*Hakemli Makale*

# STRICT LIABILITY OF STATES FOR DEALING WITH TRANSBOUNDARY NUCLEAR DAMAGES

*(Sınır Ötesi Nükleer Zararlarla Mücadelede Devletin Kusursuz Sorumluluğu)*

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**Abstract**

It is undeniable that nuclear energy may cause very serious transboundary damages. In dealing with this problem, three different liability schemes have been put forward, namely state's strict liability, state responsibility and current regime in which operator is strict liability. Amongst them, operator's strict liability and some elements of state responsibility have been accepted in dealing with nuclear damages and states generally have absented themselves from strict liability discussions. But, after Fukushima, it is now very urgent that state's strict liability issue must be clarified given the fact that the current nuclear liability scheme is very deficient. As a result of deficiencies in current nuclear liability system, there may be some cases of uncompensated transboundary victims. Considering the urgent need of clarification of state's strict liability for transboundary nuclear da-

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mages, this article will try to answer if there is a firm ground for state's strict liability in international law and if so, how this concept could be incorporated into legal system. During the research, transnational environmental law, related cases and International Law Commission's works were used as main sources when analysing the legal status of state's strict liability. It can be briefly concluded that international law is not clear on the state's strict liability, but this ambiguity should not prevent states to create new mechanisms in which both current nuclear liability and state's strict liability elements are included.

**Keywords:** State's Strict Liability, Transboundary Damages, Nuclear Energy, State Responsibility, Strict Liability of Operator

**Öz**

Nükleer enerjinin önemli derecede sınır aşan zararlara yol açabileceği kabul edilmektedir. Bu sorunla mücadelede devletin kusursuz sorumluluğu, devletin kusurlu sorumluluğu ve işletmecinin kusursuz sorumlu olduğu mevcut sorumluluk rejimi olmak üzere üç farklı sorumluluk sistemi ortaya konulmuştur. Bunların içinden ise işletmecinin kusursuz sorumluluğu ile devletin kusurlu sorumluluğunun bazı unsurları nükleer zararlarda sorumluluk konusunda kabul görmüş olsa da devletler devletin kusursuz sorumluluğu tartışmalarına çekince ile yaklaşmışlardır. Ancak Fukuşima sonrası, mevcut sorumluluk sisteminin eksikliği dikkate alınarak, devletin kusursuz sorumluluğu konusunun netleştirilmesi hususu âciliyet kazanmıştır. Zira mevcut sorumluluk sistemindeki eksiklikler dolayısıyla zaman zaman bazı sınır aşan nükleer zarar hallerinde tazmin edilememe durumları oluşabilmektedir. Bu hallerde kusursuz devlet sorumluluğuna olan ihtiyacı dikkate alarak makalede uluslararası hukuk çerçevesinde devletin kusursuz sorumluluğuna yer olup olmadığı ve eğer varsa bu sorumluluğun hukuk sistemine nasıl dâhil edilebileceği analiz edilecektir. Kusursuz devlet sorumluluğunun hukuki durumu analiz edilirken uluslararası çevre hukuku, emsal olaylar ve Uluslararası Hukuk Ko-

misyonu'nun çalışmalarından faydalanılmıştır. Sonuç olarak ise uluslararası hukukun devletin kusursuz sorumluluğu sistemi konusunda net olmadığı görülmektedir ancak bu belirsizlik devletleri mevcut sorumluluk rejimi ile devletin kusursuz sorumluluğu sistemlerini bir arada içeren yeni mekanizmalar oluşturmaktan uzak tutmamalıdır.

**Anahtar Kelimeler:** Devletin Kusursuz Sorumluluğu, Sınır Aşan Zararlar, Nükleer Enerji, Devletin Kusurlu Sorumluluğu, İşletmecinin Kusursuz Sorumluluğu

## 1. Introduction

Nuclear energy, as an ultra-hazardous activity, has been at the centre of the discussions of transboundary damage problem from the beginning of international environmental law. It is widely accepted that nuclear power plant in one country may cause very serious damages in other countries.[1] The core issue is to find the liable person for that significant damage. For dealing with this liability problem, three different liability schemes have been put forward, namely state responsibility, state's strict liability and strict liability of operator.[2] According to the state responsibility concept, state is held responsible if breaches its international obligations, for example if state does not fulfil its notification obligation in nuclear emergency, it will make state responsible.[3] But for the 'state's strict liability', the only condition is the occurring of damage regardless of any breach of international

1 Norbert Pelzer, 'Nuclear Accidents: Models for Reparation' in Jonathan L. Black-Branch and Dieter Fleck (eds),
*Nuclear Non-Proliferation in International Law - Volume III* (T.M.C. Asser Press the Hague 2016) 355.

2 S. M. M. Zeidan, *State Responsibility and Liability for Environmental Damage Caused by Nuclear Accidents* (Tilburg
University, 2012) 505.

3 Fazil Jamal, 'Responsibility and Liability for Transboundary Environmental Harm: A Legal Analysis' (2014) 2(7)
Journal of International Academic Research for Multidisciplinary, 60
<https://www.jiarm.com/Aug2014/paper14232.pdf> accessed 30.05.2020

obligation.[4] In other words, state' strict liability is a type of risk liability in which state will be held liable for merely allowing that kind of ultra-hazardous activity in its territory.[5] The third liability scheme is operator's strict liability in which private person (generally nuclear power plant operator) would be liable according to international liability treaties signed by states.[6]

For dealing with nuclear damages, operator's strict liability system was accepted as a best alternative and has been in force to date. In this liability regime, operator of nuclear power plant is strictly liable for transboundary damages. However, after Chernobyl nuclear disaster which had caused significant transboundary damages, it has been understood that this liability regime is not well-equipped for dealing with such huge calamities.[7] For this, in order to solve the shortcomings of liability regime, state responsibility concept was proposed and accordingly different international environmental law obligations regarding nuclear energy were incorporated into different treaties.[8] For example, early notification of nuclear damage incorporated into Convention of 1986 on Early Notification of a Nuclear Accident.[9] With all these obligations, states accepted to be held liable if they breach their obligations.

While state responsibility elements were added next to operator's strict liability, it is undeniable that most of the nuclear damages were not related to the breach of any international environmental law

4 Zeidan (n 2) 499.

5 Zeidan (n 2) 499.

6 Meher Nigar, 'Revisiting the International Civil Liability Regimes for Transboundary Pollution by Nuclear, Oil and Hazardous Waste' (2018) 26 Sri Lanka J Int'l L 53, 54.

7 Norbert Pelzer, 'Main Features of the Revised International Regime Governing Nuclear Liability – Progress and Standstill' in Nuclear Energy Agency, *International Nuclear Law: History, Evolution and Outlook* (OECD 2010) 365.

8 Gabor Kecskes, 'The Concepts of State Responsibility and Liability in Nuclear Law' (2008) 49 Acta Jur Hng 221, 229.

9 Convention of 1986 on Early Notification of a Nuclear Accident, 18 November 1986, INFCIRC/335 https://www.iaea.org/sites/default/files/infcirc335.pdf, accessed 5.06.2021.

obligation.[10] In other words, even though states fulfilled their obligations, nuclear power plants are still very prone to cause transboundary damages due to its highly risky nature. It, therefore, brought state's strict liability issue to the discussion table, especially after Chernobyl. It was argued that states must be liable and compensate transboundary damages according to state' s strict liability concept even if that state were not party to any nuclear liability treaty or operator's fund became insufficient to compensate all damages.[11] Because, at that time, Soviet Union was not party to any civil liability treaty and even if it were, liability amounts of then treaties would be insufficient for compensation. However, important nuclear states rejected any state' strict liability concept.[12] Rather, current liability regime was confirmed and improved only for some aspects. Within these improvements, as a second tier after operator's fund became insufficient, limited state compensation fund was accepted instead of accepting any unlimited state liability[13]. States explicitly asserted that these state compensation funds, or public funds were not related with state' strict liability, instead, they were merely tools of 'state solidarity'.[14]

All the improvements as to nuclear liability regime and new added elements of state responsibility through different international treaties explicitly proved in Fukushima disaster that even this improved liability regime cannot still cope with such huge transboundary damages[15]. Fortunately, there was not significant transboundary environmental damage in Fukushima, but it is understood that liability amounts for damages only within Japan were not even comparable

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10 Kecskes, (n 8) 227.

11 Tom Vanden Borre, 'Shifts in Governance in Compensation for Nuclear Damage, 20 Years after Chernobyl' in Michael Faure and Albert Verheij (eds), *Shifts in Compensation for Environmental Damage* (Springer Verlag-Wien 2007) 282.

12 Marianna Novotna and Peter Varga, 'International and Supranational Aspects of Nuclear Liability' (2017) 15 Teises Apzvalga L Rev 38, 52.

13 Koray Güven, *Karşılaştırmalı Hukukta Nükleer Zararlardan Doğan Hukuki Sorumluluk* (Yüksek Lisans Tezi, Ankara Üniversitesi Sosyal Bilimler Enstitüsü 2017) 49.

14 Borre (n 11) 295.

15 Güven (n 13) 110-111.

with liability amounts provided in liability treaties.[16] However, as there was not any transboundary environmental damage issue in Fukushima, state' strict liability discussion has not been discussed as much as happened after Chernobyl. Nonetheless, the problem at stake is so serious that anyone can disregard. While any state may compensate their victim citizens, there is not any clarity as to transboundary damages.[17]

Taking all these into consideration, this article will try to answer two questions. First one is to verify if state' strict liability exists by analysing treaties, case law, customary law, and International Law Commission (ILC) Draft Principles. If so, then it will be further discussed what could be the role of state' strict liability in dealing with transboundary nuclear damages problem. Before doing that, current nuclear liability regime and its deficiencies will be assessed in order to demonstrate the urgency of clarification for the state' strict liability. This article will be concluded with saying very briefly that international law is not clear-cut at this issue, and this hesitate states to bring their claims based on state's strict liability, obliging them to content with deficient nuclear liability regime. However, states should keep pursuing as they did after Chernobyl to design a new mechanism which would include both operator's strict liability and state's strict liability elements in it.

## 2. Nuclear Liability Regime

### 2.1. Background

For nuclear energy, states decided to hold nuclear power plant operators liable via concluding international treaties.[18] Then, they

[16] Jeremy Suttenberg, 'Who Pays: The Consequences of State versus Operator Liability within the Context of Transboundary Environmental Nuclear Damage' (2016) 24 NYU Envtl LJ 201, 213.

[17] Suttenberg (n 16) 215.

[18] Agah Kürşat Karauz, 'Nükleer Santral İşletenin Hukuki Sorumluluğu' (2011) 1(1) Nevşehir Barosu Dergisi, 15.

incorporated the terms of treaties into their national laws.[19] The idea of this liability regime can be traced back to late 1950's when nuclear industry was burgeoning.[20] At that time, the need of new liability regime appeared so as to both encourage nuclear industry and ensure adequate compensation in case of any damage.[21] It was explicit that new developing nuclear sector needed special liability regime rather than depending on ordinary tort law based on fault.[22] The need of special liability regime for nuclear had several reasons. First, nuclear damages may appear decades later after an accident and time-limits in tort laws does not allow that much period.[23] Secondly, as nuclear process is too complex, proving any fault of operator according to tort law rules in nuclear accident could be very burdensome for claimants.[24] In addition, the scale of possible nuclear damage is so high that rules of tort law, which could hold liable anyone involved who made a mistake instead of holding solely operator of plant liable as in civil liability system, may discourage any party from getting involved in nuclear process.[25] For all above reasons, new special civil liability regime was established instead of adhering to fault-based tort law.

The first international treaty of nuclear liability regime was the 1960 Paris Convention on Third Party Liability in the Field of Nuclear Energy.[26] With this convention, states adopted the basic principles of

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19 Güven (n 13) 55-62.

20 Nuclear Energy Agency, *Liability and Compensation for Nuclear Damage: An International Overview* (OECD, 1994) 15.

21 Nuclear Energy Agency Secretariat, 'Progress towards a global nuclear liability regime' (2014) 93(1) Nuclear Law Bulletin 9, 9.

22 Pelzer, 'Nuclear Accidents: Models for Reparation' (n 1) 357.

23 Güven (n 13) 134.

24 International Atomic Energy Agency, *The 1997 Vienna Convention on Civil Liability for Nuclear Damage and the 1997 Convention on Supplementary Compensation for Nuclear Damage — Explanatory Texts, International Law Series No. 3* (IAEA 2017) 5.

25 International Atomic Energy Agency (n 24) 5.

26 Convention on Third Party Liability in the Field of Nuclear Energy, July 29, 1960, 956 U.N.T.S. 263, https://www.oecd-nea.org/jcms/pl_31788/paris-convention-full-text accessed 22.03.2021 [hereinafter 1960 Paris

nuclear law. These principles consisted of strict liability of operator but limited in terms of time and amount, legal channelling of all liability claims to operator, insurance or financial security obligation of operator in order to cover its liability amounts and lastly the exclusive jurisdiction of state courts where nuclear incident occurred.[27] In order to increase compensation amount, most of the Paris Convention states adopted the Brussels Convention Supplementary to the Paris Convention in which they required new funds from both installation state and convention states.[28] As the Paris Convention was mainly signed by Western Europe countries, there was also need of more international nuclear civil liability treaty which brought the Vienna Convention on Civil Liability for Nuclear Damage in 1963.[29] This convention adopted nearly similar principles of Paris Convention.

The special nuclear liability regime had helped nuclear industry to thrive until Chernobyl happened. After Chernobyl, it came out that the special liability regime was unsatisfactory.[30] Because, the liability regime was not offering any solution to nuclear damages occurred in the territory of non-signatory parties. For instance, then special nuclear liability regime did nothing as to transboundary nuclear damages as Soviet Union was not party to any nuclear liability conventions.[31] More striking reality was that even if Soviet Union were party to any nuclear liability conventions, liability amounts of operator would be incomparable to actual transboundary damage.[32] In order to make up

Convention]. (Paris Convention was amended in 1964, 1982 and 2004, 2004 protocol is not in force yet)

27 IAEA (n 24) 5.

28 Convention of 31 January 1963 Supplementary to the Paris Convention of 29 July 1960 (Brussels Supplementary Convention), OECD/LEGAL/0053, https://legalinstruments.oecd.org/public/doc/197/197.en.pdf, accessed 22.03.2021

29 Nuclear Energy Agency Secretariat (n 21) 10.

30 Nuclear Energy Agency (n 20) 12.

31 Pelzer, 'Nuclear Accidents: Models for Reparation' (n 1) 390.

32 Ayşe Aslıhan Erbaşı Çuhadar, 'Uluslararası Nükleer Sorumluluk Rejimi Çerçevesinde Sivil Amaçlı Nükleer Santral İşletenin Hukuki Sorumluluğu' (2015) Özel Sayı Cilt 1 İnönü Üniversitesi Hukuk Fakültesi Dergisi, 371.

the shortcomings of nuclear liability system, state's strict liability was offered.[33] But this offer was rejected, and states only agreed on to improve and revise current special nuclear liability system in some aspects.[34] To this end, 'Protocol to Amend the Vienna Convention',[35] 'The 1997 Convention on Supplementary Compensation for Nuclear Damage'[36] and '2004 Protocol to amend the Paris Convention'[37] were adopted.

The revisions of nuclear liability system made very important changes. While the definition of nuclear damage had narrowly defined in former conventions, it was altered to cover also environmental damages and losses in these revised protocols.[38] The extension of damage heads was very important because most of transboundary damages are related to environment in nuclear accidents. The second most notable improvement was related to the territorial scope of liability system which had only been covering the territories of signatory states in the past. However, with the new amendments, damages wherever occurred became be compensable.[39] For example, damages may now be compensated even if damages occurred in a state which is not party to any nuclear liability convention. The last but not least,

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33 IAEA (n 24) 17.

34 Jon M. Van Dyke, 'Liability and Compensation for Harm Caused by Nuclear Activities' (2008) 35(1) DENV. J. INT'L L. & POL'Y 13, 30

35 Protocol to Amend the 1963 Vienna Convention on Civil Liability for Nuclear Damage, 12 September 1997, United Nations, Treaty Series, vol. 1063, I-16197, https://www.iaea.org/sites/default/files/infcirc566.pdf, accessed 22.03.2021.

36 The 1997 Convention on Supplementary Compensation for Nuclear Damage, 22 July 1998 INFCIRC/567, https://www.iaea.org/sites/default/files/infcirc567.pdf, 4.06.2021 accessed

37 Protocol to Amend the Paris Convention on Nuclear Third Party Liability (2004 Protocol to the PC) (Not yet in force) https://www.oecd-nea.org/jcms/pl_20361/2004-protocol-to-amend-the-paris-convention, accessed 4.06.2021

38 *Protocol to Amend the 1963 Vienna Convention on Civil Liability for Nuclear Damage, 12 September 1997,* United Nations, Treaty Series, vol. 1063, I-16197, https://www.iaea.org/sites/default/files/infcirc566.pdf accessed 22.03.2021 (hereafter 1997 Vienna Convention) art.2

39 Vienna Convention art. 1a

with the revision, states became able to introduce unlimited liability for operators for nuclear damages.[40]

When looking at all improvements, it is undeniable that current nuclear liability system is now highly predictable and offers easy access to victims compered to former regime. It cannot be even compared to ordinary tort law procedures in dealing with such huge nuclear damages. Besides, repeated argument of insufficient liability amounts has now been highly increased, and states now commit themselves to provide public funds in case operator's fund becomes insufficient. While these advancements in nuclear liability system are very positive, this special liability regime still has many drawbacks and more importantly, some drawbacks of this liability regime are related with the very nature of regime and thus cannot be solved by any improvements.

### 2.2. The Deficiencies of Nuclear Civil Liability Regime

The most apparent deficiency of current nuclear liability regime is not having enough state participation to nuclear liability conventions.[41] Various nuclear states still abstain from adhering to any nuclear liability convention. This scarce participation keeps other non-nuclear states away from adhering to nuclear liability regime. The improvements as to extension of territorial scope of nuclear liability regime could not solve this less participation problem because according to nuclear liability conventions states still have discretion regarding the application of nuclear liability regime to damages occurred in

[40] Vienna Convention has always allowed to introduce unlimited liability for operators; see: Convention on Third Party
Liability in the Field of Nuclear Energy of 29 July 1960, as amended by the Additional Protocol of 28 January 1964,
by the Protocol of 16 November 1982 and by the Protocol of 12 February 2004, NEA/NLC/DOC (2017)5/FINA art.10.

[41] Louise De La Fayette, 'Towards a New Regime of State Responsibility for Nuclear Activities' (1992) 50 Nuclear Law
Bulletin 7, 11.

non-contracting states.[42] Due to this discretion, a state, where incident occurred, may not compensate damages occurred in other state which does not provide reciprocal rights.

Another very significant deficiency of nuclear liability system is to have limited liability amounts.[43] Apart from a handful countries, which introduced unlimited liability of operator, most countries are applying limited liability.[44] It must be admitted that limited liability of operator has been grounded on several logical explanations. One is the 'congruence principle' which obliges states to adjust liability amount of operator according to current insurance capacity.[45] In other words, liability amounts of operator cannot be changed unless insurance capacity changed, in that, locking operators' liability into insurance sector's capacity. Another reason of setting limited liability amount was to encourage nuclear development at the beginning.[46] While that low limited liability of power plant operator adjustment helped to a great extent the burgeoning nuclear industry, this limited liability now seems very insufficient and inappropriate to deal with such huge possible nuclear damages. Looking at the estimates of possible nuclear damage in any nuclear incident, it is very clearly seen that liability amounts would not be sufficient.[47] Even though it could

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42 Norbert Pelzer, 'Learning the Hard Way: Did the Lessons Taught by the Chernobyl Nuclear Accident Contribute to
Improving Nuclear Law?' in NEA and IAEA, *International Nuclear Law in the Post-Chernobyl Period* (OECD 2006)
103.

43 Güven (n 13) 134.

44 Pelzer, 'Main Features of the Revised International Regime Governing Nuclear Liability – Progress and Standstill' (n7)
367.

45 Pelzer, 'Main Features of the Revised International Regime Governing Nuclear Liability – Progress and Standstill' (n7)
368.

46 Pelzer, 'Main Features of the Revised International Regime Governing Nuclear Liability – Progress and Standstill' (n7)
368.

47 Michael G. Faure and Tom Vanden Borre, 'Compensating Nuclear Damage: A Comparative Economic Analysis of the
U.S. and International Liability Schemes' (2008) 33 William & Mary Environmental Law and Policy Review 219, 267.

be accepted for supporting the developing industry at the outset, these low liability amounts are now nothing but explicit subsidy to nuclear industry. , There is no logical explanation of any special treatment for nuclear industry as it is now highly developed. The argument of International Atomic Energy Agency (IAEA) which asserts that setting unlimited liability might be ruinous for nuclear sector cannot be accepted because otherwise it would become ruinous for victims.[48]

Due to those problems regarding the limited liability of nuclear power plant operators, unlimited liability for operator is now fiercely supported.[49] But some still argue that unlimited liability is false assertation as there would always be some upper limits which could be covered by operator. In addition, insurance would not be available to cover that unlimited liability, thus, making unlimited liability is a deception.[50] However, these should not prevent states from setting unlimited liability for operators. Because, even if there were not any available insurance to cover that unlimited liability, state can insure the operator against a determined fee as a second tier after private insures insured the operator as much as they could.[51]

The other group of deficiencies are more procedural, in other words they are originated from the very nature of the special liability system. First one is the concern of neutrality of national courts.[52] As the one single court where nuclear incident occurred would look at all liability claims, be it internal damages or transboundary damages,

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48 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' (2008) 35(1)
DENV. J.
INT'L L. & POL'Y 85, 91.

49 Nigar (n 6) 75.

50 Pelzer, 'Main Features of the Revised International Regime Governing Nuclear Liability – Progress and Standstill'
(n7) 368.

51 Necip Kağan Kocaoğlu, 'Nükleer Tesis İşletenin Hukuki Sorumluluğu: Karşılaştırmalı ve Uluslararası Özel Hukuk
Analizi' (2010) 68(2) Ankara Barosu Dergisi, 38.

52 Nigar (n 6) 59.

transboundary victims may naturally be concerned with neutrality. This issue is more heightened with the introduction of more competence to national courts, in that, national courts now have very extensive discretion as to defining some damage heads.[53] It cannot be denied that these extensive competencies would cause lack of harmonisation between contracting states.

Having analysed all deficiencies of nuclear liability regime, it is important to admit that even most radical changes within this liability system cannot fix the problem of possible uncompensated transboundary damage on its own. Therefore, state' strict liability must be clarified and then should be used in cases of nuclear incidents.

## 3. Strict Liability of State

### 3.1. What is the Strict Liability of State?

State's strict liability is not well-developed concept. The emergence of this term is very related to transboundary environmental damages resulting from the lawful activities of states. In other words, there may be some situations where transboundary damages occur even though source state has not done anything wrong. Its main difference from state responsibility is, thus, being not related to the lawfulness of the concerning activity. While state responsibility can only be invoked if state breaches its international law obligations, even if there were not any damage, state's strict liability appears only in case of damage.[54] The state's strict liability is therefore more about risk liability, making state liable as it allowed that hazardous activity within its territory.[55] Therefore, as opposed to state responsibility, state cannot evade its strict liability by doing due diligence. In particu-

[53] Anthony Adisianya, 'Different Compensation Systems Under Nuclear Liability Conventions' (2010-2011) 14 CEPLMP Car Review, University of Dundee, 7 <https://uod.app.box.com/s/d22jtwgdytm9jdb8d6i3s2woec0yp9rp> accessed 30.05.2020

[54] Kecskes (n 8) 233.

[55] Zeidan (n 2) 506.

lar, state's strict liability is essential instead of state responsibility system for transboundary nuclear damages. Because unlike other energy sources, nuclear incidents are not strictly related to the breaching of obligations.[56]

The importance of state's strict liability cannot be overstated. In case of nuclear catastrophe which is likely to cause significant transboundary damages, any operator in the world and any public fund determined in nuclear liability conventions would not be able to compensate all damages. At that case, states would most likely compensate damages only within their territory, but it is not as much clear that same state would compensate damages occurred outside.[57] Similarly, in case of nuclear incidents resulting from war or armed conflicts, operator will be exonerated according to nuclear liability regimes, and, thus, states would possibly intervene to compensate their nationals. However, it is again not that much clear as to transboundary damages. Therefore, strict liability of state must be established to make sure that any victim, be it national or not, would not be uncompensated.

### 3.2. The Current Situation of State's Strict Liability in International Law

There is not any international treaty which accepts strict liability of states for transboundary nuclear damages.[58] The only international convention accepts state' strict liability is the 1972 Space Objects Liability Convention which makes the launching state strictly liable for damages caused by its space objects. For example, Cosmos 954 case was handled under this convention in which Soviet Union was held liable for transboundary damages caused by its space objects regardless of its fault.[59] For now, as there is no other treaty which adopts

[56] Kecskes (n 8) 227.
[57] Suttenberg (n 16) 215-217.
[58] Suttenberg (n 16) 223.
[59] Suttenberg (n 16) 237.

strict liability of state, one must look at if customary law and case law provide firm ground for state's strict liability.

In customary law, the most prominent rule regarding state liability is so called 'no harm rule'. According to this rule, risky activities in one state must not have transboundary damages in another state.[60] The first case related to this rule was the famous Trail Smelter case[61] in which Canada was held liable for transboundary damages caused by private smelter in its territory.[62] After this case, no harm rule was further applied by International Court of Justice (ICJ) in Corfu Channel case.[63] The no harm rule then was reiterated in 'Declaration of the United Nations Conference on the Human Environment' (Stockholm Declaration) Principle 21 and 'Rio Declaration on Environment and Development' (Rio Declaration) Principle 2.[64] In 1996, ICJ confirmed that the no harm rule has become customary law in its 'Advisory Opinion on the Legality of the Threat or Use of Nuclear Weapons'.[65]

Even though no harm rule is now accepted as a customary law, no harm rule and its applications in case law were only related to state responsibility, not in any way related to state's strict liability.[66]

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60 Pelzer, 'Main Features of the Revised International Regime Governing Nuclear Liability – Progress and Standstill' (n7) 376.

61 Trail Smelter (U.S. v. Can.), 3 R.I.A.A. 1905 (1938 & 1941), https://legal.un.org/riaa/cases/vol_III/1905-1982.pdf, accessed 22.03.2021.

62 Pelzer, 'Main Features of the Revised International Regime Governing Nuclear Liability – Progress and Standstill' (n7) 376.

63 Suttenberg (n 16) 228-229; Corfu Channel (U.K. v. Alb.), Judgment, 1949 I.C.J. 4, 22 (April 9), https://www.icj-cij.org/public/files/case-related/1/001-19480325-JUD-01-00-EN.pdf, accessed 22.03.2021

64 Suttenberg (n 16) 233.

65 Ved P. Nanda, 'International Environmental Laws Applicable to Nuclear Activities with Particular Focus on Decisions of International Tribunals and International Settlements' (2008) 35(1) DENV. J. INT'L L. & POL'Y 47, 54.

66 Alan E. Boyle, 'Nuclear Energy and International Law: An Environmental Perspective' (1989) 60(1) British Yearbook of International Law 257, 288.

In that, states were held liable according to no harm rule in above mentioned cases because they breached their international law obligations as in the case of Trail Smelter where Canada had not fulfilled its control obligation of the operation of private smelter. As state responsibility and state's strict liability was not explicitly distinguished clearly at that time, those cases are still open to different interpretations.

Beyond above mentioned different interpretations as to the relationship between no harm rule and state's strict liability, there remain more problems as to applicability of strict liability in various situations. Most importantly, it is not certain if state would be liable for acts of private operators or nor is it certain if liability of state would be limited in time or amount[67]. Regarding the acts of private operators, in Trail Smelter case, Canada was held liable for private smelter operator. This can be used as a supporting evidence for state's strict liability as to nuclear damages caused by private nuclear power plant operators. However, as there is no more clear evidence which explicitly holds state strictly liable for private operators acts regardless of fulfilling its obligations, it cannot be surely stated that state would always be liable for private acts.

Another customary law principle which supports, at least theoretically, the state' strict liability could be 'polluter pays' principle. This principle, according to Rio Declaration, ensures that polluter internalises its cost of pollution.[68] To date, this principle has only been used for holding private operators liable for its pollution. However, as a

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67 Dinah L. Shelton and Alex Kiss, 'Strict Liability in International Environmental Law' in Tafsir Malick Ndiaye and Rüdiger Wolfrum (eds), *LAW OF THE SEA, ENVIRONMENTAL LAW AND SETTLEMENT OF DISPUTES: LIBER AMICORUM* J*UDGE THOMAS A. MENSAH* (Brill Academic Publishers, 2007) 1140.

68 The United Nations Conference on Environment and Development, Rio Declaration on Environment and Development 1992, https://www.un.org/en/development/desa/population/migration/generalassembly/docs/globalcompact/A_CONF.151_26_Vol. I_Declaration.pdf, accessed 22.03.2021, principle 16.

natural extension of the polluter pays principle, state should also be liable together with private operator because states are ultimate beneficiary of such activities. Therefore, it would be against the polluter pays principle if the only liable person were the private operator of nuclear power plant.

After having analysed treaties, case law and customary law for determining if there is any support for state's strict liability for transboundary nuclear damages, one should also look at the ILC Draft principles. ILC first worked on state responsibility and defined what would be the consequences for the breach of international law obligations in its 'Draft articles on Responsibility of States for Internationally Wrongful Acts'[69] in 2001. After having worked on state responsibility, the Commission then also published 'Draft principles on the allocation of loss in the case of transboundary harm arising out of hazardous activities'[70] in 2006. The latter draft principles determine who will bear the cost in case transboundary damage occurs even if state has fulfilled its international obligations which is at the heart of the state's strict liability discussions. In the Draft principles of 2006, the principle of strict liability of nuclear operator was reaffirmed. According to principles, only duty of states is to ensure adequate compensation available for victims in case of transboundary damage.[71] While the principles require states to hold private operators strictly liable, strict liability of state is not envisaged even in case the funds of operators become insufficient.

After all, it could be inferred that international law does not provide a firm ground for state's strict liability. While it would be better off for victims if there were clearly defined state's strict liability con-

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69 International Law Commission, Draft articles on Responsibility of States for Internationally Wrongful Acts, with commentaries 2001, https://legal.un.org/ilc/texts/instruments/english/commentaries/9_6_2001.pdf, accessed 3.06.2021

70 International Law Commission (ILC), Draft principles on the allocation of loss in the case of transboundary harm arising out of hazardous activities, with commentaries, Yearbook of the International Law Commission, 2006, vol. II.

71 ILC, Draft Principles (n 70) Part Two, principle 4.

cept, there is unfortunately only too little grounds for it. Therefore, it is still very difficult and unpredictable to bring inter-state claims in case of transboundary damages originated from lawful activities of states by using state's strict liability as a basis. It is, thus, not surprising to see that strict liability of operator will be much more used in cases of transboundary nuclear damages as it provides easy access and predictable results even if compensation is too limited to cover all damages.

### 3.3. What Is the Future of Strict Liability of State?

There is no obstacle before developing state's strict liability for transboundary nuclear damages. As it is explicitly stated, current special nuclear liability regime has never prevented state's strict liability.[72]Nuclear liability conventions clearly laid down that compensation claims according to conventions do not abrogate the public law rights. In addition to that, it cannot also be asserted that international law forbids introducing strict liability of state While international law is not clear-cut on state's strict liability and one may find that there is little evidence supporting it in treaties or in case law or in customary law, it cannot be concluded that international law is fully against state's strict liability.

The thing which needs to be done as soon as possible is to develop a new system which will include both strict liability of operator and strict liability of state elements in it even if there might be some states which could object the introducing of state's strict liability. This was indeed the target of some states after Chernobyl but ILC's then uncompleted working on Draft Principles was used as an excuse to not further develop strict liability of states.[73] However, the situation is now allowing to develop and proceed the strict liability. ILC Draft

[72] Article XVIII of 1997 Vienna Convention
[73] Nuclear Energy Agency (n 20) 99.

principles and other international environmental law principles are now clearer than 1980's.[74]

To sum up the needed reforms in nuclear liability regime, in this ideal system, strict liability of operator would be unlimited, in other words operator of nuclear power plant will no longer receive special treatment. For this, operator will first try to take an insurance from private sector and then for the rest, state will insure its operator against a fee, which can be called 'indemnity fee'.[75] If all assets of the operator are still insufficient to compensate damages, then state will have to compensate all transboundary nuclear damages, be it damages of its nationals or foreigners without any limitation in time or amount. In this new liability regime, all claims will be submitted to an ad hoc international tribunal. This ad hoc tribunal will look at both liability claims against operator and claims against state originated from state's strict liability. Thanks to this international tribunal, neutrality concerns of transboundary victims will also be alleviated.

## 4. Conclusion

Nuclear accidents have showed that damages will not be confined within nation borders. Accordingly, states have been dealing with the problem of how to compensate those transboundary damages and who will bear that liability. In doing so, special nuclear liability regime was first developed in which operator of power plant was held strictly liable. This liability system with its deficiencies was perceived as a best way to deal with nuclear damages. While the benefits of this liability system are undeniable, it was seen that this system could not cope with transboundary nuclear damage problem on its own. Therefore, state's strict liability became an issue to be urgently established. However, the only thing which done was the revising and improving the nuclear liability system in some aspects like increasing the state funds or expansion of damage heads. But with Fukushima, it became so clear that anyone can now disregard the urgent need for the clarifi-

[74] Suttenberg (n 16) 254.
[75] Kocaoğlu (n 51) 6.

cation of state's strict liability. Because it is widely acknowledged that one state will compensate its citizens at the end even if operator does not so, but there is no certainty as to transboundary damages. Seeing that urgency, all attention directed to investigate international law whether it provides clear basis for strict liability of liability.

It is seen that international law is not preventing to develop state's strict liability and there is no obstacle before basing compensation claims on it. But equally, it must also be said that international law does not give clear example as to how state's strict liability would be applied appropriately. There is no treaty or sufficient case law or customary law as to state's strict liability for transboundary nuclear damages. As a result of this unclear situation in international law, strict liability of state has not been preferred instead of current nuclear liability regime to date.

But this unclear situation of international law should not discourage anyone to develop new liability system considering the urgency of transboundary nuclear damage problem. To this end, a system which includes the elements of current nuclear liability regime and state's strict liability would be the best way to compensate transboundary damages. It is clear that this new system will balance and complement the shortcomings of current system. when current liability regime cannot cope with transboundary damages. Accordingly, transboundary nuclear damages will be no longer serious threat for victims. Because it must be understood that unless there is any clarified state's strict liability concept, nuclear energy will remain as a concern for transboundary damages.

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