nuclear regimes,⁸ the Indian government felt it necessary for the country to have a viable nuclear liability regime in case of nuclear disaster.⁹ The new law allows for negligent nuclear suppliers to be exposed to liability, much to the consternation of foreign nuclear players.¹⁰

India's new legislation has faced much criticism in the West, but as this Note will attempt to prove, moving away from legal channeling and, instead, subjecting suppliers to third-party liability claims is the next logical direction for the outdated nuclear liability regime. Channeling liability solely to the operator is a means of protecting powerful nuclear suppliers from liability claims.¹¹ Contrary to popular belief, this is at the expense of the victims, the greater public, and the environment, because suppliers have no real incentive to ensure the safety and longevity of their goods and services.¹² In addition, it is very difficult for plaintiffs to collect sufficient damages.¹³

Part I will delve into the inception of legal and economic channeling of liability to the nuclear operator and the current regime's justifications for such a doctrine.¹⁴ Part II will discuss the various international nuclear liability damage regimes and how they channel liability solely to the nuclear operators and away from any third-party suppliers.¹⁵ Part III will briefly review how the use of liability channeling varies in different nations, including Austria, Canada, Chile, and the United States.¹⁶ Finally, Part IV will discuss legal channeling in the context of the Indian Civil Liability for Nuclear Damage Bill and analyze why supplier's liability will better serve the interests of the public and the environment.¹⁷

⁶ Treaty on the Non-Proliferation of Nuclear Weapons, Mar. 5, 1970, 729 U.N.T.S. 161, available at http://www.un.org/disarmament/WMD/Nuclear/pdf/NPTEnglish_Text.pdf [hereinafter Non-Proliferation Treaty].

⁷ *Convention on Third Party Liability in the Field of Nuclear Energy*, NUCLEAR ENERGY AGENCY, July 29, 1960, available at http://www.oecd-nea.org/law/nlparis_conv.html [hereinafter Paris Convention].

⁸ See *infra* Parts II.B–I.

⁹ See *infra* Part IV.

¹⁰ See *infra* Part IV.A.

¹¹ See *infra* Part IV.B.

¹² See *infra* Part IV.C.

¹³ See *infra* Part IV.B.

¹⁴ See *infra* Part I.C.

¹⁵ See *infra* Part II.

¹⁶ See *infra* Part III.

¹⁷ See *infra* Part IV.

While the Indian bill is not perfect by any stretch of the imagination, it is a significant step toward providing the public and the environment with greater protection by updating the nuclear liability regime to reflect the industry's current status as a mature industry no longer in need of such strong liability protections.

I. CHANNELING LIABILITY TO THE NUCLEAR OPERATOR

There are a variety of reasons that the nuclear industry objects to any form of supplier liability, and instead, prefers channeling liability solely to the nuclear operator. The primary justification is the belief that it will lead to unlimited liability far “upstream” and that will cause many nuclear operators and suppliers to become insolvent.¹⁸

There are also multiple policy objectives that make strict operator liability attractive to the nuclear industry. It is cost-effective, in their view, because nuclear operators are able to pass off the cost of potential future accidents onto current and future users or purchasers of nuclear energy.¹⁹ Essentially, future damages are internalized into the price of production.²⁰ The industry also argues that strict liability acts as an incentive for operators to follow safety standards and “implement state-of-the-art” techniques to maintain the safest possible nuclear installation.²¹

A. *Historical Context*

The idea of shifting all liability in the event of a nuclear accident or disaster was a product of the dominant lobbying power of the American nuclear industry in the late 1940s and 1950s.²² After World War II, the United States was the obvious preeminent power in nuclear technology.²³

¹⁸ See Duncan E. J. Currie, *The Problems and Gaps in the Nuclear Liability Conventions and an Analysis of How an Actual Claim Would be Brought Under the Current Existing Treaty Regime in the Event of a Nuclear Accident*, 35 DENV. J. INT'L L. & POL'Y 85, 91–92 (2006).

¹⁹ See Kathy J. S. Fritz, *Civil and State Liability for Nuclear Accidents: A Proposal for Eastern Europe*, 6 INT'L LEGAL PERSP. 37, 60–61 (1994).

²⁰ *Id.* at 61.

²¹ *Id.*

²² See Tom Vanden Borre, *Channeling of Liability: A Few Juridical and Economic Views on an Inadequate Legal Construction*, in CONTEMPORARY DEVELOPMENTS IN NUCLEAR ENERGY LAW HARMONISING LEGISLATION IN CEEC/NIS 13, 17–18 (Nathalie L.J.T. Horbach ed., 1999).

²³ See *id.* at 19 (explaining how many Western nations were forced to rely on American technological expertise in nuclear energy).

Initially, the U.S. government was responsible for any liability caused by a failure in nuclear technology, because at the time, nuclear plants, reactors, and facilities were run by the government or the military.²⁴ In 1954 the American government decided it was time for the private industry to be allowed to own, operate, and license reactors.²⁵ This boon to the industry came with a heavy price, as it meant the liability of third-party actors (suppliers, designers, contractors, and manufacturers) would also shift toward the private sector.²⁶ This immediately became a huge disincentive for the fledgling industry to develop new nuclear technologies—specifically those focused on advances in civil nuclear energy—and so investment in nuclear energy declined.²⁷ At the same time, the American nuclear industry was in the midst of trying to expand its supply market into Western Europe.²⁸ The burden of such liability was problematic because the American companies were unwilling to be liable for any nuclear incidents that might occur across the Atlantic.²⁹

B. Economic Channeling

The primary hurdle for the American private sector was insurance. Due to the low-probability but high-risk nature of nuclear incidents, it is very difficult to calculate insurance premiums.³⁰ This is why the Price-Anderson Act came into effect in 1957.³¹ The concept of economic channeling was born and created as a *quid pro quo* type of arrangement.³² Nuclear operators agreed to bear the burden of strict liability in return for a limitation of liability over time, insurance coverage, manageable premiums, and capped damages.³³ This idea of economic channeling is the reason the industry now has the insurance pools and operator schemes discussed previously. Economic channeling differs from legal channeling in “that the person causing the damage [e.g., the supplier] is in principle liable, but

²⁴ *Id.* at 18.

²⁵ *See id.*

²⁶ *Id.*

²⁷ *Id.*

²⁸ *See* Vanden Borre, *supra* note 22, at 19.

²⁹ *See id.*

³⁰ *See* Evelyne Ameye, *Channeling of Nuclear Third Party Liability Towards the Operator: Is it Sustainable in a Developing Nuclear World or is There a Need for Liability of Nuclear Architects and Engineers?*, 19 EUR. ENERGY & ENVTL. L. REV. 33, 35 (2010).

³¹ *See* Vanden Borre, *supra* note 22, at 18.

³² Ameye, *supra* note 30, at 35.

³³ *See id.* (“[O]perators agreed to economically channeled and strict liability, a single *forum*, a single applicable law and the obligation to hold financial security in return for limitation of liability in amount and in time.”); *see also* Vanden Borre, *supra* note 22, at 18.

that only one designated person will bear the eventual economic burden [e.g., operator's insurance]"³⁴ By contrast, legal channeling makes it legally impossible for victims' claims to be brought against a party responsible for the damage (e.g., the supplier of a faulty reactor), because all the liability has been shifted to another party.³⁵

C. *Legal Channeling*

The famous Harvard Report by the Atomic Industrial Forum took the principle of the economic channeling of liability to operators and transformed it into a legal principle.³⁶ The Harvard Report focused on the fact that suppliers, contractors, and designers have no control over their goods and services once ownership is transferred to the operators.³⁷ Because of this transference of complete control, it was concluded that liability should transfer completely as well.³⁸ The Harvard Report articulated twelve basic principles of nuclear liability, the most pertinent principles being: limitation of liability over time; limitation of damages; an exclusive forum; exclusive jurisdiction of the state where the plant is located; and the obligation to have insurance as a means of financial security.³⁹

1. *Judicial Efficacy*

The Harvard Report listed various justifications for this new approach to liability—an approach that is in fact counter to most state tort law. The main reasons presented were to avoid costly, duplicative, and lengthy litigation; “to avoid an escalation of nuclear insurance costs;” and to encourage investment and innovation in the nuclear industry.⁴⁰ Attempting to meet the burdens of proof for claims seeking damages from the third-party suppliers would be virtually impossible for the average plaintiff.⁴¹ The incessant litigation would become publicly detrimental to the victims'

³⁴ See Vanden Borre, *supra* note 22, at 27.

³⁵ See *id.* at 27.

³⁶ HARVARD LAW SCH. & ATOMIC INDUS. FORUM, INTERNATIONAL PROBLEMS OF FINANCIAL PROTECTION AGAINST NUCLEAR RISK (1959) [hereinafter HARVARD REPORT].

³⁷ Vanden Borre, *supra* note 22, at 20.

³⁸ See *id.* (stating that fairness required the supplier to be relinquished from liability).

³⁹ See Ameye, *supra* note 30, at 35.

⁴⁰ *Id.* at 36.

⁴¹ See HARVARD REPORT, *supra* note 36, at 16 (providing suggested solutions for this dilemma).

cause, because it would have the appearance of malicious litigation and harassment of the fledgling industry. Furthermore, the Report argued that plaintiffs would purely be targeting the suppliers, rather than the operators, because of their deeper pockets.⁴² Such threat of litigation would dampen nuclear innovation, because, in theory, no company directly or indirectly participating in the construction of a nuclear installation would be absolutely immune under general law.⁴³

2. Improves Victims' Ability to Receive Compensation

The concept of exclusive jurisdiction and a single forum was argued to be for the benefit of the plaintiffs because most large industrial defendants have assets in various other countries—countries that often will not support or accept American judgments.⁴⁴ In addition, such presence in foreign nations could subject plaintiffs to confounding choice-of-law issues.⁴⁵ Finally, the Harvard Report argued that limiting plaintiffs' options would also help avoid forum shopping, thus keeping the litigation in the state where presumably the nuclear incident had the most impact.⁴⁶ Having all the liability channeled to the operator and requiring the location of the operator to be the state of jurisdiction and the forum, the Report argued that this provided the plaintiffs with the best means for recovering damages and experiencing a significantly higher percentage of success.⁴⁷

3. Benefits to Public Safety and the Environment

The Harvard Report also took the time to address the concerns of certain legislators with regard to the third-party suppliers' almost complete immunity from suit.⁴⁸ The authors of the Report argued that this immunity would not result in neglect or ignorance of safety standards, as

⁴² See Vanden Borre, *supra* note 22, at 20 (“[S]uppliers feared being prosecuted instead of or jointly with the nuclear operator, even if their role was limited to calculations or supervision of specific parts of the reactor, because the victim of a nuclear incident could be compelled to sue as many companies as possible.”).

⁴³ *Id.*

⁴⁴ See Ameye, *supra* note 30, at 35; see also HARVARD REPORT, *supra* note 36, at 16.

⁴⁵ See HARVARD REPORT, *supra* note 36, at 16.

⁴⁶ See Ameye, *supra* note 30, at 36.

⁴⁷ See *id.*

⁴⁸ See *id.* at 38 (noting that the Harvard Report advocated that absent liability, suppliers would maintain adequate safety measure for business reasons).

was the concern of consumer protection groups, but, rather, would cause “suppliers . . . [to] aspire to a high reputation in terms of quality.”⁴⁹

Why would the suppliers aspire to such lofty and probably unprofitable goals? The Harvard Report argued that this would be purely a business decision.⁵⁰ Because operators bear the entire weight of liability in the event of a nuclear accident or disaster, the operators would only want to do business with the suppliers who had the reputation for being the best and the safest.⁵¹ The operators would seek out the suppliers, designers, manufacturers, contractors, and delivery companies that could offer them the comfort of a solid reputation for safety compliance, and this in turn would result in the operators acquiring their operating license from the federal government faster.⁵² In addition, forcing the operator to bear the burden of all liability would also force them “to maintain the highest standards of safety.”⁵³ Finally, but most importantly, the operators’ insurance premium rates would decrease significantly.⁵⁴ And so, at the behest of the U.S. nuclear industry, legal channeling was introduced to the world with the aforementioned goals and interests at the heart of it all.⁵⁵

There are numerous faults with this doctrine of legal channeling of liability, but because it is a doctrine so entrenched in the nuclear community, critics are often overlooked or are few and far between. This is especially true in the United States, where the concept of channeling found its inception.⁵⁶ In fact, this author’s primary frustration was the lack of critical information available on a doctrine that so obviously flouts basic tort law principles.⁵⁷

II. INTERNATIONAL NUCLEAR LIABILITY DAMAGE COMPENSATION REGIME

The basic principles of international nuclear law can be succinctly reduced to the following: channeling liability exclusively to the operator of

⁴⁹ *Id.*

⁵⁰ *See id.*

⁵¹ *Id.*

⁵² Ameye, *supra* note 30, at 38; *see* HARVARD REPORT, *supra* note 36, at 57 (explaining that suppliers’ safety concerns may be taken into account throughout the licensing process).

⁵³ Patricia Goedde, *In Search of a Civil Nuclear Liability Regime for North Korea*, 27 ASIAN PERSP. 225, 230 (2003).

⁵⁴ *See* Vanden Borre, *supra* note 22, at 20.

⁵⁵ *See id.* at 20–21.

⁵⁶ *See id.* (discussing how channeling of liability originated in contract law, specifically indemnification and “hold harmless” clauses used by the Atomic Energy Commission).

⁵⁷ *See infra* note 222 and accompanying text (noting that legal channeling defies tort law).

the nuclear installation; limiting the liability (amount, duration, and damage type) of nuclear operators; requiring the operator to have insurance; imposing strict liability upon the operator; and granting exclusive jurisdiction to the court of one country for a given nuclear incident or accident.⁵⁸

A. *Convention on Third Party Liability in the Field of Nuclear Energy (Paris Convention)*

The Convention on Third Party Liability in the Field of Nuclear Energy,⁵⁹ most commonly known as the Paris Convention, was one of the first nuclear conventions that dealt with liability issues in a post-nuclear weapons world. It was passed by the Nuclear Energy Agency in 1960.⁶⁰ The Convention covers damage or loss of life of any person or property that is caused by a nuclear incident in a nuclear installation or by substances from such installations.⁶¹ Any claims by parties injured in such an incident must bring forth their claim within ten years of the injury or within two years of reasonably discovering the injury (this, however, will be truncated by the ten-year limitation clause).⁶² The claim must be brought against the nuclear operator or the operator's insurer and no other parties.⁶³ The jurisdiction of the court must lie within the state in whose territory the incident occurred or where the operator was situated.⁶⁴

The Paris Convention was the first international treaty to introduce this concept of channeling liability to the nuclear operator.⁶⁵ This principle had two major implications: 1) only the nuclear operator can be held liable for any nuclear accident that fell under the Paris Convention's purview; and 2) only the operator can be liable—meaning the operator cannot seek financial recourse through third-party lawsuits, indemnity actions, or other legal means.⁶⁶ The Paris Convention essentially became the only means in which plaintiffs could seek compensation. This became

⁵⁸ See Vanden Borre, *supra* note 22, at 15–17.

⁵⁹ Paris Convention, *supra* note 7.

⁶⁰ *Id.*

⁶¹ *Id.* at art. 3.

⁶² *Id.* at art. 8; see Fritz, *supra* note 19, at 44.

⁶³ Paris Convention, *supra* note 7, at art. 6.

⁶⁴ *Id.* at art. 13; see also Currie, *supra* note 18, at 104.

⁶⁵ See Currie, *supra* note 18, at 87–88 (stating that the Paris Convention is one of the foundational documents for the international nuclear liability regime).

⁶⁶ See Fritz, *supra* note 19, at 41.

known as “exclusive liability.”⁶⁷ Plaintiffs were further limited because the “maximum liability of the operator in respect of damage caused by a nuclear accident [would] be 15 million Special Drawing Rights (“SDRs”), C15.518 million or \$24.654 million . . . [and not] be less than 5 million SDR, C5.173 million or \$8.218 million.”⁶⁸

B. Brussels Supplementary Convention to the Paris Convention

The Brussels Supplementary Convention of 1963⁶⁹ amended the original Paris Convention by providing additional avenues in which victims could collect damages. It increased the liability amounts by increasing the contributions of the installation state to 175 million SDRs.⁷⁰ The Brussels Supplementary Convention was able to accomplish this increase by requiring contributions from states with nuclear installations, who were parties to the convention, to contribute based on their calculated installed nuclear capacity.⁷¹ The more powerful and numerous the installations, the greater share a signatory must contribute.⁷²

By adding these additional layers of public funding, the Brussels Supplementary Convention provided for a larger pool in which nuclear operators could dip into to cover damages. This could range from 175 million SDRs to 300 million SDRs per incident (300 million SDRs equals roughly \$493 million).⁷³ Like the Paris Convention, the Brussels Supplementary Convention does provide nuclear operators an out if they become insolvent or are unable to pay damages for other reasons by capping the damages

⁶⁷ Michael G. Faure & Tom Vanden Borre, *Compensating Nuclear Damage: A Comparative Economic Analysis of the U.S. and International Liability Schemes*, 33 WM. & MARY ENVTL. L. & POL'Y REV. 219, 234 (2008) (quoting Julia A. Schwartz, *International Nuclear Third Party Liability Law: The Response to Chernobyl*, in INTERNATIONAL NUCLEAR LAW IN THE POST CHERNOBYL PERIOD 41–44 (OECD-NEA, 2006)). Special Drawing Rights (“SDRs”) are a unit of currency used by the International Monetary Fund (“IMF”), and the IMF also sets the currency value of SDRs. *Factsheet: Special Drawing Rights (SDRs)*, INT'L MONETARY FUND, <http://www.imf.org/external/np/exr/facts/sdr.htm> (last visited Nov. 7, 2011).

⁶⁸ Faure & Vanden Borre, *supra* note 67, 234–35. Unless otherwise noted, all dollar amounts shall refer to currency in United States dollars.

⁶⁹ *Supplementary to the Paris Convention of 29th July 1960*, NUCLEAR ENERGY AGENCY, Jan. 31, 1963, available at <http://www.oecd-nea.org/law/nlbrussels.html> [hereinafter Brussels Convention].

⁷⁰ See Currie, *supra* note 18, at 105.

⁷¹ See *id.*

⁷² See *id.* (stating that some parties to the convention contributed based on the collective nuclear capacity); see also Brussels Convention, *supra* note 69, at arts. 4(b), 12(a).

⁷³ See Faure & Vanden Borre, *supra* note 67, at 235; see also Currie, *supra* note 18, at 105.

at the 300 million SDR mark.⁷⁴ Arguably, the increase in the “money pool” further justifies, in the minds of the nuclear industry, the necessity and plausibility of channeling liability to only the operator.

C. *Vienna Convention on Civil Liability for Nuclear Damage*

The Vienna Convention on Civil Liability for Nuclear Damage of 1963⁷⁵ is very similar to the Paris Convention, except it was drafted and passed by the International Atomic Energy Agency. The Vienna Convention defines damage as a loss of life; “any personal injury or any loss of, or damage to, property from a nuclear incident”; or damage arising from the nuclear incident.⁷⁶ In addition, like the Paris Convention, the Vienna Convention has an armed conflict exception, and requires that operators be insured.⁷⁷ The insurance requirement is relatively small.⁷⁸ However, the Vienna Convention does not limit damage to that caused within the territory of the installation state.⁷⁹

As with the Paris Convention, the Vienna Convention limits plaintiffs’ ability to raise a claim to within ten years of the incident (including reasonable discovery).⁸⁰ The Vienna Convention also engages in legal channeling.⁸¹ Civil liability is restricted to the single operator entity who, in turn, cannot seek financial recourse elsewhere.⁸² In addition to these limitations, the likelihood that plaintiffs would receive complete recovery for their losses is further restricted because the Convention allows the contracting or installation state to weigh the interests of the victim against those of the nation in relation to maintaining a consistent source of nuclear energy.⁸³ This means the state could limit recovery in the name of the greater good.

⁷⁴ Faure & Vanden Borre, *supra* note 67, at 235.

⁷⁵ Vienna Convention on Civil Liability for Nuclear Damage, Int’l Atomic Energy Agency May 21, 1963, INFCIRC500, *available at* <http://www.iaea.org/Publications/Documents/Infcircs/1996/inf500.shtml> [hereinafter Vienna Convention].

⁷⁶ Currie, *supra* note 18, at 101; *see* Vienna Convention, *supra* note 75, at art. I(1)(k).

⁷⁷ *See* Vienna Convention, *supra* note 75, at arts. IV(3), VII(1).

⁷⁸ *See* Currie, *supra* note 18, at 102.

⁷⁹ *See id.* at 101.

⁸⁰ *See* Fritz, *supra* note 19, at 43–44.

⁸¹ *See* Vienna Convention, *supra* note 75, at art. II(1); *see also* Currie, *supra* note 18, at 101 (explaining that an operator is liable “upon proof that the damage has been caused by a nuclear incident”).

⁸² Bagely, *supra* note 1, at 536 n.171.

⁸³ *See* Fritz, *supra* note 19, at 42.

D. Protocol to Amend Vienna Convention

The 1997 Protocol to Amend the Vienna Convention⁸⁴ was the primary amendment to the Vienna Convention in the post-Chernobyl world. The Vienna Protocol extended the geographical coverage of the convention to include wherever suffering was caused by the nuclear incident as per the discretion of the installation state.⁸⁵ Damages now can be recovered for any economic loss arising from loss of life, personal injury, or property damage, but other types of economic loss can be recovered as well, such as fishing or tourism, only if permitted under the civil laws of the installation state.⁸⁶ The Protocol also included environmental expenses as a recoverable damage. This was coined as the cost of reinstatement of the impaired environment, but, to be recoverable, the impairment and the reinstatement must be significant.⁸⁷

As mentioned earlier, the Vienna Protocol did expand the area in which damages can be calculated.⁸⁸ Part of this was due to the inclusion of nuclear shipment accidents into the protocol.⁸⁹ Damages could be recovered by coastal states and non-installation states when the accident occurs within the “Exclusive Economic Zone” of a given jurisdiction.⁹⁰

The Vienna Protocol also increased the compensation limits to either 300 million SDRs or from 5 million to 150 million SDRs where public funds are made available.⁹¹ This eliminates the need for the operator to carry liability insurance, as long as the nuclear operator has at least 100 million SDRs underwritten by public funds.⁹² The drawback with this option is that there are no requirements or qualifications the operator must meet in order to opt out of insurance, such as solvency.⁹³

Unfortunately, the Vienna Protocol maintains the exclusive and strict liability of the nuclear operators, and it maintains jurisdiction primarily in the country of occurrence or installation.⁹⁴

⁸⁴ Protocol to Amend the Vienna Convention on Civil Liability for Nuclear Damage, Int'l Atomic Energy Agency, *opened for signature* Sept. 12, 1997, INFCIRC/566, *available at* <http://www.iaea.org/Publications/Documents/Conventions/protamend.html> [hereinafter Vienna Protocol].

⁸⁵ *See* Currie, *supra* note 18, at 86.

⁸⁶ *See id.*

⁸⁷ *Id.* at 86.

⁸⁸ *See supra* note 86 and accompanying text.

⁸⁹ *See* Vienna Protocol, *supra* note 84, at art. 6.

⁹⁰ *See id.* art. 12; Currie, *supra* note 18, at 102.

⁹¹ *See* Vienna Protocol, *supra* note 84, at art. 7.

⁹² *See* Currie, *supra* note 18, at 102.

⁹³ *See* Vienna Protocol, *supra* note 84, at art. 7.

⁹⁴ Vienna Protocol, *supra* note 84, at arts. 6, 12.

E. Convention on Supplementary Compensation for Nuclear Damage

In 1997, the Convention on Supplementary Compensation for Nuclear Damage (“CSC”)⁹⁵ was created as a means for a supplementary compensation fund to be available to signatories. It incorporates many of the reforms that were called for in the wake of the Chernobyl tragedy.⁹⁶ The fund is collectively provided by contributions from state parties.⁹⁷ A state’s contribution is calculated based on the state’s nuclear installation capacity and a rate assessment conducted by the United Nations.⁹⁸ The installation state shall ensure the availability of at least 300 million SDRs (\$493.083 million).⁹⁹ The CSC has not yet come into force, but any state can follow it regardless of whether the state is a party to other existing nuclear treaties or whether it has nuclear installations of its own.¹⁰⁰

The CSC is not yet in force because it must have five states with a minimum of 400 GW thermal of installed nuclear capacity ratify it.¹⁰¹ Thus far, the United States is the only ratifying party with significant generating capacity.¹⁰² It is argued that the primary incentive for states to join, including non-nuclear states, is that the fund compensates for transboundary damages, as well as a more expanded definition of nuclear damage.¹⁰³ At the same time, very few states have signed the CSC for a variety of reasons, the primary reason being an unwillingness “to give up state sovereignty

⁹⁵ Int’l Atomic Energy Agency, Convention on Supplementary Compensation for Nuclear Damage, *opened for signature* Sept. 12, 1997, INF/CIRC/567, available at <http://www.iaea.org/Publications/Documents/Infcircs/1998/infcirc567.pdf> [hereinafter CSC].

⁹⁶ Goedde, *supra* note 53, at 232 (highlighting some of the changes, including “an increase in compensation amount, a broader definition of nuclear damage, and treatment of maritime nuclear accidents”).

⁹⁷ See CSC, *supra* note 95, at art. IV.

⁹⁸ *Id.* at art. IV(1); Currie, *supra* note 18, at 89.

⁹⁹ CSC, *supra* note 95, at art. IV(1); Currie, *supra* note 18, at 89.

¹⁰⁰ See Currie, *supra* note 18, at 89.

¹⁰¹ CSC, *supra* note 95, at art. XX; see *Liability for Nuclear Damage*, WORLD NUCLEAR ASS’N, <http://www.world-nuclear.org/info/inf67.html> (last updated Aug., 2011).

¹⁰² *Liability for Nuclear Damage*, *supra* note 101. India announced it would sign the Convention in October of 2010. See *CSC Latest Status*, INT’L ATOMIC ENERGY AGENCY (Oct. 27, 2010), http://www.iaea.org/Publications/Documents/Conventions/supcomp_status.pdf. This move was seen as an olive branch to the United States because India is not part of any other nuclear treaty. See *infra* note 228. The current signatories are: Argentina, Australia, Czech Republic, India, Indonesia, Italy, Lebanon, Lithuania, Morocco, Peru, Philippines, Romania, Ukraine, and the United States. See *CSC Latest Status*, *supra*. However, only Argentina, Morocco, Romania, and the United States have ratified the CSC and placed a deposit. *Id.*

¹⁰³ See Goedde, *supra* note 53, at 233.

on the issue of nuclear liability.”¹⁰⁴ Another reason is due to the limited access of compensation if an accident occurs in a non-signatory state.¹⁰⁵ For example, if an accident occurs in neighboring Pakistan but India suffers damages, India can only recover under the CSC if Pakistan is a signatory.¹⁰⁶

As mentioned before, the United States recently signed the CSC. This was accomplished with the Energy Independence and Security Act¹⁰⁷—which created the funding mechanism in which the United States would contribute to the international compensation regime.¹⁰⁸ The United States Treasury will act as the go-between for the nuclear suppliers and the CSC fund. The Treasury will pay into the fund, but it will be reimbursed by the suppliers.¹⁰⁹ As mentioned previously, this is another example of the United States government keeping the financial burden of the nuclear industry in the private sector. By compensating the Treasury Department, the United States can participate in the international nuclear liability system, but not at the expense of burdening American taxpayers.¹¹⁰ Furthermore, by becoming a member of the CSC, American nuclear suppliers are able to participate in the retrospective pooling program to cover potential costs from overseas nuclear incidents.¹¹¹

F. *Protocol to Amend the Paris Convention*

The 2004 amendments to the Paris Convention,¹¹² while similar to those of the Vienna Convention, did not expand its parent treaty as much. The Paris Protocol still requires the nuclear operators to maintain insurance,¹¹³ and more relevant to this Note, it still requires exclusive and strict liability for nuclear operators.¹¹⁴ In addition, it maintains jurisdiction primarily in the country of occurrence.¹¹⁵

¹⁰⁴ *Id.*

¹⁰⁵ *See id.* at 237 (using South Korea as an example of a nation that would see little benefit unless neighboring nuclear powers also signed the CSC).

¹⁰⁶ *See id.* (applying the example of South Korea to an accident in India).

¹⁰⁷ Energy Independence & Security Act, Pub. L. No. 110-140, § 934, 121 Stat. 1492, 1741–48 (2007).

¹⁰⁸ *See* Faure & Vanden Borre, *supra* note 67, at 247.

¹⁰⁹ *See* Energy Independence & Security Act, § 934, 121 Stat. at 1744–46.

¹¹⁰ *See* Faure & Vanden Borre, *supra* note 67, at 248.

¹¹¹ *Id.* at 247 (quoting Energy Independence and Security Act, Pub. L. No. 110-140, § 934(a)(1)(D), 121 Stat. 1492, 1741 (2007)).

¹¹² 2004 Protocol to Amend the Convention on Third Party Liability in the Field of Nuclear Energy, Nuclear Energy Agency, Feb. 12, 2004, *available at* http://www.oecd-nea.org/law/paris_convention.pdf [hereinafter Paris Protocol].

¹¹³ *See id.* at art. 10.

¹¹⁴ *Id.* at art. 2.

¹¹⁵ *Id.*

Now under the Paris Protocol, the maximum liability for a nuclear incident shall not be less than \$1.112 billion,¹¹⁶ but it does allow the installation state to use its discretion to lower the threshold as the state sees fit.¹¹⁷ The threshold could be lowered depending on the nature of the incident, the nature of the nuclear installation involved, and the “likely consequences” emanating from that installation.¹¹⁸

G. *Protocol to Brussels Supplementary Convention*

The Brussels Supplementary Convention was also revised post-Chernobyl by its 2004 Protocol. The 2004 Protocol further increased contracting parties' contributions and raised the level of available collective public funding.¹¹⁹

H. *Maritime Laws*

In light of the prior discussions regarding the different conventions' approach to high seas accidents, coastal damages, and the global commons, it is important to address quickly the Convention Relating to Civil Liability in the Field of Maritime Carriage of Nuclear Materials (1971),¹²⁰ and the Convention on the Liability of Operators of Nuclear Ships (1962).¹²¹ Both of these conventions were drafted in the same vein as the Vienna and Paris Conventions.¹²² This means that operators of a nuclear installation are exclusively and strictly liable for damages when the nuclear materials are being transported by sea.¹²³

I. *Insurance Pools*

As mentioned throughout the sections of this Note discussing the international regime's and individual nations' approaches to nuclear liability,

¹¹⁶ See Faure & Vanden Borre, *supra* note 67, at 237.

¹¹⁷ See Currie, *supra* note 18, at 104.

¹¹⁸ See Paris Protocol, *supra* note 112, at art. 7(b).

¹¹⁹ See Currie, *supra* note 18, at 105.

¹²⁰ Convention Relating to Civil Liability in the Field of Maritime Carriage of Nuclear Material, Dec. 17, 1971, 11 I.L.M. 277.

¹²¹ Convention on the Liability of Operators of Nuclear Ships, May 25, 1962, 57 AM. J. INT'L L. 268, 268–78 (1963).

¹²² Peter Riley, *The Legal Control of Nuclear Energy Between States*, 21 CAL. W. INT'L L. J. 303, 322 (1991).

¹²³ See *id.* (discussing Convention Relating to Civil Liability in the Field of Maritime Carriage of Nuclear Material (1971), and the Convention on the Liability of Operators of Nuclear Ships (1962)).

all the laws passed require nuclear operators to be insured.¹²⁴ These insurers are actually nuclear insurance pools that operate “as a bundling of resources at a national level.”¹²⁵ Every country with an active nuclear market has its own nuclear insurance pool. The member insurance companies are able to determine individually what their yearly contribution will be.¹²⁶ Such an approach allows even the smaller insurance companies to participate without risking their entire financial capital.¹²⁷

Because these are domestic pools, a nuclear operator or supplier is most likely going to be covered by the pool in its respective nation. The insurance pool provides coverage for both first- and third-party liability, however, the two liabilities are competing for the same resources.¹²⁸ There is some internal contention on this matter within the nuclear industry; many believe first-party liability (e.g., damage to the plant) should be removed because it unnecessarily increases premiums.¹²⁹

Ironically, nuclear insurance operates counter to that of conventional insurance. Because liability is channeled only to the operator, the nuclear operator cannot defend itself by “asserting lack of negligence” or claiming that financial responsibility lies with another party.¹³⁰ The operator is still responsible for any accident or incident, even if it is caused by the supplier’s negligence.¹³¹

III. SAMPLING OF INTERNATIONAL NUCLEAR LIABILITY LAWS

As already discussed, the concept of legal channeling of liability and limiting a right of recourse for the operator stems from the United States’ desire to protect a fledgling nuclear industry in the mid-twentieth century.¹³² The extent of this effort can be seen in the international conventions¹³³ that were circulated throughout Europe, all of which adopted the same doctrines. In Europe, however, the motivation was more centered on the Western European insurance sector’s inability or unwillingness to offer comprehensive insurance coverage.¹³⁴

¹²⁴ See *supra* Parts II.A–G.

¹²⁵ Faure & Vanden Borre, *supra* note 67, at 248–49.

¹²⁶ *Id.* at 249.

¹²⁷ *Id.*

¹²⁸ *Id.* at 250.

¹²⁹ *Id.* at 251.

¹³⁰ Goedde, *supra* note 53, at 230.

¹³¹ *Id.*

¹³² See *supra* Part I.A.

¹³³ See *supra* Part II.

¹³⁴ See Ameye, *supra* note 30, at 41.

However, there was resistance to the American-endorsed doctrine. Fourteen now-member states proffered a joint amendment to the Vienna Convention where the right of recourse was preserved if the fault of the nuclear incident could be found in another party.¹³⁵ The IAEA even discussed in its Explanatory Texts how “the principle . . . obviously favors the manufacturer, supplier or carrier of the material or equipment, since it obviates the necessity for them to take out insurance, as well as any other person who may have contributed to the nuclear incident.”¹³⁶ At the same time, “Germany, Austria, and Switzerland actively argued against the principle of legal channelling and supported economic channelling instead” when debating the ratification of the Paris Convention.¹³⁷ Because the concept of legal channeling was included in the final draft, Germany and Greece each included a reservation in their respective ratifications.¹³⁸

A. *Austrian Nuclear Liability Law*

India is not the only country to pass an innovative nuclear liability law that goes beyond what is set forth by the international regulatory scheme. In 1998, Austria passed the Act on Civil Liability for Damages Caused by Radioactivity.¹³⁹ The scope of this law consists of allowing damage recovery for environmental impairment.¹⁴⁰ Environmental impairment, in this context, is “any interference with the environment, which lastingly alters [it] in such a way that it differs noticeably from natural processes either in quantity, in quality or in the temporal respect,” and the cost of preventative measures.¹⁴¹ Damages that occur in the ordinary course of

¹³⁵ See *id.* at 41 & n.55 (discussing Amendment CN-12/CW/92 (Argentina, Brazil, Colombia, Greece, Philippines, Indonesia, Iran, Lebanon, Mexico, Morocco, Austria, Portugal, Spain, and Vietnam)).

¹³⁶ Currie, *supra* note 18, at 93 (quoting IAEA, *The 1997 Vienna Convention on Civil Liability for Nuclear Damage and the 1997 Convention on Supplementary Compensation for Nuclear Damage Explanatory Texts*, page 11, IAEA Doc. GC(48)/INF/5 (Sept. 2, 2004)).

¹³⁷ Ameye, *supra* note 30, at 41.

¹³⁸ *Id.* (“Reservation of the right to provide, by national law, that persons other than the operator may continue to be liable for damage caused by a nuclear incident on condition that these persons are fully covered in respect of their liability, including defence [sic] against unjustified actions, by insurance or other financial security . . .”).

¹³⁹ BUNDESGESETZ ÜBER DIE ZIVILRECHTLICHE HAFTUNG FÜR SCHÄDEN DURCH RADIOAKTIVITÄT [ATOMHG 1999] [FEDERAL ACT ON CIVIL LIABILITY FOR DAMAGE CAUSED BY RADIOACTIVITY] Bundesgesetzblatt Teil 1 [BGBl I] No. 170/1998 (Austria), available at <http://www.oecd-nea.org/law/legislation/austria/AUSTRIA-AtomicLiabilityAct.pdf> (unofficial English version).

¹⁴⁰ *Id.* at § 11(2).

¹⁴¹ See INT'L ATOMIC ENERGY AGENCY, AUSTRIA: AUSTRIAN NATIONAL REPORT UNDER THE JOINT CONVENTION ON THE SAFETY OF SPENT FUEL AND ON THE SAFETY OF RADIOACTIVE

operation are also included, but unlike most international conventions, the Austrian Act does not require any particular nuclear incident to trigger the statute.¹⁴² Rather, the Austrian Act's primary focus is "to protect its citizens."¹⁴³

While the law is far more limited than India's recent bill, it does address the issue of supplier's liability. Unlimited strict liability is still in play concerning the operators and carriers, regardless of where the incident occurred or who is at fault.¹⁴⁴ However, contractors and suppliers of materials and parts can be held liable as well.¹⁴⁵ This allows for plaintiffs to pierce the corporate veil and find the controlling company liable for damages, not just the under-insured operating company.¹⁴⁶ The Austrian Act also does not implement any maximum liability amounts, and it requires all nuclear carriers/operators in Austria to be insured.¹⁴⁷ While a plaintiff can file a claim against the supplier, the claim can be dropped if the supplier can prove that sufficient compensation can be provided upon completion of the suit against the operator.¹⁴⁸ If this turns out to be untrue, the suit against the suppliers would be reopened by the courts.¹⁴⁹

Furthermore, to be even more inviting to plaintiffs, victims can require Austrian choice of law regardless of where the event occurred as long as damage occurred in Austria.¹⁵⁰ Previous Austrian law only allowed for fault-based liability and nuisance law to be applied to foreign nuclear installations.¹⁵¹ In addition, the Austrian law expanded its definition of damage in order to make the causality issue for plaintiffs easier to prove.¹⁵² The law also allows claims to be directly brought against the nuclear insurers.¹⁵³

The motivation behind the Austrian legislature's decision to "flout" international conventions is that legal channeling of supplier liability does

WASTE MANAGEMENT (May 2003), available at <http://www-ns.iaea.org/downloads/rw/conventions/austria-report-jc-first-review-meeting.pdf>.

¹⁴² See Monika Hinteregger, *The New Austrian Act on Third Party Liability for Nuclear Damage*, 35 DENV. J. INT'L L. & POL'Y 193, 196 (2006).

¹⁴³ Goedde, *supra* note 53, at 238.

¹⁴⁴ Hinteregger, *supra* note 142, at 196.

¹⁴⁵ See Currie, *supra* note 18, at 123.

¹⁴⁶ Hinteregger, *supra* note 142, at 196.

¹⁴⁷ See Currie, *supra* note 18, at 122–23.

¹⁴⁸ Hinteregger, *supra* note 142, at 197–98.

¹⁴⁹ *Id.* at 198.

¹⁵⁰ Ved P. Nanda & Jon M. Van Dyke, *International Nuclear Law: An Introduction*, 35 DENV. J. INT'L L. & POL'Y 1, 10 (2006).

¹⁵¹ *Id.* at 9.

¹⁵² *Id.* at 10.

¹⁵³ See Hinteregger, *supra* note 142, at 197.

more harm than good to plaintiffs, the public, and the environment.¹⁵⁴ Austria is a non-nuclear state as per a 1978 state referendum¹⁵⁵ (nuclear-related activity is limited to three small research facilities¹⁵⁶), but all its neighbors operate commercial and state nuclear power plants: Germany, Hungary, Slovak Republic, and Czech Republic.¹⁵⁷ Furthermore, the legal deficiencies exposed after the Chernobyl disaster made it clear that the current nuclear legal regime did not supplicate Austria's concerns.¹⁵⁸

Interestingly enough, the Austrian law has not received as much international play in the press, specifically the American press, because Austria has prohibited the operation of nuclear plants in order to produce electrical energy since 1978.¹⁵⁹ Because Austria only has three small research reactors, it is considered by the powerful nuclear industry to be a non-market not worthy of risking such liability.¹⁶⁰

B. *Canadian Nuclear Liability Act*

In comparison, Canada has a nuclear liability act more in line with the flawed international regime. Canada's Nuclear Liability Act ("NLA")¹⁶¹ imposes some familiar restrictions and limitations on plaintiffs' ability to collect damages. The nuclear operator is subject to absolute liability¹⁶² that would otherwise be the burden of "upstream" suppliers to the nuclear operators.¹⁶³ The NLA has a statute of limitations of ten years after a nuclear accident in which claims can be brought by victims.¹⁶⁴ Plaintiffs also have a discovery period of three years (manifestation or discovery of the injury and filing of a claim) that is limited by the ten-year framework.¹⁶⁵

Similar to the international regime, the Canadian law imposes caps on the total liability for which a nuclear operator is responsible.¹⁶⁶

¹⁵⁴ *See id.* at 194 (explaining that opposition to legal channeling was the primary impetus behind rejecting both the Paris Convention and the CSC).

¹⁵⁵ *See id.* at 193.

¹⁵⁶ *Id.*

¹⁵⁷ *See* Nanda & Van Dyke, *supra* note 150, at 1–2; *Nuclear Power in Hungary*, World Nuclear Assoc., <http://world-nuclear.org/info/inf92.html> (last updated Feb. 2011).

¹⁵⁸ Hinteregger, *supra* note 142, at 193.

¹⁵⁹ *See id.*

¹⁶⁰ *See id.*

¹⁶¹ Nuclear Liability Act, R.S.C. 1985, c. N-28 (Can.).

¹⁶² *See id.* at § 4; Michael Trebilcock & Ralph A. Winter, *The Economics of Nuclear Accident Law*, 17 INT'L REV. L. & ECON. 215, 219 (1997) ("The liability of non-operators (suppliers, manufacturers, and design consultants) is transferred completely to the operator.").

¹⁶³ Trebilcock & Winter, *supra* note 162, at 215.

¹⁶⁴ *See* Nuclear Liability Act § 13.

¹⁶⁵ *Id.*

¹⁶⁶ *See* Trebilcock & Winter, *supra* note 162, at 219.

For third-party claims arising after the nuclear incident, there is a limit of 75 million Canadian dollars on the liability of a nuclear operator.¹⁶⁷ Even more troubling, if cumulative damages surpass \$75 million, nuclear accident victims' access to the Canadian courts is frozen.¹⁶⁸ Finally, if it appears that the claims will well exceed the \$75 million limit, the Governor-in-Council can call, in the name of the public interest, for a claims commission to be created, and this commission would hear all the claims and authorize prorated payments from a fund not to exceed \$75 million.¹⁶⁹

C. *Chile*

With respect to nuclear operators being held liable even for the transport of nuclear materials by third-party carriers, Chile's Law for Nuclear Safety¹⁷⁰ provides an interesting alternative. Rather than outright defying the legal channeling principle, the Chilean law alters the definition of "nuclear operator" and makes any transporter of nuclear substances and/or radioactive material—in Chile's territorial sea, surrounding sea, and Exclusive Economic Zone—by definition an operator.¹⁷¹ This means that liability cannot be passed off onto the plant operator, but rather the transporters must be concerned with the prospect of being subject to a lawsuit.¹⁷²

D. *United States' Price-Anderson Nuclear Industries Indemnity Act*

Because the United States and India have entered into a marquee nuclear partnership, it is important to briefly review how the United States' nuclear liability scheme is structured. The Price-Anderson Nuclear Industries Indemnity Act of 1954¹⁷³ (renewed in 2005 for twenty years¹⁷⁴) created a two-layer insurance system under which nuclear operators function, and is based on the concept of economic channeling.¹⁷⁵ A nuclear operator is required to first have at least \$300 million in liability insurance from a private insurer,¹⁷⁶ and in addition to that, a second layer of

¹⁶⁷ Nuclear Liability Act § 13.

¹⁶⁸ Trebilcock & Winter, *supra* note 162, at 219.

¹⁶⁹ See Nuclear Liability Act § 18; Trebilcock & Winter, *supra* note 162, at 219.

¹⁷⁰ Law No. 18302, April 16, 1984, DIARIO OFICIAL [D.O.] (Chile).

¹⁷¹ Currie, *supra* note 18, at 123.

¹⁷² See *id.*

¹⁷³ Act to Amend the Atomic Energy Act of 1954, 42 U.S.C. §§ 2011–2297 (2006).

¹⁷⁴ *Liability for Nuclear Damage*, *supra* note 101.

¹⁷⁵ Goedde, *supra* note 53, at 235.

¹⁷⁶ Currie, *supra* note 18, at 120.

insurance for each reactor.¹⁷⁷ The secondary collective liability insurance on the reactors was maxed at approximately \$96 million per reactor plus an extra five percent for legal costs, with a maximum annual retroactive premium of \$15 million per reactor per year.¹⁷⁸ This was mandated by Congress in an attempt to cover future excess claims.¹⁷⁹

The double layer of insurance is required because nuclear operators are subject to strict liability in the event of a nuclear event.¹⁸⁰ An important distinction is that the Price-Anderson Act channels this liability through economic means (multiple insurance layers) rather than legal means.¹⁸¹ Whenever there is an “extraordinary nuclear occurrence,” the U.S. Nuclear Regulatory Commission is given the opportunity to decide if the nuclear operator can have access to tort law defenses that in effect create the strict liability.¹⁸²

After Three Mile Island, mutual insurance companies were created to provide nuclear operators with insurance alternatives beyond what basic insurance had to offer.¹⁸³ Such insurance provides nuclear operators and their related units insurance, which covers costs associated with electrical generation issues caused by physical damage to the installation, decontamination procedures, property damage, and other direct physical loss.¹⁸⁴ As a result, American nuclear suppliers and operators are insured threefold: 1) primary liability insurance coverage of \$300 million; 2) a retrospective premium of \$96 million per reactor; and 3) a property insurance program for nuclear electricity operators of up to \$2.75 billion.¹⁸⁵ However, it is still questionable as to how much of this money would actually end up benefiting the victims of a nuclear disaster.

It is also important to note that the Price-Anderson Act represents a cognizant shift by Congress to move the burden of the nuclear industry from the government to the private sector.¹⁸⁶ This was accomplished by requiring nuclear operators, licensed by the Nuclear Regulatory Commission

¹⁷⁷ *Id.*

¹⁷⁸ Faure & Vanden Borre, *supra* note 67, at 244.

¹⁷⁹ Act to Amend the Atomic Energy Act of 1954, 42 U.S.C. § 2210 (e)(2) (2006); *see* Currie, *supra* note 18, at 120.

¹⁸⁰ *See* Faure & Vanden Borre, *supra* note 67, at 241.

¹⁸¹ *See id.* at 242.

¹⁸² *Id.* at 241.

¹⁸³ *See id.* at 254–55.

¹⁸⁴ *See* NUCLEAR ELECTRIC INSURANCE LIMITED (NEIL), <http://www.nmlneil.com/> (last visited Nov. 7, 2011); *see also* Faure & Vanden Borre, *supra* note 67, at 255 (only available to nuclear electricity operators); *Liability for Nuclear Damage*, *supra* note 101, at 6.

¹⁸⁵ *See also* Faure & Vanden Borre, *supra* note 67, at 244, 255.

¹⁸⁶ *Id.* at 242–43.

(which was all of the operators in the United States), to pay a retrospective premium or second layer of insurance.¹⁸⁷ The criticism with the American system is that nuclear accidents cause such high damages that companies are more likely to go insolvent before they can pay either the victims or the insurance pool for the funds it was unable to contribute.¹⁸⁸ This leads to concerns regarding how much of a deterrence impact does the Price-Anderson system have on ensuring American nuclear suppliers and operators function reasonably and/or suffer consequences when an accident occurs due to their negligence or mistake.¹⁸⁹ These very concerns are addressed by the Indian legislature as a reason to include supplier's liability into the Indian nuclear framework.

IV. INDIA'S INCLUSION OF SUPPLIER'S LIABILITY TO THE NUCLEAR LIABILITY DISCOURSE

India's rise as a global power has made it an extremely lucrative market, especially in the field of nuclear energy.¹⁹⁰ As the most populous democracy in the world, India's energy needs far exceed its current capacity.¹⁹¹ Nuclear energy can serve as an efficient alternative, but at the moment, there are only nineteen nuclear reactors in the country.¹⁹² The influential Nuclear Suppliers Group decided to open up its international vendor market to India in the fall of 2008, as a vote of confidence for nuclear industry investors.¹⁹³ Since that vote India has signed numerous civilian nuclear agreements, the most prominent ones with the United States,

¹⁸⁷ *See id.* at 243.

¹⁸⁸ *See id.* at 263 ("An important condition for a strict liability rule to be efficient, however, is that the amount of compensation to be paid to the victim should be equal to the actual damage caused by the operator.").

¹⁸⁹ *Id.*

¹⁹⁰ *See* RAJYA SABHA, TWO HUNDRED TWELFTH REPORT ON "THE CIVIL LIABILITY FOR NUCLEAR DAMAGE BILL, 2010," DEP'T-RELATED PARLIAMENTARY STANDING COMM. ON SCI. & TECH., ENV'T & FORESTS 4 (Aug. 18, 2010), *available at* <http://www.prsindia.org/uploads/media/Nuclear/SCR%20Nuclear%20Liability%20Bill%202010.pdf> [hereinafter STANDING COMMITTEE REPORT].

¹⁹¹ *See* Kritivas Mukherjee, *India Nuclear Plans on Track Despite Japan Crisis*, REUTERS, Mar. 15, 2011, *available at* <http://in.reuters.com/article/2011/03/15/idINIndia-55595220110315>.

¹⁹² ANDIRUDH BURMAN, LEGISLATIVE BRIEF: THE CIVIL LIABILITY FOR NUCLEAR DAMAGE BILL, 2010, PRS LEGISLATIVE RESEARCH (July 5, 2010), 2, *available at* <http://www.prsindia.org/uploads/media/Nuclear/Final%20Brief%20-%20civil%20liability%20for%20nuclear%20damage%20bill.pdf> [hereinafter LEGISLATIVE BRIEF].

¹⁹³ *See* STANDING COMMITTEE REPORT, *supra* note 190, at 4.

France, and Russia.¹⁹⁴ The advent of these agreements, and the fact that India is not party to any international nuclear agreements or the Non-Proliferation Treaty, forced the Indian parliament to draft a bill that provides compensation in the face of a nuclear accident.¹⁹⁵

A. *Text of Civil Liability for Nuclear Damage Bill*

Similar to certain international conventions, the Indian bill caps total liability at 300 million SDRs.¹⁹⁶ It limits the liability of operators to Rs 500 crore (approximately \$109 million), but this cap only applies if the private sector is allowed participation in the industry.¹⁹⁷ Nuclear damage is defined as including "loss of life or personal injury," or "loss of, or damage to, property."¹⁹⁸ Damage caused to the environment and economic loss resulting from environmental damage is included in the damage calculations.¹⁹⁹

The Civil Liability for Nuclear Damage Bill addresses the issue of third-party liability in its chapter on claims and awards.²⁰⁰ Clause 17 states:

The operator of a nuclear installation shall have a right of recourse where . . . (b) the nuclear incident has resulted from the willful act or gross negligence on the part of the supplier of the material, equipment, or services, or of his employees; (c) the nuclear incident has resulted from the act of commission or omission of a person done with the intent to cause nuclear damage.²⁰¹

This clause allows for a right of recourse by the operator against a negligent third-party supplier, thus making supplier's liability a part of Indian nuclear law.

¹⁹⁴ See LEGISLATIVE BRIEF, *supra* note 192, at 2.

¹⁹⁵ *See id.*

¹⁹⁶ *See id.*

¹⁹⁷ The Civil Liability for Nuclear Damage Bill, No. 19 of 2010, INDIA CODE, ch. I cl. 6–7 (2010). Currently all of India's nuclear power plants are owned by the state or by state-run entities, but these clauses allow for joint ventures between the public and private sectors. STANDING COMMITTEE REPORT, *supra* note 190, at 4.

¹⁹⁸ The Civil Liability for Nuclear Damage Bill, ch. I cl. 2.

¹⁹⁹ *Id.*

²⁰⁰ *Id.* at cl. 17.

²⁰¹ *Id.*

B. Legislative Intent Against Legal Channeling and for Supplier's Liability

“The Bill was introduced in the Lok Sabha²⁰² on May 7, 2010 by the Ministry of Science and Technology and Earth Sciences.”²⁰³ The original version presented by Prime Minister Manmohan Singh and his party was typical of what one can find with CSC, Paris, or Vienna-compliant legislation.²⁰⁴ However, because the Prime Minister's party does not have the majority vote in the Lok Sabha, the bill was subject to many revisions at the behest of the BJP.²⁰⁵ It was referred to the Standing Committee on Science & Technology, Environment & Forests on May 13, 2010, and the committee submitted a detailed report three months later.²⁰⁶ The Standing Committee provided several recommendations, but with reference to clause 17, it recommended that 17(b) should be amended to say: “the nuclear incident has resulted as a consequence of an act of supplier or his employees, done with the intent to cause nuclear damage, and such act includes supply of equipment or material with patent or latent defects or sub-standard services.”²⁰⁷

1. Minimize Inherent Risks and Protect Plaintiffs

The Standing Committee consulted the opinion of various heads of Indian public and private sectors. The Non-Governmental Organizations and Trade Unions were in favor of drafting clause 17 in a vein similar to products liability law that would allow for suppliers to be “liable for product

²⁰² For those not familiar with Indian politics, the Lok Sabha, also known as the House of the People, is the lower house of the Indian Parliament, and it is where all the representatives are elected by direct vote (analogous to the U.S. House of Representatives). LOK SABHA, <http://loksabha.nic.in/> (last visited Nov. 7, 2011).

²⁰³ LEGISLATIVE BRIEF, *supra* note 192, at 1.

²⁰⁴ *Id.* at 4–5 (explaining that one of the original reasons for introducing the bill was to facilitate joining an international nuclear liability regime).

²⁰⁵ See *BJP Refuses to Support Govt on Nuclear Liability Bill*, TIMES OF INDIA, Aug. 23, 2010, http://articles.timesofindia.indiatimes.com/2010-08-23/india/28300486_1_patent-or-latent-defects-supply-of-sub-standard-material-equipment-or-services. The Bharatiya Janata Party (“BJP”) is the Hindu nationalist party, and is considered to be the more conservative of the two dominant political parties in the Indian Parliament. BHARATIYA JANATA PARTY, <http://www.bjp.org/> (last visited Nov. 7, 2011).

²⁰⁶ STANDING COMMITTEE REPORT, *supra* note 190, at 1–2.

²⁰⁷ CIVIL LIABILITY FOR NUCLEAR DAMAGE BILL NOTICE OF AMENDMENTS, LOK SABHA 3 (Aug. 20, 2010), available at <http://www.prsindia.org/uploads/media/Nuclear/Civil%20Liability%20Govt%20Amendments%2021st%20Aug%202010%201.pdf>.

liability, faulty design, faulty manufacture, negligence, etc.”²⁰⁸ This was partially based on the concept that any defects in the supplier’s technology would not be noticed by the operator until after operation has begun.²⁰⁹

The Lok Sabha feared such negligent practices because legal channeling, in practice, transfers liability onto the victims, and would not create an industry that felt compelled to comply with safety measures. “Channeling benefits the nuclear industry, and its suppliers, . . . but it prejudices the victim as it limits the parties against whom they may claim.”²¹⁰ This is because the manufacturers, designers, suppliers, and transporters agree to transfer all liability towards the operators in an attempt to limit damages and costs, and ignore the basic social costs to victims.²¹¹ Rather, the “system transfers liability to the . . . victims and . . . minimises incentives to take safety precautions by maximising the value of liability protection of the entire group.”²¹² The concern is why foreign suppliers would bother with safety compliance if the system allows them to not suffer the consequences of liability and offers them protection for any potential loss of income. While it is acknowledged that these risks inherently exist in any industry, the “negative incentive effects on both care and activity are magnified correspondingly” when liability is channeled strictly to the operator.²¹³ Critics of the bill in its infant form believed that taking a products liability-type approach would help minimize potentially negligent practices by foreign suppliers far removed from the negative impacts a nuclear disaster would have on the subcontinent.²¹⁴

2. Reflect Indian Interest

The Committee was of the unanimous opinion that the bill’s primary objective should be reflective of Indian interest and well-being.²¹⁵ In pursuit of this objective, the Committee recommended that “there should be clear-cut liability on the supplier of nuclear equipments/material in case

²⁰⁸ STANDING COMMITTEE REPORT, *supra* note 190, at 8.

²⁰⁹ *See id.* at 8–9.

²¹⁰ Currie, *supra* note 18, at 93.

²¹¹ *See id.* at 93–94.

²¹² Ameye, *supra* note 30, at 38.

²¹³ Trebilcock & Winter, *supra* note 162, at 233.

²¹⁴ *See* Prabir Purkayastha, *Nuclear Liability Bill: Subsidizing Foreign Suppliers With Indian Money*, DELHI SCI. FORUM (Mar. 21, 2010), <http://www.delhiscienceforum.net/peace-and-disarmament/407-nuclear-liability-bill.html> (describing why a products liability approach eases liability for nuclear operators).

²¹⁵ STANDING COMMITTEE REPORT, *supra* note 190, at 16 (similar to Austria’s motivations).

they are found to be defective.”²¹⁶ Unfortunately, the current “willful act or gross negligence” requirement provides suppliers with a loophole as this can be difficult to prove.²¹⁷

The Committee also wished to bolster the victims’ means of finding speedy and sufficient compensation by making the supplier’s liability more clear and the cap significantly higher.²¹⁸ The current nuclear regime essentially created immunity for third-party suppliers, which is against the interests and well-being of an installation state, in this case India. Suppliers’ immunity from liability comes from the fact that “victims [are unable] to invoke other civil legal bases [other] than the one that provides for legal channeling. . . .”²¹⁹ As mentioned previously, the Harvard Report helped justify the creation of a system that enforces one jurisdiction, one forum, and one legal doctrine—the doctrine of channeling and operator strict liability.²²⁰

The counter-argument is that victims are denied the legal recourse to sue all the parties that most likely contributed to a nuclear incident, and, furthermore, the operators themselves cannot seek action against those same contributing parties (suppliers, designers, etc).²²¹ Channeling liability exclusively to operators flouts basic tort law principles because it limits a liable party’s ability to recover costs and/or pay greater damages to the initial plaintiffs through an indemnity or third party lawsuit.²²² Legal channeling instead “interferes in the external extra-contractual relation between the victims and the chain of liable persons [thus making] a number of common law tort actions legally impossible.”²²³ Such interference is contrary to the Standing Committee’s objective of ensuring sufficient compensation for victims.

3. Right of Recourse

By retaining the operator’s right of recourse in clause 17,²²⁴ victims are no longer limited in their ability to recover costs through a third-party

²¹⁶ *Id.* at 19.

²¹⁷ *Id.*

²¹⁸ *See id.* at 18.

²¹⁹ *See Ameye supra* note 30, at 38.

²²⁰ *Id.* at 35.

²²¹ *See id.* (providing the contrasting justification, and noting that suits against several parties would open multiple avenues for payment).

²²² *Id.* at 33–34.

²²³ Vanden Borre, *supra* note 22, at 28.

²²⁴ *See* The Civil Liability for Nuclear Damage Bill, No. 19 of 2010, INDIA CODE ch. IV, cl. 17 (2010).

or indemnification lawsuit by the operators. The right of recourse idea harkens back to the *quid pro quo* arrangement of channeling liability; one cannot reap the benefits of strict liability and channeling without sacrificing one's right of recourse.²²⁵ As the Indian legislature realized, this is simply not true.

The doctrine of strict liability is not one with little clout or power. Numerous industries have created systems that invoke strict unlimited liability and channeling, but do not limit third party suits. Conventions in the field of products liability, maritime law, and environmental law have their own versions of legal channeling, but "none of these conventions prevents the party to which liability is channeled to use his right of recourse to recover compensation from any other party."²²⁶ For example, the International Conventional Civil Liability for Oil Pollution Damage channels the liability of damages resulting from pollution and casualties involving oil-carrying ships to the registered owner of the ship.²²⁷ However, it does not limit the ship owner from pursuing suits against manufacturers in the event the accident was caused by a defect in the ship or the containment units holding the oil.²²⁸

While the current version of the bill does not reflect what was originally envisioned by the majority or the standing committee, the Indian government has made it clear that the infant supplier's liability clause will not be removed from the bill, even though the Prime Minister has indicated that India will be a signatory to the CSC (viewed as a move to placate American investors).²²⁹ It is important to note that the bill does not preclude operators from waiving this right of recourse during contract negotiations with suppliers, investors, etc.²³⁰ This is problematic as it could effectively eliminate any benefits of having an available right of recourse.

C. *Social, Economic, and Global Context*

Exposure to liability is meant to act as an incentive for companies to maintain compliance with standards and pursue safer advancements in

²²⁵ Ameye, *supra* note 30, at 34.

²²⁶ *Id.*

²²⁷ International Convention on Civil Liability for Oil Pollution Damage, International Maritime Organization, Nov. 29, 1969, art. III § 1, *available at* <http://sedac.ciesin.columbia.edu/entri/texts/civil.liability.oil.pollution.damage.1969.html> (entered into force June 19, 1975).

²²⁸ *Id.* at art. III § 5.

²²⁹ Siddharth Varadarajan, *India Signs Nuclear Liability Treaty*, THE HINDU (Oct. 28, 2010), <http://www.hindu.com/2010/10/28/stories/2010102861770100.htm>.

²³⁰ The Civil Liability for Nuclear Damage Bill, No. 19 of 2010, INDIA CODE ch. IV, cl. 17(a) (2010).

technology.²³¹ If that liability is eliminated, then the incentive to produce safe products is arguably diminished greatly. In addition, it can be viewed in the public's eye as allowing businesses to act in a vacuum where safety and human life are valued less than insurance premiums and profit.²³² Such was the opinion of the Indian public during the time the bill was in debate in Parliament.²³³ As this Note has discussed, in the end such liability channeling negatively impacts the citizens of developing nations or nations seeking to expand their nuclear industry. Recent current events will further enhance the discussion of supplier liability in the nuclear regime. The tragedy of the Japanese earthquake and tsunami of 2011 and the Fukushima disaster are stark reminders not only of the awesome power of mother nature, but of the risks of using nuclear technology and how legal channeling of supplier liability further enhances this risk.

1. Bhopal's Lasting Impact & Fairness to the Public

Around the time the bill was being debated in the Lok Sabha, the Bhopal decision was released.²³⁴ Almost thirty years later, the victims of this infamous industrial tragedy still suffer greatly due to lack of proper compensation and medical rehabilitation.²³⁵ The timing of the decision brought the disaster into the forefront of the Indian public's eyes and arguably bolstered the BJP in their push for strong supplier's liability.²³⁶ The

²³¹ See Faure & Vanden Borre, *supra* note 67, at 262.

²³² *The Civil Nuclear Liability Bill: Not in the Indian Interest*, India Current Aff. (Aug. 18, 2010, 9:40 AM), <http://indiacurrentaffairs.org/the-civil-nuclear-liability-bill-not-in-the-indian-interest/> (using the Indian nuclear bill as an example of this concept).

²³³ See *id.* (underscoring the disdain for the removal of supplier liability in favor of assisting U.S. companies).

²³⁴ *Union Carbide Corp. v. Union of India*, No. 8460/1996 (D. Bhopal June 7, 2010) (India) (judgment upholding finality of 1989 settlement); see *Union Carbide Corp. v. Union of India*, A.I.R. 1990 S.C. 273 (India) (Bhopal settlement with government of India). On February 14, 1989 the Supreme Court directed Union Carbide to pay up to \$ 470 million United States dollars to the Union of India in "full settlement of all claims, rights, and liabilities related to and arising out of the Bhopal Gas disaster[.]" Madabhushi Sridhar, *Is it Civil Liability for Nuclear Damage or Corporate Immunity for National Damage Law?: An Analysis of Civil Liability for Nuclear Damage Bill 2010*, INDIA CURRENT AFFAIRS (Aug. 18, 2010, 10:00 am), <http://indiacurrentaffairs.org/civil-immunity-for-nuclear-damage-indian-parliament-offers-mnecs-to-play-with-the-lives-of-indians/>.

²³⁵ STANDING COMMITTEE REPORT, *supra* note 190, at 22 (dissent).

²³⁶ Bajoria, *supra* note 4 (noting the need for opposition support and timely issuance of Bhopal decisions).

Indian press, the Indian Atomic Energy Agency, the BJP, and, more importantly, the public were concerned the bill was becoming a tool for American investors to be exempted from any sort of liability in the future.²³⁷ No one wanted a repeat of the Bhopal disaster where Union Carbide only suffered relatively minor liability while thousands of Indians and the Indian countryside were left to suffer irreparable damage.²³⁸

The Indian bill faced much criticism in the Indian press because it was viewed as an attempt to sell out by the Indian Prime Minister.²³⁹ As a means to attract and appease investors, American investors in particular, the first version of the bill was similar to the international regime, thus allowing foreign nuclear investors to profit from the Indian market without facing any responsibility or liability.²⁴⁰ Furthermore, because of the very low cap, the view is that human life in India was being valued at a far less amount than the lives of others abroad.²⁴¹ For example, in the United States, operator liability is capped at \$11,900 million United States dollars ("USD"), but state compensation is still unlimited.²⁴² By contrast, the Indian bill caps operator liability at \$109 million USD, and state compensation at \$345 million.²⁴³ Fortunately, there does appear to be a feature in the Act that could allow for civil suits to bypass the cap. Clause 46 states that "the provisions of [the] Act shall be in addition to, and not in derogation of, any other law."²⁴⁴ It is arguable that a court could interpret that to mean if liability arising out of a nuclear incident went beyond the caps of the bill, it could be covered under other Indian laws.²⁴⁵ This, however, is not certain.

As has been made painfully obvious in the press, foreign suppliers are only concerned with whether they can be competitive in a burgeoning

²³⁷ See STANDING COMMITTEE REPORT, *supra* note 190, at 22; see also Bajoria, *supra* note 4.

²³⁸ See Bajoria, *supra* note 4; see also *Bhopal Disaster*, Greenpeace, <http://www.greenpeace.org/usa/en/campaigns/toxics/justice-for-bhopal/> (last visited Nov. 7, 2011) (highlighting that Union Carbide's settlement roughly worked out to \$370 to \$533 per victim, limiting many victims' ability to pay medical bills).

²³⁹ MANOJ KUMAR & LYDIA POWELL, OBSERVER RESEARCH FOUND., CIVIL LIABILITIES FOR NUCLEAR DAMAGES BILL 2010: THE WAY FORWARD 5 (2010), available at http://www.orfonline.com/cms/export/orfonline/modules/issuebrief/attachments/ib_24_1282285648562.pdf.

²⁴⁰ See *id.*

²⁴¹ *Id.*

²⁴² LEGISLATIVE BRIEF, *supra* note 192, at 4 tbl.2.

²⁴³ *Id.*

²⁴⁴ The Civil Liability for Nuclear Damage Bill, No. 19 of 2010, India Code ch. VII, cl. 46.

²⁴⁵ *Japan Disaster Revives Debate on Nuclear Liability and Safeguards: Expert Views*, BAR & BENCH NEWS NETWORK (Apr. 15, 2011), <http://barandbench.com/brief/2/1405/japan-disaster-revives-debate-on-nuclear-liability-and-safeguards-expert-views>.

market and how little liability exposure potentially results.²⁴⁶ They are not concerned with the welfare of the Indian public or environment on a subcontinent far away from company headquarters.

This mentality provides insightful context for the basic presumption behind the industry's support for channeling of liability to operators. The primary reason for channeling is not the protection of the victims, but rather it is needed to prevent a devastating rise in insurance costs.²⁴⁷ It was first argued that operators would be in a better position and have more incentive to compensate injured plaintiffs if they had the assurance that parties further up the nuclear chain would in turn pay them damages.²⁴⁸ Suppliers in turn would be forced to enhance their compliance procedures and work to ensure safer designs and equipment. However, the nuclear regime has argued that the lack of supplier's liability has kept insurance premiums and costs for operators low because only the operator is required to take out insurance.²⁴⁹ They argue that the catastrophic nature of nuclear incidents is inherently difficult to insure, and thus would otherwise result in increasingly escalating premiums.²⁵⁰ As such, the industry believed channeling of liability is needed. Scholars have recognized that channeling liability creates artificially low premiums and does not solve the issue of insurance capacity.²⁵¹

It seems entirely contrary to fundamental concepts of fairness to exonerate a third-party from liability purely because the party risks being subject to a claim beyond its capacity or willingness to pay, and instead, let the innocent public face the brunt of the consequences.²⁵² This issue of fundamental fairness was another reason the Lok Sabha found it justifiable to push so hard for supplier's liability and a right of recourse for the operator.²⁵³

²⁴⁶ See Bajoria, *supra* note 4 (“The United States has only one objective: to create a level playing field for U.S. companies . . . The U.S. government is really indifferent . . . because their *only interest is to make certain that American companies are not kept out of the competition* because of these constraints.” (emphasis added)).

²⁴⁷ See Vanden Borre, *supra* note 22, at 35.

²⁴⁸ See Ameye, *supra* note 30, at 39.

²⁴⁹ See HARVARD REPORT, *supra* note 36, at 57.

²⁵⁰ See Ameye, *supra* note 30, at 39.

²⁵¹ See *id.* In fact, during the ratification of the Vienna Convention, fourteen countries proposed an amendment that would have required suppliers to take out insurance as well. *Id.*

²⁵² See Simon Carroll, *Perspective on the Pros and Cons of a Pooling-type Approach to Nuclear Third Party Liability*, 81 NUCLEAR L. BULL. 75, 85 (2008); Vanden Borre, *supra* note 22, at 38.

²⁵³ See STANDING COMMITTEE REPORT, *supra* note 190, at 25 (dissent).

Because the BJP party controls the Lok Sabha, the bill was not able to pass without including revisions that would create supplier's liability.²⁵⁴ As mentioned in prior discussion, the Bhopal decision was released shortly before the bill was subject to vote, and critics in the Lok Sabha reiterated that the first priority of the legislature should be the interest of the Indian people, property, and environment.²⁵⁵ Because of this, the current version of 17(b) and the liability caps are viewed by some as completely inadequate.²⁵⁶ Many of these problems are beyond the scope of this Note, but in the international context, the Indian law is the first real attempt at moving beyond the burdensome yoke of legal channeling. While this author does not purport to claim the bill is anywhere close to being satisfactory when it comes to the idea of supplier liability, the very fact that the nuclear industry's suppliers are completely up in arms over the clause is an indication that it is a step in the right direction.

2. Foreign Investor Fears

Foreign investors now fear they will be subject to liability years down the line in the face of a nuclear accident, and American investors worry that the playing field is no longer level for them.²⁵⁷ As a result, the American lobbyists have been pushing hard on the Indian Prime Minister to amend the bill.²⁵⁸

American investors' fears reflect one of the basic tenants of liability channeling: the idea that nuclear investment would suffer greatly if suppliers and manufacturers had to worry about liability costs. This fear is illustrated quite well in the American press when discussing India's Civil Liability Bill.²⁵⁹ Keep in mind this same concern was one that was initially raised during the inception of the nuclear industry when it was still young and rising in the United States, let alone in other parts of the

²⁵⁴ Amita Shah, *Supplier Liability to Save Nuke Bill*, THE ECONOMIC TIMES, Aug. 20, 2010, http://articles.economictimes.indiatimes.com/2010-08-20/news/28472692_1_supply-of-sub-standard-material-patent-defect-equipment-or-services.

²⁵⁵ STANDING COMMITTEE REPORT, *supra* note 190, at 25 (dissent).

²⁵⁶ *See id.* at 22–25.

²⁵⁷ *See* Bajoria, *supra* note 4.

²⁵⁸ *See id.*

²⁵⁹ *See, e.g.*, Elana Schor, *Japan Disaster Refuels Liability Debate in U.S.-India Nuclear Pact*, N.Y. TIMES (Mar. 25, 2011), <http://www.nytimes.com/gwire/2011/03/25/25greenwire-japan-disaster-refuels-liability-debate-in-us-59319.html>; Rama Lakshmi, *India Introduces Controversial Legislation on Compensation for Nuclear Accidents*, WASH. POST (May 8, 2010), <http://www.washingtonpost.com/wp-dyn/content/article/2010/05/07/AR2010050705057.html>.

world. As such, the United States insisted upon channeling liability when it first began to share its technology with Western European markets: “Western suppliers are reluctant to enter into significant nuclear project and safety upgrades, absent adequate protection. . . .”²⁶⁰ Western Europe in turn applied the same channeling logic when it began to tap into the Eastern European markets, perpetuating the doctrine with the expansion of the industry.²⁶¹

It is important to note that investment in India’s nuclear industry has not suffered since the passage of the bill, as countries like France and Russia continue to ink lucrative deals.²⁶² As a concession to America’s fears, Prime Minister Singh agreed to sign the CSC in October of 2010, but due to opposition pressure and the Bhopal decision, the Prime Minister wisely declared that supplier’s liability will remain.²⁶³

3. Current Events

As with most young, start-up industries, there are of course concerns of liability. As discussed throughout this Note, the channeling doctrine clearly was created to protect the American industry, not society or plaintiffs. Unfortunately, this mentality has done nothing to limit the inherent safety risks that nuclear energy and the nuclear industry create. The tragedy of the Japanese earthquake and tsunami of 2011 and the Fukushima disaster are stark reminders not only of the awesome power of mother nature, but of the risks of using nuclear technology and how legal channeling of supplier liability further enhances these risks.²⁶⁴

Japan, similarly to India, is not party to international nuclear liability conventions, but it has implemented its own nuclear civil liability system. The Law on Compensation for Nuclear Damage,²⁶⁵ for the most part, follows the same principles established in the third-party liability regimes discussed in this note, most importantly channeling strict, exclusive,

²⁶⁰ Ameye, *supra* note 30, at 40 (citation omitted).

²⁶¹ *Id.*

²⁶² See Bajoria, *supra* note 4.

²⁶³ See Shah, *supra* note 254 (indicating significant backlash from the BJP if the supplier’s liability clause was removed).

²⁶⁴ Rachel Armstrong, *Japan Nuclear Crisis to Trigger Huge Civil Damages Claims*, REUTERS (Apr. 4, 2011), <http://www.reuters.com/article/2011/04/04/us-japan-tepco-liability-idUSTRE7331xx20110404>.

²⁶⁵ Act on Compensation of Nuclear Damage, Act. No. 147 of 1961, *amended by* Act No. 19 of 2009 (Japan), *available at* <http://www.oecd-nea.org/law/legislation/japan-docs/Japan-Nuclear-Damage-Compensation-Act.pdf>.

and unlimited liability to the operator.²⁶⁶ It exonerates the operator for damages caused by a “grave natural disaster of an exceptional character.”²⁶⁷ Like the other liability acts, it provides a statute of limitations and allows for the government to intervene when cost of the damages exceeds the operator’s capacity to pay.²⁶⁸ Furthermore, the Law was amended in 1994 to prevent the Product Liability Act²⁶⁹ from applying to nuclear damage.

All of these provisions in the Japanese law come into play when dealing with the aftermath of the Fukushima failure. Granted, a natural disaster was the cause of the damage, thus mooted the supplier liability argument, the old and potentially faulty design of the reactors has received coverage in the press.²⁷⁰ Hypothetically speaking, if there was a reactor failure in Japan that was due to faulty design and not a tsunami, the makers of the reactor (for example, General Electric) would still suffer no liability.²⁷¹ The entire cost of the damages would fall on the operator, and if the operator cannot pay (as in the case of TEPCO²⁷²) the costs would fall to the Japanese government, and ultimately to the Japanese taxpayers.²⁷³ In fact, it is estimated that the “Japanese taxpayers will pay as much 1 trillion yen (\$12 billion) to compensate businesses and individuals for damages from the nuclear accident” because of the liability limitations in place in Japanese law.²⁷⁴ These liability limitations are extremely similar to those established in the various liability treaties and acts discussed in this Note.

This is a real example of the injustice and unfairness of the channeling regime, and how it protects the industry, not the people, the environment, or the communities that surround nuclear facilities. It is painfully obvious that the Paris and Vienna Conventions were created to protect the emerging nuclear industries, and recent amendments have not altered this outdated goal of promoting, protecting, and nurturing the nuclear industry.²⁷⁵ However, it is questionable to view the nuclear industry now

²⁶⁶ *Id.* at §§ 3–4.

²⁶⁷ *Id.* at § 3.

²⁶⁸ ORG. FOR ECON. CO-OPERATION & DEV., NUCLEAR LEGISLATION IN OECD COUNTRIES: REGULATOR AND INSTITUTIONAL FRAMEWORK FOR NUCLEAR ACTIVITIES, JAPAN 12–13 (2011), available at <http://www.oecd-nea.org/law/legislation/japan.pdf>.

²⁶⁹ *Id.*; see Product Liability Act, Act No. 85 of 1994 (Japan).

²⁷⁰ Scott Malone, *Analysis—Japan Crisis A Blow to GE, Reactor Design an Issue*, REUTERS (March 17, 2011), <http://in.reuters.com/article/2011/03/16/idINIndia-55640020110316>.

²⁷¹ *See id.*

²⁷² Armstrong, *supra* note 264.

²⁷³ *See id.*

²⁷⁴ *Japan’s Nuclear Disaster “Made in USA,”* WORKERS WORLD 10 (Apr. 5, 2011), available at http://www.workers.org/2011/editorials/japans_nuclear_disaster_0407/.

²⁷⁵ Carroll, *supra* note 252, at 81.

as a young, burgeoning industry in need of protection, at the expense of the public and environment.

CONCLUSION

The primary obstacle to nuclear energy development has always been the fear of harm that can be caused by a tragic nuclear accident. The Indian Civil Liability for Nuclear Damage Bill passed in August of 2010 attempts to reconcile the need for the public's and Indian countryside's protection with India's growing appetite for sustainable energy. While the law has many flaws, it tries to provide victims with supplier's liability, a tool long removed from the nuclear industry.²⁷⁶

By analyzing the historical context and industry justification in which legal channeling was first introduced into the nuclear liability regime, it is clear this is an outdated concept not reflective of the growth and power the industry has enjoyed. The current regime of channeling liability strictly to the nuclear operator provides suppliers with no incentive to ensure their products are not defective or sub-standard. Furthermore, since this is no longer a fledgling regime, the need for protecting nuclear suppliers has passed. Such liability protection is in fact counterproductive to ensuring a safe nuclear facility less at risk for a devastating accident.

The Indian Civil Liability for Nuclear Damage Bill of 2010 reflects how it is not necessary for high-density states like India to be at the whim of the nuclear industry, but instead, must work to evolve the current regime so as to protect their constituents and environment. Implementing supplier's liability against the nuclear industry is the first step in the right direction.

²⁷⁶ The Civil Liability for Nuclear Damage, Bill No. 19 of 2010, INDIA CODE ch. IV, cl. 17 (2010); Shah, *supra* note 254.