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The Nuclear Civil Liability Regimes and the Path Forward for the State of Qatar

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Abstract

While many states are moving away from nuclear power and decommissioning their reactors for cheaper and safer alternative energy sources, recent years have seen a spark in interest for nuclear power within the Middle East under the pretext of 'energy independence'. This trend poses a potential threat for the safety of the region considering that nuclear power plants are prone to human errors, deliberate attacks, and natural environmental convulsions which could trigger potential transboundary fallout. Given the region's small and compacted geography along with the increasingly volatile geopolitical instability, a regional incident would likely have much direr consequences compared to other previous nuclear incidents. As a non-nuclear power state, Qatar is not currently party to any of the nuclear civil liability conventions which could guarantee some level of compensation for the victims in case of transboundary nuclear harm. In due course, Qatar will be surrounded by nuclear reactors from the north (the Iranian Bushehr plant), the east (the UAE Barakah plant) and the west (the planned Saudi plants). As exemplified by the COVID-19 pandemic, theoretical transboundary calamities can unexpectedly become a sudden reality and there is a solemn need to work proactively when dealing with such consequential hypotheticals. Therefore, this article qualitatively assesses the relevant international conventions with an aim of being policy relevant and navigate Qatari decision-makers through the vexing web of the nuclear civil liability regimes.

Keywords: Law; International; Nuclear; Liability; Reactor; Qatar

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أنظمة المسؤولية المدنية النووية والخطوة التالية لدولة قطر

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ملخص

في الوقت الذي تتعد فيه العديد من الدول عن الطاقة النووية، وتوقف تشغيل مفاعلاتها؛ للحصول على مصادر طاقة بديلة أرخص، وأكثر أماناً؛ تشهد السنوات الأخيرة اهتماماً متزايداً بالطاقة النووية في الشرق الأوسط، تحت ذريعة "أمن الطاقة"، وهذا يشكل تهديداً محتملاً لسلامة المنطقة؛ نظراً لتعرض محطات الطاقة النووية للأخطاء البشرية، والهجمات المتعمدة، والتغيرات البيئية التي يمكن أن تؤدي إلى كوارث عبر الحدود. وبالنظر إلى جغرافية المنطقة الصغيرة والمحدودة، بالإضافة إلى عدم الاستقرار الجيوسياسي الذي يشهد تقلبات بشكل متزايد، فمن المرجح أن يكون لأي حادث في المنطقة عواقب وخيمة أكثر من الحوادث السابقة. وكدولة غير نووية، فإن قطر ليست - حالياً - طرفاً في أي من اتفاقيات المسؤولية المدنية النووية التي يمكن أن تضمن مستوى معيناً من التعويض للضحايا في حالة الضرر النووي العابر للحدود. وقريباً، ستُحاط قطر بمفاعلات نووية؛ من الشمال (مفاعل بوشهر الإيراني)، ومن الشرق (مفاعل براكه الإماراتي)، ومن الغرب (المفاعلات السعودية المخطط لها). كما يتضح من جائحة "COVID-19"، أنه يمكن نظرياً أن تتحول الكوارث العابرة للحدود بشكل غير متوقع إلى حقيقة مفاجئة؛ فهناك حاجة ملحة إلى العمل بشكل استباقي للتعامل مع مثل هذه الافتراضات الخطيرة. ومن ثم، تقيم هذه المقالة الاتفاقيات الدولية من الناحية النوعية، بهدف أن تكون ذات صلة بالسياسات القطرية، وتوجه صانعي القرار في قطر عبر الشبكة الشائكة لأنظمة المسؤولية المدنية النووية.

الكلمات المفتاحية: قانون، دولي، نووي، المسؤولية، مفاعل، قطر

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© 2021، المعاضيد، الجهة المرخص لها: دار نشر جامعة قطر. تم نشر هذه المقالة البحثية وفقاً لشروط Creative Commons Attribution-NonCommercial 4.0 International (CC BY-NC 4.0). تسمح هذه الرخصة بالاستخدام غير التجاري، وينبغي نسبة العمل إلى صاحبه، مع بيان أي تعديلات عليه. كما تتيح حرية نسخ، وتوزيع، ونقل العمل بأي شكل من الأشكال، أو بأية وسيلة، ومزجه وتحويله والبناء عليه، طالما يُنسب العمل الأصلي إلى المؤلف.

Introduction

In an era of ever-growing global demand for energy, some states are turning to nuclear power as a stable source of energy to complement their other sources. This gradual expansion of the nuclear energy industry has not least found its avenue in the developing states of the Middle East. However, history witnesses the catastrophic risks inherent in nuclear power (take for instance the incidents in Three Mile Island, Chernobyl and Fukushima Daiichi), and, as such, states are incessantly seeking to legally indemnify themselves and their populations through international legal channels in case of such incidents. This is decidedly the case for the State of Qatar, given the amount of emerging nuclear powers nearby its territory and the added transboundary risks they constitute. Qatar is not currently party to any international nuclear civil liability convention that would assure a degree of compensation in case of a nuclear accident in a neighboring state. Hence, this article aims to provide a general overview of the current international nuclear liability regimes and make recommendations to policymakers on the prospects of adherence to the relevant international conventions. It alludes to these different regimes and assesses them based on a political, legal, and strategic perspective in view of Qatar's geopolitical and regional interests.

I. Historical context

The principle incentive for a non-nuclear power state, such as the State of Qatar, in bolstering the formation of a nuclear liability regime is the potential transnational effects of a nuclear incident, given the equivocal position of international law on the legal liabilities between states, the question of state immunity and transboundary harm, and the ambiguity with respect to jurisdiction. This enigma was perhaps most exemplified by the Chernobyl nuclear incident of 1986, which caused a compensation vacuum as neighboring nation states, had to incur considerable costs without making any legal claims against the USSR under public international law or treaty law¹. None of these costs were compensated by the USSR, as it considered that it was not liable. The USSR was able to legally substantiate its position because; (i) it was not a party to any of the conventions, (ii) it had veto power in the UN, and (iii) although the International Court of Justice (ICJ) had established a rather clear position regarding the principles of international environmental law, its jurisdiction is based on state consent, and as such, the USSR did not subject itself to the jurisdiction of the ICJ in this issue². Furthermore, American suppliers of nuclear technologies moved quickly to fill in the legal lacuna regarding liability by pressuring states to adhere to the civil liability conventions that provide legal channeling clauses and thus insulate suppliers from any liability claims (this is because the incident itself, along with the other two

1 L. Malone, 'The Chernobyl Accident: A Case Study in International Law Regulating State Responsibility for Transboundary Nuclear Pollution', [1987], Faculty Publications, 237.

2 Ibid.

major nuclear incidents, was caused partly by design flaws)³. By exonerating suppliers of nuclear technologies from substantial liability claims, and in turn, allowing the fruitful expansion of the nuclear industry, the civil liability regimes sought to alleviate any hurdles to attracting meaningful investments in nuclear technology. This general trend catalyzed in the 1950's where many US companies, with fresh memories of the calamitous power of nuclear technologies, lobbied for legal channeling of liability clauses in their foreign export contracts⁴. However, the corresponding risks from nuclear power were recognized and finally solidified on a more global basis after the effects of Chernobyl. European states incurred the most damage, and by force of consequence, moved to both campaign for international agreements, and to facilitate victim recovery under the existing agreements by making amendments to them and establishing a Joint Protocol⁵. Thus, the bona fide impetus for establishing the regimes was twofold; (i) to guarantee victim compensation for both national and transnational damages and (ii) to ensure the long-term feasibility and protect the economic interests of the nuclear power industry from liability in case of a nuclear accident.

II. The nuclear civil liability regimes

Pragmatically, however, there exist multiple international legal regimes, even among developed nuclear power states. Some of the most prominent nuclear powers, including the USA (which, although party to the Convention on Supplementary Compensation for Nuclear Damage 1997 (CSC), is still bound by the Price-Anderson Act) and China (which is hitherto not party to any international liability convention), depend entirely upon their domestic legislations to set the appropriate insurance obligations and civil liabilities on the plant operators⁶.

Other states, including some that possess reputable nuclear programs, have joined the Vienna Convention on Civil Liability for Nuclear Damage of 1963 (hereinafter the Vienna Convention)⁷. Although the memberships of the Vienna Convention focuses on Latin American and the Middle Eastern states, it is the most adhered to regime worldwide, in

3 P. Blanchard, 'The Risk of Civil Nuclear Liability of Foreign Contractors in Central and Eastern Europe and the NIS', [1999], Kluwer Law International, 534.

4 M. Faure and T. V. Borre, 'Compensating Nuclear Damage: A Comparative Economic Analysis of the U.S. and International Liability Schemes', [2008], William & Mary Environmental Law and Policy Review, 286; Atomic Industrial Forum, 'International Problems of Financial Protection against Nuclear Risk: A Study under the Auspices of Harvard Law School and Atomic Industrial Forum, Inc', (1959) (otherwise known as 'The Harvard Report 1959').

5 Joint Protocol Relating to the Application of the Vienna Convention and the Paris Convention (adopted 21 September 1988, entered into force 27 April 1992) UNTS 1672.

6 Convention on Supplementary Compensation for Nuclear Damage (adopted 12 September 1997, entered into force 15 April 2015) UNTS 3039; Act to Amend the Atomic Energy Act of 1954 (Price-Anderson), Pub. L. No. 85-256, 71 Stat. 576 (1957).

7 Vienna Convention on Civil Liability for Nuclear Damage (adopted 21 May 1963, entered into force 12 November 1977), UNTC 1063 (p.265).

nuclear civil liability. The Protocol to Amend the Vienna Convention on Civil Liability for Nuclear Damage was adopted in 1997, where several of Vienna Convention countries have subsequently joined⁸.

Still other states have joined the Paris Convention on Third-Party Liability in the Field of Nuclear Energy of 1960 instead (hereinafter the Paris Convention), which is under the auspices of the Organization for Economic Co-Operation and Development (OECD) (therefore it is not open for non-OECD members)⁹. The Paris Convention currently consists of only European states. It was complemented in 1963 by the Brussels Convention, which established for the first time a system for a 'supplementary compensation fund', comprising of contributions from member states in the case where a nuclear incident exhausts the minimum amount of liability an operator is obliged to reimburse (it is analogous to the CSC's compensation tiers, which will be elaborated on later)¹⁰. Some parties in both the Vienna and Paris Conventions are also parties to the Joint Protocol Relating to the Application of the Vienna Convention and the Paris Convention, which was established to form treaty relations between the parties of both conventions and to remove overlapping conflicts that may arise from the synchronized implementation of both Conventions to the same nuclear accident¹¹. As such, the latter is only open to parties to the Paris and Vienna conventions.

A number of other states have joined the IAEA's Convention on Supplementary Compensation for Nuclear Damage 1997 (CSC), which entered into force in 2015, after Japan's ratification¹². The CSC enjoys the support of the US, the world's largest nuclear power-generating state, along with a small number of other state parties, of which comparatively have the highest yield of nuclear power. The Vienna convention failed to create such a regime given that the US had found the Convention inapt in respect to its domestic tort-law system¹³. The CSC was ostensibly established as "an umbrella for the other international liability conventions and to provide the basis for a global nuclear liability regime that could attract broad adherence from countries with and without nuclear power plants"¹⁴. Like the Vienna Convention, the CSC creates a legal framework for defining, arbitrating, and indemnifying civil liability for nuclear damage that arises from an incident in the territorial jurisdiction of a member state. However, it is unique from the Vienna

8 Protocol to Amend the Vienna Convention on Civil Liability for Nuclear Damage (adopted 12 September 1997, entered into force 4 October 2003) UNTS 2241 (p.27).

9 Paris Convention on Third-Party Liability in the Field of Nuclear Energy (adopted 29 July 1960) UNTS 956, p.251.

10 Brussels Supplementary Convention to the Paris Convention, (adopted 31 January 1963), UNTS 956, p. 251.

11 n[5].

12 n[6].

13 United States Senate Consideration of Treaty Document 107-21, 2002 <<https://www.congress.gov/treaty-document/107th-congress/21/document-text>>.

14 Civil Liability for Nuclear Damage: Advantages and Disadvantages of Joining the International Nuclear Liability Regime. A paper by the International Expert Group on Nuclear Liability (INLEX) <<https://www.iaea.org/sites/default/files/17/11/liability-regime.pdf>>

Convention in so far as it creates a contingent international supplementary compensation fund which is triggered in the case of an incident with damage so financially profound, that it depletes the compensation funds that is obligated on the Party where the incident occurs¹⁵. The contributions to the supplementary fund would comprise mainly from Parties that are in possession of nuclear power plants within its jurisdiction¹⁶. Some nuclear power states may find the CSC especially helpful as a means by which they may harmonize their national laws with respect to nuclear civil liabilities without having to join the other civil liability Conventions (for instance, some current members, such as the USA, Canada, India and Japan, are solely party to the CSC). But there are other prerequisites distinct to the CSC, such as the requirement that a Member State with an Installation must join the 1994 Convention on Nuclear Safety (CNS)¹⁷. At any rate, joining the CNS is already a precursor to building a power plant according to IAEA guidelines, however, this is not strictly followed, as showcased by Iran who is currently the only country operating a nuclear power plant that is not a party to the CNS. Other requirements include that parties to the CSC either must also be party to the Vienna Convention, the Paris Convention, or must have national nuclear liability legislations that align with the provisions set forth in the Annex of the CSC¹⁸. The Annex includes the basic civil liability provisions provided for in the other conventions, primarily being the principle of legal channeling of liability on the operator of the nuclear installation. Parties with no nuclear installations on their territory are required to have only a national legislation which would make effective its obligations under the CSC—and nothing beyond that narrow set of obligations¹⁹.

From a legal perspective, the extended definition of Nuclear Damage, the extended territorial scope for damage claims, and the reservation of 50% of the second-tier compensation fund for transnational damage are key features of the CSC that incentivizes non-nuclear states to join, perhaps more so than any of its competitive regimes. What is more, the concept of "damage" itself is not precisely defined in neither the Vienna Convention nor the Paris Convention, nor does the former establish a system of supplementary funds. Compared with the other regimes, the CSC is unequivocal in its definitions and more reliant for victim compensation²⁰. Having said that, while the CSC provides better protection for victims than some of the other current conventions, there are some deficiency such as the limited amount of damages, the allocation of jurisdiction to the state where the damage occurs, the short statutes of limitations, and the inadequate amount of current parties

15 n[6], article III.1(b).

16 Ibid, article IV.

17 Ibid, article XVIII; Convention on Nuclear Safety (adopted 17 June 1994, entered into force 24 October 1996) UTC 1963. Ibid, Article XVII and Article XIX. It is worth mentioning that the Nuclear Safety Convention, of which Qatar is not party to, itself incorporates a duty to ensure an adequate nuclear liability (domestic) regime.

18 n[6] article IX.

19 Ibid, Annex.

20 Ibid, article I.

to the Convention. Further, in order to join the Convention, Qatar would have to make some modifications to its legislations to meet the requirements of the CSC's annex on civil liabilities.

Finally, some States complement the aforementioned conventions with bilateral or regional relations in order to embolden multilateral co-operation towards achieving a global nuclear liability regime. The most prominent of which include the 2013 Joint Statement on Liability for Nuclear Damage between France and the United States, the G20 Leaders' Declaration of 2013, and the Franco-Russian Nuclear Power Declaration of 2013²¹.

The above-mentioned regimes share the following basic civil liability principles:

- The strict liability on the operator of the installation (the licensee or other government-recognized entity).
- The channeling of liability to the operator (regardless of negligence) to the omission of any other parties, such as suppliers who would otherwise be possibly liable (except for 'acts of armed conflict, hostilities, civil war or insurrection').
- The jurisdiction over actions is exclusive to the courts of the Contracting Party in whose territory the nuclear incident occurred.
- The liability must be limited in amount.
- The liability must be limited in time.
- The liability must be financially secured and available (e.g. through insurance).
- The equal treatment of victims.

III. State liability for transboundary harm under Public International Law

The very purpose of the international civil liability conventions is to amend ordinary tort laws and make the operator of a nuclear installation exclusively liable for damages incurred. Subsequently, all claims will fall under private law/private international law rather than public law/public international law. At present, there appears to be virtually no outlook for a convention on State liability (as opposed to operator/civil liability), but States generally accept the potential existence of such liability directed towards them outside the context of the three Conventions (of which instead redirect and channel liability to the operator of the installation and not the State itself). Hence, all claims for damages under the nuclear civil liability conventions will be submitted to an ordinary court operating in the national legal system of the state that has jurisdiction over the incident. The claims may also be invoked under private international law where the plaintiff and the defendant are situated in different countries. At a national level, these conventions paint

21 United States and France (2013), "Joint Statement on Liability for Nuclear Damage" http://energy.gov/sites/prod/files/2013/08/f2/Joint%20Statement%20Signed_0.pdf; G20, 'Leaders' Declaration' (2013) www.g20.utoronto.ca/2013/2013-0906-declaration.html; France and Russia, 'Franco-Russian Nuclear Power Declaration' (2013) https://inis.iaea.org/collection/NCLCollectionStore/_Public/45/089/45089793.pdf?r=1.

an explicit picture on who is to be liable in case of a nuclear accident—the operator of the installation, and where the operator’s financial security is exhausted, the state would likely provide additional funds as a last resort (depending on the specific convention). However, there is some ambivalence with the conventions when it comes to transboundary harms. Where the damages reach the national borders of another State, the conventions would hold the operator of the plant liable to a certain limited extent in time and monetary amount and only towards contracting parties. They also make the forthright adjudication that jurisdiction over claims lie in the state where the incident occurs, and not under any international court (again, since it is a private rather than public matter). Moreover, they are relatively sufficient when addressing moderate incidents, but are untenable in dealing with major accidents with transboundary effects. Fortunately, there exist other avenues, albeit hazier ones, for indemnifications in public international law that would, in principle, hold the installation state itself liable for any transboundary harm it causes, and it would customarily be heard in the International Court of Justice (ICJ).

So then, independent of any provisions set forth, in particular international conventions, there exists other sources of international principles and laws that bind states to prevent transboundary harm. Nonetheless, as showcased by the accidents at Chernobyl in 1986 and perhaps at Fukushima Daiichi as well (albeit considerably less so as the transboundary harm was kept at a relative minimum), these sources of law are usually less directly enforceable than an explicit international treaty which, preferably, leaves no room for ambiguities in compensating the victims involved. As such, a State relying on principles of public international law may find it more difficult in attaining *prompt* compensation for its affected victims where the incident is relatively minor. Moreover, even when presuming that the claimant State wins the case and circumvents all the intractable hurdles of the ICJ, opinions of the Court is only enforceable by the United Nations Security Council²². While this might still be a difficult route, it might be the only available one since, as mentioned, the conventions would ultimately fail when the incident is large or where a State seeks indemnification for grave environmental damages against the State itself. Thus, until a State liability convention is established, the most apt proceeding for victim States suffering from costly environmental damage and for those suffering from a large calamity affecting its population following a nuclear incident is to make a claim against the installation State itself under public international law channels. In this author’s view, the abstract nature of recovery under international law, where a considerable nuclear catastrophe worth billions takes place, is preferable to an almost certain inadequate indemnification under the private liability conventions.

In any case, the general sources of international law that may hold a State liable

22 United Nations, Charter of the United Nations, 24 October 1945, 1 UNTS XVI, article 94.

for transboundary harm include the general principles of law (and equity) and customary international law. Of the former, this includes the no-harm principle, that is, the duty not to cause harm to or in other States, along with the principles of due diligence, the doctrines of State responsibility, State sovereignty, territorial integrity, public trust, good neighborliness and sovereign equality²³. The duty to prevent harm is in itself considered both a general principle of law as well as a customary international law, of which to be binding (albeit in an admittedly equivocal manner) on all States. International law is also replete with precedent cases that upholds the principles against transboundary harm (the *Corfu channel* 1949 case, the *Smelter Arbitration* 1939 case, and more recently the *Pulp Mills* 2010 case)²⁴. Further, and perhaps most glaringly, the Rio (1992) and Stockholm (1972) United Nations declarations provide the most univocal *opinion juris* on transboundary harm²⁵. The declarations were also affirmed by the ICJ advisory opinion on the *Legality of the Threat or Use of Nuclear Weapons* as well as by the International Law Commission draft articles on transboundary harm, which held that "[t]he State of origin shall take all appropriate measures to prevent significant transboundary harm or at any event minimize the risk thereof"²⁶. All this is not to say that sovereign States will always abide to such principles and that realpolitik and veto power do not usually play a major role in State actions, but it is only to say that States are legally obliged to concede since public international law encompasses customary law through State practice coupled with the general principles of law. One must also bear in mind that International law is constructed on the underpinnings of State consent. Ergo, a State's legal obligations are profoundly, if not solely, based on its consent to be bound²⁷.

Commentary and recommendations:

Given the options currently available, the State of Qatar may consider:

1. Ratifying or acceding to the Paris or the Vienna Convention and the Joint Protocol.
2. Ratifying or acceding to the CSC, with the possibility of previously adhering to the Vienna/Paris Convention.
3. Establishing bilateral/regional agreements with its neighboring nuclear power

23 United Nations, Statute of the International Court of Justice, 18 April 1946, article 38(1).

24 *Corfu Channel Case (United Kingdom v. Albania); Merits*, International Court of Justice (ICJ), 9 April 1949; *Trail Smelter Case (United States v. Canada) (1938 and 1941)* 3 R.I.A.A. 1905; *Pulp Mills on the River Uruguay (Argentina v. Uruguay)*, International Court of Justice (ICJ), 20 April 2010.

25 U.N. Conference on Environment, 'Report of the United Nations Conference on the Human Environment', (1972) U.N. Doc. A/Conf.48/14/Rev.1 and U.N. Conference on Environment and Development, 'Rio Declaration on Environment and Development' (1992), U.N. Doc. A/Conf.1.

26 Law Commission, *Draft Articles on Prevention of Transboundary Harm from Hazardous Activities*, (UN Doc. A/56/10 2001), 153.

27 n[23], supra note 70, article 36(2).

- states.
4. Depend exclusively on public international law for any transboundary damage incurred in its territory due to a foreign nuclear installation.

IV. Possible contingencies from the 'legal channeling of liability' clause

In joining any of the aforementioned conventions, the State of Qatar will be bound to implement certain civil liability clauses within its national legislations, which may prove to be inconvenient to its domestic affairs in the future. This was the principle reason why the United States chose not to join the Paris or Vienna Conventions, as neither conformed to its domestic tort law on nuclear liabilities (the 1957 Price-Anderson Act)²⁸. On contemplating whether to join a new multilateral international treaty, the primary question a potential Member State ought to ask itself, from an 'enlightened self-interest' perspective, is: "what tangible value will my adherence to that international instrument bring about in the long term?" (taking into account its economic, political, and strategic interests). Because it is challenging to make such predictions on forthcoming events (such as the demand for energy), adequate resources must therefore be allocated to anticipate possible contingencies and complications that may increase the cost or reduce the paybacks of joining an international convention.

For example, joining the CSC (which is contingent on signing the Convention on Nuclear Safety *if* the Member State has a nuclear installation) might create no problems for Qatar today, when there are no plans to build a nuclear installation, but might create political and technical problems in the future with respect to importing nuclear power plant technology from nuclear suppliers and manufacturers. The companies have large enough commercial leverage to impact the domestic legal regime of states with nuclear power plants, of which Qatar might aspire to become one in the future²⁹. For instance, the vendor/exporter will require the purchaser to have a national legislation for compensation for nuclear liability that conforms with basic civil liability principles, including exclusive channelization and joining an international civil liability convention³⁰. Because Qatar has no current interests in building nuclear installations, attracting vendors and exporters of nuclear installations and service serves no practical interest to it today, on the contrary, obliging itself to legal channeling liability clauses may become an unnecessary burden.

28 n[13].

29 There are various reasons which may prompt Qatar to join the list of countries producing nuclear energy in the future (prestige, politicization, and energy independence) however, a thorough examination goes beyond this article; see: J. Krane, A. M. Kaffe, and J. Ellass, 'Nuclear energy in the Middle East: Chimera or solution?', 2016, Bulletin of the Atomic Scientists.

30 J. Bellamy, 'Civil liability for nuclear damage in countries developing nuclear new build programmes', Journal of World Energy Law and Business, 2018, 9.

Doing so might even prove to be an adverse hindrance as the principle of 'legal channeling' of liability might not be something that Qatar wishes to be obliged by in the first place. To be sure, the clause is one of the main incentive for nuclear States in joining civil nuclear liability conventions, as it serves as a protective mechanism for the nuclear industry and thus aids in its progression and attracts foreign investors³¹. Suppliers of nuclear safety equipment and technology in those States are often concerned that they would be held liable in damage claims by victims of a potential future incident at a facility where they have provided assistance. Consequently, the conventions would exonerate them from any liability claims. However, this is not a necessary priority for the State of Qatar, as it does not yet have any plans in building nuclear installations that would require catering to supplier liability concerns, nor is it clear that Qatar has any interest in applying overly protective measures in favor of the nuclear industry at a subsequent time, and if it hypothetically did, it seems more apt to make that decision when it is required. Take for instance the non-nuclear states of Austria and New Zealand, which declared that the provisions that place strict liability on nuclear operators at the expense of the suppliers have excluded their adherence to any international agreement in this area because they regard such excessively protectionist requirements as being unnecessary for the nuclear industry to the exclusion of other industries³². As such, both States have not ratified any of the civil liability conventions. Furthermore, in joining the Paris Convention, Austria, Germany and Greece determined to make a reservation which contains "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 defense against unjustified actions, by insurance or other financial security obtained by the operator or out of State funds"³³. In that same Convention (Paris), fourteen Member States proposed a joint amendment which held that the operator would have a right of recourse if the nuclear accident was intentional and if it was as result of a fault by another party (however, this amendment was later rejected)³⁴. This, along with the other provided examples, suggests that a large enough number of states hold the view that victims should not have their rights to adequate compensation be delimited to such a degree, seeing as the nuclear industry has now reached a ripened stage. Such states contend that suppliers of nuclear products and services no longer need to hide behind the veil of liability, which, in the initial stages of the development of the nuclear industry was arguably vital for the continuation of the industry³⁵. Advocates of this opinion consider that

31 T. V. Borre, 'Shifts in Governance in Compensation for Nuclear Damage, 20 Years after Chernobyl' in F. M. Verheiji *Shifts in Compensation for Environmental Damage* (eds), (Springer, 2007).

32 OECD and IAEA, 'International Nuclear Law In The Post-Chernobyl Period'(2006) <https://www.oecd-nea.org/jcms/pl_14152>, 59.

33 n[9], Annex, Article 6(a) and (c) (i)

34 Amendment CN-12/CW/92 by Argentina, Brazil, Colombia, Greece, the Philippines, Indonesia, Iran, Lebanon, Mexico, Morocco, Austria, Portugal, Spain and Vietnam; Official Records Vienna Convention, p. 301.

35 For further discussion, see: T. V. Borre, 'Channelling of liability: a few juridical and economic views on an inadequate

the industry is now financially ripe enough to shoulder its standard share of risks and that the principle of 'legal channeling' should thus be discarded.

As demonstrated, legal channeling is a virtually inescapable concept at the heart of these conventions, and so all current nuclear civil liability regimes generally allow suppliers of defective equipment to avoid any responsibility in case of a nuclear incident. Indeed, even though legal channeling had been accepted in Austria since 1964, it was abolished with the Federal Law on Civil Liability for Damages caused by Radioactivity because legal channeling was considered inimical to the interests of nuclear accident victims and removes the necessary incentive of suppliers to guarantee the highest degree of safety³⁶. The legislation was also intricately crafted to manage and regulate the nuclear power plants in neighboring Czech and Slovak Republic³⁷. It puts their operators of nuclear installations, combined with the suppliers and transporters, at risk of third party liability in Austria in the case of a nuclear accident, driving them to take out adequate and prompt insurance³⁸. Hence, any claims for damages incurred in Austria caused by a foreign plant will be subject to Austrian jurisdiction and Austrian law will be applicable³⁹.

Moreover, the Bhopal gas leak accident in India (which is subject to the practically non-existent chemical civil liability regime) resulted in thousands of casualties due to defective equipment provided by the suppliers and has very often been used as an example to explain the rationality in maintaining a degree of liability on the suppliers⁴⁰. In ordinary tort law, accident victims may bring a claim against any party that may be considered liable for the accident. If this approach was applied to the nuclear civil liability regime, it could significantly increase the financial ability to compensate the victims, as several parties would be considered liable (however, it is a double-edged sword in that it could also hamper the victims in obtaining adequate compensation in a prompt manner). Nevertheless, it must be noted that the nuclear civil liability regime is much stronger than that of the chemical regime, and victims of nuclear civil liability convention state parties will most likely be

legal construction' in N.L.J.T. Horbach, *Contemporary Developments in Nuclear Energy Law* (ed.), (London: Kluwer Law International, 1999), 17-18. See also E. 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', 2010, *European Energy and Environmental Law Review*, 33.

36 Federal Act on Civil Liability for Damage Caused by Radioactivity 1998; *Bundesgesetz über die zivilrechtliche Haftung für Schäden durch Radioaktivität [AtomHG 1999]* Bundesgesetzblatt Teil I [BGB1 I] No. 170/1998.

37 OECD, 'Regulatory and Institutional Framework for Nuclear Activities, Austria', (2003), <https://www.oecd-nea.org/jcms/pl_24161/nuclear-legislation-in-oecd-and-nea-countries-austria-2016-update>.

38 P. Goedde, 'In Search of a Civil Nuclear Liability Regime for North Korea', [2003], *Asian Perspective*, 238.

39 n[36], section 23.

40 For the news report see: R. Chhabara, 'Bhopal gas disaster: Corporate negligence with deadly consequences', Reuters, <<https://www.reutersevents.com/sustainability/supply-chains/bhopal-gas-disaster-corporate-negligence-deadly-consequences>> accessed 15/12/2020; *Union Carbide Corporation vs Union Of India etc.* (1989), 1990 AIR 273, 1989 SCC (2) 540.

compensated to a higher degree (with the exception of transboundary damages where the nuclear liability regimes would undoubtedly only operate in a very restricted manner without providing the expected adequate indemnification to the victims). Similar to the Bhopal incident, a US Presidential Commission posited that the cause of the Three Miles Island accident was primarily the failing of the supplier to provide the operator with prompt data regarding the emergency cooling system⁴¹. Suppliers were also partly responsible for the Chernobyl incident, as a substantive role was played by the dangerously high positive void coefficient of the RBMK reactor core and the inadequate containment structure⁴². Similarly, flaws in General Electric's Mark-1 design partly catalyzed the accident at Fukushima⁴³.

V. The CSC's concept of legal channeling

The CSC is the only convention which manifests a deviation from the standard principles and precedents set forth in past nuclear civil liability regimes. This is because it was (controversially) structured in such a way as to allow the continuation of the US's Price Anderson Act, and more specifically, the principle of 'economic channeling', to be speciously compatible with the Paris and Vienna Conventions along with the Annex to the CSC by way of grandfather clause, a criterion that is benefited only by the US⁴⁴. The Act holds that the operator has a right of recourse against other entities such as suppliers, manufacturers, contractors and etc. (with umbrella insurances covering the liability)⁴⁵. Therefore, ordinary tort law may apply in the US—deviating from the principle of 'legal channeling' in the CSC and applying the principle of 'economic channeling' instead. In other words, the US continues to be a strong defender of legal channeling in an oxymoronic, if not even, duplicitous manner, in that it does so only outside the US, when it privileges its exporting nuclear business.

A similar case exists in India. India ratified the CSC without altering its Atomic Energy Act 1962, which arranges a statutory right of recourse against the suppliers, in conflict with international standards and the CSC but in accord with the US⁴⁶. This suggests that the concept of legal channeling to the ostensibly unfair benefit of the nuclear industry's

41 J. G. Kemeny, *The Need For Change: The Legacy Of TMI, Report of the President's Commission on the Accident at Three Mile Island* (1979), 1.

42 IAEA, 'The Chernobyl Accident: Updating of INSAG-1', (1992) <https://www-pub.iaea.org/MTCD/publications/PDF/Pub913e_web.pdf>, 76; M. Najmedin, 'Human Factors in Large- Scale Technological Systems' Accidents: Three Mile Island, Bhopal, Chernobyl', [1991], *Industrial Crisis Quarterly*, 131; M. A. Prelas. and M. S. Peck, *Nonproliferation Issues For Weapons of Mass Destruction*, (2016), 89.

43 M. G. Faure and L. Jing, 'The Tsunami of March 2011 and the Subsequent Nuclear Incident at Fukushima: Who Compensates the Victims?', [2012], *William & Mary Environmental Law and Policy Review*, 189.

44 IAEA, 'The 1997 Vienna Convention on Civil Liability for Nuclear Damage and the 1997 Convention on Supplementary Compensation for Nuclear Damage—Explanatory Texts', (2007), <<https://perma.cc/6PAM-T4W9>>, 64-65.

45 n[6].

46 The Atomic Energy Act 1962, NO. 33, section 3 and section 17(b).

suppliers and manufactures is a point of contention within many states, and therefore requires further studying by the State of Qatar in order to decide whether to be tied to such legal obligations in the future. In one view, the US and India's legislations of 'economic channeling' can be seen as a non-zero sum game for the victims as it permits them to solely sue the operator, of which the operator may then sue the suppliers—saving the victims time and courtly costs while perhaps allowing them to receive wider payments from the operator⁴⁷.

VI. The path forward for Qatar

As of yet, Qatar generally has no international assurance that it will be sufficiently or promptly compensated in the occurrence of a nuclear incident (although it may rely on the arguably enigmatic public international law). While increasing the likelihood of compensation to the victims and for any environmental damage incurred, as well as ultimately championing a harmonized global legal regime are all significant objectives in themselves, Qatar might have a more direct incentive for joining a nuclear civil liability convention, that is, to insure itself from possible transboundary harm caused by neighboring nuclear plants, such as the Barakah nuclear power plant that is stationed in nearby UAE or the Bushehr reactor in Iran, which lies closer to Qatar than to Iran's capital Tehran. Iran is not a party to the CNS, which would subject the plant to regular safety inspections by the IAEA. Further, Iran is not currently party to any of the nuclear civil liability conventions, which makes the prospects for Qatar in becoming a party exclusively with respect to the Bushehr plant to be virtually nil. Hence, a bilateral agreement would seem more apt to govern and harmonize a reciprocal relationship, which would subject both parties, Qatar and Iran, to the same nuclear civil liability and transboundary harm provisions. In contrast, the UAE is party to both the Vienna Convention and the CSC (as well as the CNS). In virtue of Qatar's ratification of either one, Qatar and the UAE's civil liability legislations would then be under the auspices of an international legal instrument that would govern their relationship and the fate of the reciprocal victims. The Barakah plant rests a mere 274.5 km away from Qatar's territory. This, added with the fact that the plant's technology is hitherto untested, and that there is a lack of any international cooperation between Qatar and the UAE regarding disaster and emergency planning, health and safety, and the protection of the environment—or any other channels of communication regarding the plant itself, urges Qatar to be more solemn in seeking indemnification insurance for a possible future nuclear incident. This all the same applies to Saudi Arabia, which is currently planning to construct two large nuclear power reactors⁴⁸. Therefore, Qatar may have an evident direct interest

47 E. M. Ameye, 'United States and India: two nuclear states with legislation that truly holds responsible parties liable in case of a nuclear accident', 2014, *Journal of Risk Research*, 1070.

48 World Nuclear Association, 'Nuclear Power in Saudi Arabia', (August, 2020) <<https://www.world-nuclear.org/information-library/country-profiles/countries-o-s/saudi-arabia.aspx>> accessed 30/11/2020.

in a strong and robust international nuclear liability regime where its neighboring nuclear power states are party. Joining a nuclear liability regime would, in principle, provide the essential treaty relations and dialogue between the neighboring states, clarify which state has jurisdiction over the claims, increase the available funds that would be allocated to the victims by contributing to an international fund, ensure enforceability of third party liability judgments in other jurisdictions in case of nuclear damage suffered in the party state's territory, and provide an adequate compensation for damages suffered by the victims of the party state (where the incident is minimal). Moreover, a shared regime harmonizes nuclear liability legislations and thus promotes reciprocal treatment to the victims as well as the operators between the states.

Be that as it may, none of the current nuclear civil liability regimes are adequate for Qatar's current (limited) needs. From a political vantage point, it should be recalled that international and national legal regimes are not intended to have the capability (nor the authority) to provide complete financial compensations after a nuclear calamity in the magnitude of (say) Fukushima. Japan's Ministry of Economy, Trade and Industry recently estimated that the total cleanup cost as a result of the Fukushima disaster amounts to 187 billion US dollars, with the victims receiving 47 to 69 billion US dollars, surpassing the ceiling requirement of any nuclear liability convention⁴⁹. The international conventions are thus not the best avenue to guarantee compensation to all victims of a nuclear incident, and the insurer of last recourse will continue to be the installation State—a requisite that is perhaps acceptable for wealthy and developed nuclear power States but surely not developing ones. Moreover, the conventions hold that the jurisdiction lies in the State where the incident occurs, such that if the incident occurred in the UAE and the transboundary harm reaches Qatar, the proceedings will be heard in UAE courts. This is flagrantly contentious for the State of Qatar given the current diplomatic rift with its neighboring states. Decisions of such enormous magnitude and consequences to both the victims and the environment is therefore left within the province of the national jurisdictional determination of a foreign State. For this, then, seeking indemnification for transboundary harm under international law is currently the most pertinent approach available for Qatar. To be sure, a regional or bilateral pathway is a more favorable route if it is indeed politically feasible to do so. From a normative perspective, there is a serious urgency for the States of the region to put aside political rifts and negotiate a regional civil liability regime for the sake of the potential victims. A regional agreement is also a more realistic route, given the higher probability that damages are suffered in a specifically compact geographical zone. The CSC, for instance, would require Qatar to contribute funds to the supplementary fund in the

49 Manichi News, '2.4 trillion yen in Fukushima crisis compensation costs to be tacked onto power bills', (10 December 2016) <<https://mainichi.jp/english/articles/20161210/p2a/00m/0na/002000c>> accessed 30/11/2020.

event of an incident as far away as (say) Montenegro in the case where Montenegro's first tier compensation funds are exhausted. Qatar would be more benefited by an arrangement such as that between Canada and the U.S. (Canada - U.S. Nuclear Liability Rules) which stipulate that Canadian operators are accountable for damage that is suffered in the U.S. but instigated by a nuclear incident occurring in Canada⁵⁰. Nevertheless, this latter approach would be a difficult negotiation and seemingly unachievable on a political scale, given the current regional instability.

Conclusion

On contemplating the best approach towards seeking appropriate indemnification for transboundary nuclear harms, Qatar might consider acceding to or ratifying one of the civil liability conventions. While there are some prominent advantages in being a party to such conventions (e.g. reciprocal victim compensation, attracting nuclear suppliers and the harmonization of domestic legislations worldwide), none of the current regimes are adequate to meet Qatar's current limited needs, i.e. the trade-offs are not favorable. Firstly, it is manifestly evident that the *raison d'être* of these conventions is to exonerate suppliers and manufacturers of the nuclear industry from liability (the principle of legal channeling), while leaving transboundary harm as no more than a periphery consideration at best. As such, the concept of 'legal channeling' is of high contention within states and even a deal-breaker for some. Moreover, the notion that, within all the regimes, jurisdiction lies in the State territory where the nuclear incident occurs is notably problematic in light of Qatar's ongoing diplomatic collapse with its regional states—such highly consequential issues ought to be heard by a third party body, such as the ICJ. Thirdly, adding funds under a supplementary fund where the incident is vastly remote from Qatar's geography appears to be unreasonable. Regional or bilateral relations are generally more economically realistic, as there is a higher probability of damage being incurred in a compact or small geographical zone. Ergo, the conglomeration of risks is even doubtful given the geographical remoteness of the Member States where distant parties are expected to contribute to a fund, which may be depleted following an accident occurring exceptionally remote from their own national borders. Regional or bilateral relations are ideal, that is, if they were politically feasible, and if not, then seeking indemnification under public international law, whether in the ICJ or elsewhere, should be an adequate, albeit a convoluted and laboriously slow, route. To conclude, seeing that Qatar has no current interests in catering to foreign nuclear supplier demands—as there are no current plans to build a nuclear installation within its territorial jurisdiction, and seeing that the principle of 'legal channeling' of liability may be undesirable and even inimical to its interests, it is recommended to seek indemnification guarantees through other channels, such as bilateral relations with its neighboring nuclear

50 Canada-United States Nuclear Liability Rules (C.R.C., c. 1240).

power States—analogous to the Canada-U.S. Nuclear Liability Rules or the Austrian national legislation which is binding on its neighboring nuclear powers of Czech and Slovak Republic. However, the author is sympathetic to the fact that reaching such regional relations may be a difficult task and therefore multilateral agreements might at first glance appear to be a preferable route, as they are more difficult to rescind where a diplomatic breakdown between a neighboring nuclear power State occurs. However, the need for multilateral agreements subsides once one acknowledges that there is another route for seeking indemnification for transboundary nuclear harm, that is, under the principles of public international law.