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A Comparative of Legal Study of International Environmental Liability and Dispute Resolution

-Focus on the China and Korea-

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목 차

본고는 국경 간 대기오염등의 환경분쟁과 관련하여 법적 책임의 문제를 둘러싼 환경법적 배상책임을 다루고자 한다. 이를 위해 먼저 초 국경 대기오염에 관하여 국제법상 어떤 법적 책임과 의무가 존재하는지부터 살펴보고, 초 국경 대기오염 관련 분쟁 및 협력 사례도 분석하여 이를 동아시아 국경 간 환경문제인 중국발 대기오염환경분쟁 문제에 적용 가능한지 알아볼 필요가 있다. 이러한 쟁점을 바탕으로, 본고는 중국이 인접국 간 미세먼지 문제에 대하여 어떠한 국제법적 법적 책임문제가 있는지 보여주고자 한다. 본고는 동아시아 환경 문제의 현안인 중국과 한국 간의 국경 간 대기오염 문제에 대하여 환경법적 책임을 다루고자 한다. 캐나다가 미국에 손해배상을 해준 사례를 통해, 이를 중국발 대기오염 문제에 대하여 적용할 수 있는지를 검토한다. 이러한 쟁점을 바탕으로, 본고는 인접국 간 대기환경문제에 대하여 어떠한 국제 환경법적 책임과 관련된 비교법적 접근이 가능한지를 살펴보고자 하였다. 특히 대기오염책임분쟁에서 중국에 책임을 묻는데 고려한 요소, 내용, 방법 및 절차는 중국발 미세먼지 법적 책임문제를 살펴보는데 시사하는 바가 크다. 우리가 실제로 채택하거나 적용하는 국제 환경법적 대응조치가 무엇이며, 정책적 대안을 살펴보고자 한다. 중국과 한국 간의 환경문제의 해결을 위한 법적, 정책적 시사점이 있는지 살펴보았다. 끝으로 본고는 중국의 국경 간 대기오염에 대해 한국이 취할 수 있는 국제분쟁해결기구

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를 통한 방안과 국제협력체계를 구축하는 정책적 대안을 제시하였다. 끝으로 본고는 중국-한국 간의 국경 간 대기오염에 대해 환경법적 대응조치를 제시하고자 한다.

[주제어] 환경문제, 환경법적 대응, 초국경 대기오염, 대기오염 책임문제, 국제법적 대응

Ⅰ. Introduction

Air pollution ignores political borders. Pollution sourced in one place can lead to illness or death in another.[1] Accordingly, transboundary air pollution is increasingly important in international law. Customary international law norms grew from international legal disputes over transboundary air pollution.[2] In Trail Smelter, a smelter in British Columbia, Canada emitted sulfur dioxide that crossed into the U.S. and damaged nearby Washington State in the mid-1920s.[3]The arbitration took thirteen years, and the Tribunal ultimately found the smelter liable for emitting transboundary air pollution.[4]Customary international law now imposes a duty to prevent transboundary[5]environmental harm.

Transboundary air pollution between China and South Korea starts with desertification in China and southeasterly “yellow dust” storms act as vectors for various kinds of pollutants, including fine particulate matter, nitrogen oxide,[6] These pollutants are carried by wind towards

1) See Henry Fountain, Calculating Air Pollution’s Death Toll, Across State Lines, N.Y. TIMES (Feb. 12, 2020), <https://www.nytimes.com/2020/02/12/climate/air-pollution-health.html>, (last visited January. 3, 2021). (demonstrating that nearly half of the premature deaths caused by air pollution between 2005 and 2018 were from pollutants from sources in other states).

2) Trail Smelter Case (United States v. Canada), 3 R.I.A.A. 1905, 1916, 1964 (Apr. 15, 1935), <https://legal.un.org/riaa/cases/vol_III/1905-1982.pdf>, (last visited January. 3, 2021). (highlighting the importance of preventing the mill from causing future environmental damage to Washington State).

3) See id. at 1917 (noting that the apple growers whose trees had been damaged asked the United States government to seek damages on their behalf).

4) In 1927, the U.S. and Canada referred the transboundary pollution dispute to the International Joint Commission (IJC), which was created by the Boundary Waters Treaty of 1909 ; Treaty Between the United States and Great Britain Relating to the Boundary Waters and Questions Arising Along the Boundary between the United States and Canada, U.S.-U.K., Jan. 11, 1909, 36 Stat. 2448, <https://legacyfiles.ijc.org/tinymce/uploaded/Boundary%20Waters%20Treaty%20of%201909_3.pdf>, (last visited January. 3, 2021).

5) *See* U.N. Conference on the Human Environment, *Declaration of the United Nations Conference on the Human Environment*, U.N. Doc.A/CONF.48/14 (June 16, 1972)).

South Korea sulfur dioxide, aerosols, ozone, and heavy metals. and can cause numerous health problems, including respiratory and eye diseases.[7]While air pollution within China is well understood, attributing causation for this pollution becomes complicated once it reaches South Korea. Studies have estimated as much as 49% of South Korea's air pollution can be attributed to China.[8]

Meanwhile, the National Aeronautics and Space Administration (NASA) led a 2016 international effort which determined that only 15% of South Korea's particulate matter is attributable to South Korean anthropogenic sources while most of the remainder comes from China.[9] Despite its complexity, the China-South Korea transboundary air pollution problem is not unsolvable.

Ⅱ. Liability in international envirommental legal norms

This chapter does not deal exhaustively with either state responsibility, state liability or civil liability, nor does it provide a comprehensive account of their checkered history or status in customary international law. Jurists have produced staggering amounts of research on those topics and the ILC struggled with them for decades.[10] Grey areas subsist but the true purpose

6) See S. Kor. Meteorological Admin., Korea Meteorological Administration, 21, (2018), <http://www.kma.go.kr/download_01/2018english.pdf>, (last visited January. 3, 2021). (increasing desertification in northern China creates "yellow dust," or dust and fine sand particles which are carried by the wind, and is affecting South Korea more frequently and at higher concentrations than ever before); see also Laura S. Henry et al., "From Smelter Fumes to Silk Road Winds: Exploring Responses to Transboundary Air Pollution over South Korea", *11 WASH. U. GLOBAL STUD. L. REV. 565,* (2012), p. 567. <https://openscholarship.wustl.edu/cgi/viewcontent.cgi?article=1413&context=law_globalstudies>, (last visited January. 3, 2021).

7) S. Kor. Meteorological Admin., Korea Meteorological Administration, 21, (2018), p. 25, <http://www.kma.go.kr/download_01/2018english.pdf>, (last visited January. 3, 2021).

8) Henry, *supra* note 12, p. 568.

9) Matthew A. Shapiro & Toby Bolsen, "Transboundary Air Pollution in South Korea: An Analysis of Media Frames and Public Attitudes and Behavior", *E. ASIAN COMM UNITY REV. 107,* (2018), p. 110.

10) Sandrine Maljean-Dubois, "International Litigation and State Liability for Environmental Damages: Recent Evolutions

of this thesis lies elsewhere: to study precisely how private international law and its regulatory function fit in the current landscape of international environmental law. I deal with fundamental distinctions and then turn to civil liability. It also contextualizes the ILC's choice to focus on prompt and adequate compensation as the guiding principle of international liability regimes. Liability is accurately described as the "Yeti of international environmental law— pursued for years, sometimes spotted in rough outlines, but remarkably elusive in practice."[11]

As an enforcement mechanism, its place in the arsenal of responses to noncompliance in international law leaves no doubt. As a result, "few multilateral environmental agreements … can be negotiated today without running across the liability issue in one way or another." Yet the idea that polluters should be held liable for the harm that they cause (which generally carries an obligation to compensate victims of the harm) is fraught with difficulties in all its basic components: the identity of the polluter and the role of the state, the standard of care, the nature and threshold of the harm and the very assumption that the prospect of liability will lead to deterrence. International lawyers approached the problem first by distinguishing state liability from state responsibility.

The distinction became ubiquitous under the impulse of the ILC, which separated the two topics early on. This approach led to much controversy,[12] not the least because the distinction is unintelligible in some languages, including French, which uses *responsabilité* to describe both notions.[13]

State responsibility entails the violation of an obligation under international law primary norms typically found in treaties, customary international law or general principles of

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and Perspectives" in Jiunn Rong Yeh, ed, *Climate Change Liability and Beyond* (Taipei: National Taiwan University Press, 2017) p. 27.

11) See Robert V Percival, "Liability for Environmental Harm and Emerging Global Environmental Law" (2010) *25:1 Md J Intl L* 37 p. 38.

12) See NLJT Horbach, "The Confusion About State Responsibility and International Liability" (1991) *4:1 Leiden J Intl L 47*; Alan E Boyle, "State Responsibility and International Liability for Injurious Consequences of Acts Not Prohibited by International Law: A Necessary Distinction?" (1990) p.39.

13) See Gerhard Hafner & Isabelle Buffart, "The Work of the International Law Commission: From Liability to Damage Prevention" in Kerbrat & Maljean-Dubois, pp. 234–35.

international law. State liability entails the compensation of damage in the absence of a wrongful act.[14] The latter is concerned with the transboundary risk associated with legitimate activities occurring in a state's territory (including activities carried out by private actors). Transboundary pollution is a prime example because it occurs as a result of activities which may not be unlawful or inherently reprehensible (energy production, for instance). State responsibility/liability has no direct equivalent in domestic liability law, but the two can easily capture the same kind of conduct. The so-called regulatory liability of the state in tort, for instance, targets the failure of public authorities to ensure compliance with environmental law. Trial and appellate courts have grappled with claims brought by victims against polluters and the public authorities who had been negligent in overseeing or investigating the operations.

1. Civil liability in international envirommental legal norms

Treaty-based civil liability regimes target private parties within the source state. They have three main functions. First, they ensure non-discrimination and equal access to foreign victims in the source state. Second, they address issues of jurisdiction, choice of law and enforcement of foreign judgments (their most relevant function for our purposes). Third, they harmonize substantive liability law on issues such as the standard of fault, damages, insurance and defences. Because of their concern with harmonization, civil liability treaties are not typically described as international environmental law. They are uniform tort law in disguise, "amphibious" international instruments operating through domestic laws and institutions.

They may nonetheless impose direct obligations on states with respect to the operations of private actors under their jurisdiction. they may provide for the state's alternative, subsidiary or supplementary liability, for example when compensation exceeds the financial capacity of the liable party. Polluters do not always have deep pockets: state liability becomes useful when a small private operator causes catastrophic damage while drilling off the coast or running a nuclear facility.[15] Finally, states may themselves act as operators, in which case

14) See Michel Montjoie, "The Concept of Liability in the Absence of an Internationally Wrongful Act" in Crawford, Pellet & Olleson, p.503.

civil liability treaties can apply to them.

The number of civil liability treaties increased from the 1980s to the 2000s through new standalone documents and declarations of interest for developing a liability counterpart to existing regimes. More than a dozen treaties currently exist. They are typically confined to a sector or activity although some have a broader scope. Four treaties address civil liability for marine oil pollution.

The 1977 Seabed Mineral Resources Convention deals with oil pollution resulting from the exploration and exploitation of certain seabed mineral resources. The 1992 CLC and the 1992 Fund Convention deal with pollution resulting from oil tankers. The 2001 Bunker Convention deals with pollution resulting from oil used to fuel ships.[16] An intricate web of rules deals with civil liability for nuclear damage: the 1960 Paris Convention, the 1963 Brussels Supplementary Convention, the 1963 Vienna Convention, the 1988 Vienna Joint Protocol and the 1997 CSC. In addition, the 1962 Nuclear Ships Convention deals with the liability of (nonexistent) civil nuclear ships operators[17] and the 1971 Nuclear Material Convention deals with damage caused by a nuclear incident[18]

Regardless of their practical impact, the very existence of civil liability treaties is notable. Through them, states acknowledge that liability is essential to the enforcement of international environmental law, and that victims of transboundary pollution deserve some kind of compensation even though it may not come from states themselves. The language used in many treaties also signals some agreement over the standard of compensation for environmental damage—prompt and adequate. Civil liability treaties are therefore worth studying both as

15) See Alan Boyle et al., "International Law and the Liability for Catastrophic Environmental Damage" *105 Am Soc'y Intl L Proc 423* (2011), p. 429.

16) See Convention on Civil Liability for Bunker Oil Pollution Damage, 23 March 2001, Can TS 2010 No 3, 40:6 ILM 1493.

17) See Convention on the Liability of the Operators of Nuclear Ships, *25 May 1962, 57:1 AJIL 268.*

18) See Convention Related to Civil Liability in the Field of Maritime Carriage of Nuclear Material, 17 December 1971, 974 UNTS 255, UKTS (Misc) 1972 No 39, 11:2 ILM 277.

evidence of the path taken in international environmental law, and as an illustration of the function of civil liability in the resolution of transboundary environmental disputes.

2. Assumptions of civil liability regimes

Civil liability treaties rest on two fundamental assumptions: liability may be imposed on private parties rather than the states, and ex post liability is not entirely superfluous when compared to ex ante regulation of transboundary pollution. If these two assumptions are correct —and I believe they are—we can then debate whether existing treaties succeed in conveying the benefits of an approach based on civil liability, or whether—as I propose—we need a new vehicle going forward. Civil liability regimes for domestic or transboundary pollution are typically justified by four rationales. There may be others, but these are the most common. The first three are persuasive but should be carefully nuanced. The fourth one is plausible, but more often asserted than truly demonstrated.

First, civil liability directly assists victims of pollution whether or not public authorities choose to act against polluters. This rationale does not exclude the state as plaintiff but assumes that it will not always act as such.[19] This is particularly true for transboundary pollution. Slaughter and Burke-White are right when they point out that "arresting criminals or terrorists, securing nuclear materials, and preventing pollution are within the traditional province of domestic law. The result is that the external security of many states depends on the ability of national governments to maintain internal security sufficient to establish and enforce national law."

Paradoxically, however, those same national governments may not act as vigorously when foreign interests are at stake. As Wai explains, "… there are often severe practical impediments to effective extraterritorial regulation by national regulators. Local regulators may not pursue the case because of industry capture, inefficiency, shortage of resources, or restrictive

19) See Jaye Ellis, "Extraterritorial Exercise of Jurisdiction for Environmental Protection: Addressing Fairness Concerns" (2012) *25:2 Leiden J Intl L 397.*

ideological conditions." Similarly, Banda points out that "picking a fight with a foreign government is costly, and localized injuries to human health and the environment will often be dwarfed by the perceived need for bilateral cooperation on other issues, such as trade, defense, or border control." In the end, few governments will be willing to aggressively and unilaterally defend the environment beyond borders.

Citizen suits under environmental statutes reflect the idea that civil liability can bypass government inaction.[20] Those provisions allow individuals to enforce environmental laws in the public interest.[21] When the EPA did not enforce its administrative orders against a Canadian company in the Pakootas case, members of the Confederated Tribes of the Colville Reservation in the state of Washington filed a citizen suit and asked for injunctive relief, penalties and recovery under CERCLA. They effectively did what they considered the EPA should have done. This is an important function of civil liability, even though the informal coordination of private actors through litigation may appear less plausible or desirable than the action of politically accountable public authorities with a consistent agenda (that is, assuming public authorities do have a consistent agenda and are willing to take the legal, financial and political steps to implement it).

Second, civil liability reduces the complexity of environmental disputes. They de-escalate them to the neighbourhood level and avoid issues of state responsibility or liability. As mentioned in the introduction, the dynamics of transboundary pollution suggest a conflict between private parties. The Canadian government did not initially view the Trail Smelter dispute as having an interstate character. A closer look at its history shows "that the actors most directly affected were not sovereign states but farmers, employees, businesspeople—in other words, members of the populations within the transboundary regions affected."

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20) U.S. Citizen suits under environmental statutes, see generally Kihan Lee, "A Comparative Study of the Citizen Participation in Environmental Enforcement", 17 *Dankook University Law Review*, 517-551, (2016).

21) See generally Karl S Coplan, *"Citizen Enforcement" in LeRoy C Paddock, Robert L Glicksman & Nicholas S Bryner,* eds, Elgar Encyclopedia of Environmental Law, vol 2: Decision Making in Environmental Law (Cheltenham: Edward Elgar, 2016) p. 416.

If it were to happen today, Trail Smelter could well unfold in civil courts rather than through interstate arbitration, as it indeed did in Pakootas. Many would agree that civil litigation is a quicker, cheaper and more and efficient way of settling environmental disputes than lengthy and politically charged interstate dispute resolution mechanisms. But this proposition should not be overstated. Leaving states out of the equation streamlines the process when it involves a simple transboundary nuisance that affects the legally protected interests of private actors in one neighbouring state.

The argument weakens, however, as the issue becomes more complex or involves actors in more than two states. Civil litigation may then become as lengthy as interstate proceedings, with protracted proceedings, complex jurisdictional and evidentiary issues and, ultimately, enforcement difficulties abroad. The Amoco Cadiz oil spill off the French coast in 1978, for instance, led to fourteen years of civil litigation.[22] The length of this saga matches the thirteen years of litigation in Trail Smelter and exceeds the seven years of proceedings before the parties settled in Aerial Spraying. It is also a familiar concept in international environmental law. Circumstances may require that an insurer or an industry fund compensate the victims instead of the polluters themselves. Nonetheless, civil liability regimes internalize at least partly the costs of pollution and distribute the risk associated with activities susceptible of causing environmental damage.[23]

Fourth, civil liability has a systemic effect on environmental protection akin to regulation itself. While I readily subscribe to the first three rationales for civil liability, the fourth one is more controversial. Little empirical evidence on the systemic implications of civil liability exists to either support or debunk the argument. This leaves us with intellectual postures rooted in so many assumptions regarding the behaviour of polluters and the role of the market that they become almost impossible to disentangle from their broader theoretical framework. One would celebrate the prospect of regulation through tort law or suggest that the threat of litigation provides an incentive for polluters to adjust their behaviour.

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22) See Re Oil Spill by the Amoco Cadiz Off the Coast of France on March 16, 1978, 954 F (2d) 1279, 1992 US App Lexis 833 (7th Cir 1992), rehearing denied, 1992 US App Lexis 2217 (7th Cir 1992).

23) See generally Kihan Lee, "Legislation on Environmental Liability in the U.S.A." *Korean Environmental Law Review,* 217-251, (1993).

Another would reply that this behaviour is always dictated by financial considerations, such that only the credible threat of crippling liability will alter the equation. Because financial considerations include reputation, image and the like, economic actors may align their conduct with socially beneficial ideals such as environmental protection, but that is purely coincidental. They will refrain from polluting only because they deem it financially beneficial to obey the rules rather than to disregard them, not because of the inherent deterrent effect of previous condemnations and the threat of future liability.

Yet another would point to the lack of uniformity in the adjudication of private environmental disputes and the potential for discord among neighbouring states to denounce civil liability as a mechanism to protect the environment. I cannot suggest that deterrence and better environmental protection inevitably flow from imposing liability on polluters. It is true that we often feel the "behavioural effects of tort law" on corporate actors who consciously assess their litigation exposure around the world. But as Boyle explains, "liability, and liability treaties, are not a panacea …, and sceptics rightly question whether they have had much impact on industry or contribute to improving standards. … In any event the principal purpose of liability is to secure redress for victims, not necessarily to influence the behaviour of defendants."

From this limited but important perspective, the effectiveness of civil liability varies depending on the circumstances. Legal concepts such as standing, harm and causation do not fare well in relation to complex ecological problems involving diffuse sources of pollution, unidentifiable victims and long-term consequences. Biosafety, climate change and toxic chemicals come to mind here. The EU legislature was surprisingly candid about this in its Environmental Liability Directive, noting in the preamble that "liability is … not a suitable instrument for dealing with pollution of a widespread, diffuse character, where it is impossible to link the negative environmental effects with acts or failure to act of certain individual actors."[24] The sheer complexity of litigating such issues may create a perception of injustice

24) EC, Directive 2004/35/EC of the European Parliament and of the Council of 21 April 2004 on environmental liability with regard to the prevention and remedying of environmental damage, [2004] OJ, L 143/56, Preamble,

in the eyes of the victims, as a result of what Weaver and Kysar describe as judicial nihilism in the face of catastrophic harm—the fundamental mistake of "refusing responsibility over the extraordinary and the indeterminate" using procedural and jurisdictional grounds.[25)]

At the opposite end of the spectrum, simple forms of pollution such as the Trail Smelter dispute, or isolated catastrophes such as the Deepwater Horizon blowout, are more amenable to civil liability claims. Their consequences extend to large, but identifiable environments and groups of people. They can be traced back to a complex, but again identifiable chain of events. To be sure, procedural hurdles and financial constraints may delay the judicial process immensely. But claims of this kind do not question the relevance of civil liability as a fundamental legal institution. They strain the system, but they do not break it.

Civil liability teaches significant lessons for environmental law despite its inherent limitations. Catastrophes monopolize public attention for a time. They cause national governments to pay attention to the transboundary consequences of the activities that they allow on their territory. Through civil liability, private actors can exert additional pressure to set legal reforms in motion. Courthouses become a beacon for them to assert their rights, maintain an issue on the political agenda, promote good governance and work towards environmental justice. Liability does not replace other forms of regulation but it acts as an important fail-safe and a forum for the disempowered to be heard, provided they have the means to go to court (which, of course, is not always a given).

For instance, a number of victims brought private claims after the nuclear catastrophes in Chernobyl and Fukushima[26)] even though no state made a claim against the Soviet Union

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p13.

25) R. Henry Weaver & Douglas A Kyser, "Courting Disaster: Climate Change and the Adjudication of Catastrophe" *93:1 Notre Dame L Rev 295,* (2017), p. 354, drawing from the work of Linda Ross Meyer, *"Catastrophe: Plowing Up the Ground of Reason" in Austin Sarat, Lawrence Douglas & Martha Merrill Umphrey,* eds, Law and Catastrophe (Stanford: Stanford University Press, 2007) p.19.

26) See eg Cooper v Tokyo Electric Power Company, 860 F (3d) 1193, 2017 US App Lexis 11075 (9th Cir 2017). See generally Eric A Feldman, "Compensating the Victims of Japan's 3-11 Fukushima Disaster" *16:2 Asian Pac L & Pol'y J 127,* (2015); Eric A Feldman, "Fukushima: Catastrophe, Compensation and Justice in Japan" *62:2*

or Japan. The systemic implications of tort law are a vast field of study, but the picture is sufficiently clear for our purposes. Liability regimes for transboundary pollution can legitimately focus on private parties, and ex post liability is not entirely superfluous when compared to ex ante regulation of transboundary pollution. Convincing justifications and copious lawmaking aside, however, civil liability treaties rarely achieve their purpose because many of them are simply not in force.

Ⅲ. Comparative approach of International environmental liability and dispute resolution

1. Scientific cooperation coupled with dispute resolution

Scientific cooperation with binding dispute resolution is a sound legal approach to transboundary air pollution because effective domestic legal avenues in China and South Korea are currently unavailable. Theoretically, Korean domestic law provides a remedy for Koreans who have been harmed by transboundary air pollution. Under Article 750 of the Korean Civil Code, Koreans can file tort claims against individuals or corporations for damages from air pollution if they can prove causation.[27)]

This remedial process is very similar to the approach taken by the Trail Smelter Tribunal.[28)] However, unlike the Trail Smelter Tribunal, Korean courts do not yet have sufficient scientific data to find that a certain source of air pollution caused specific damage domestically. In 2010, the Seoul Central District Court held the plaintiffs who sued the city and several automobile manufacturers under Article 750 inadequately proved causation.[29)]In its

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DePaul L Rev 335, (2013).

27) See Minbeob [Civil Act], Act. No. 471, Feb. 22, 1958, art. 750 (S. Kor.) (Definition of Torts).

28) See Trail Smelter Case (United States v. Canada), 3 R.I.A.A. 1948, 1960 (1941), <https://legal.un.org/riaa/cases/vol_III/1905-1982.pdf>, (last visited January. 3, 2021).

29) Seoul Central District Court [Dist. Ct.], 2007Ga-Hap16309, Feb. 3, 2010 (S. Kor.), <http://www.law.go.kr/precSc.do?tabMenuId=tab67&section=&eventGubun=060101&query=16309#licPrec192339> (last visited January. 3,

determination, the District Court accepted the car manufacturers' argument that the plaintiffs failed to demonstrate that car emissions were the only cause of the plaintiffs' asthma, without taking into account other contributing factors to pollution in Seoul, like pollution from China.[30] Accordingly, the District Court concluded the plaintiffs could not prove causation and were precluded from seeking damages under Article 750.[31] Due to the complexity of the pollution, demonstrating a causal link between any one source of pollution, domestic or international, might be impossible.

Therefore, a successful air pollution tort claim under Article 750 is unlikely. Another obstacle that plaintiffs may run into is reciprocity. Because both Korea and China require reciprocity before[32]plaintiffs will have difficulty finding reciprocal justice for environmental claims recognizing foreign judgments, in either country.[33] Reciprocity usually requires the plaintiff's country to have previously upheld a defendant's[34]No bilateral enforceability mechanism between China and South Korea country's domestic judgments. currently exists, so establishing reciprocity is unlikely.[35] Even if a Korean plaintiff obtained a domestic tort

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2021); see also Supreme Court, 2011Da7437, Sept. 4, 2014 (S. Kor.), <http://library.scourt.go.kr/SCLIB_data/decision/2011Da7437.htm>, (last visited January. 3, 2021).

30) Seoul Central District Court [Dist. Ct.], 2007Ga-Hap16309, Feb. 3, 2010 (S. Kor.); Henry, supra note 12, at 606; see also, Sinseob Kang et al., ictory for local automakers in vehicle emissions lawsuit, SHIN&KIM (2010), <http://www.shinkim.com/newsletter/201003/eng_214.html>, (last visited January. 3, 2021).

31) Seoul Central District Court [Dist. Ct.], 2007Ga-Hap16309, Feb. 3, 2010 (1, 66) (S. Kor.).

32) See Henry, supra note 12, at 60 (requiring reciprocity discourages foreign plaintiffs from bringing suit). <https://openscholarship.wustl.edu/cgi/viewcontent.cgi?article=1413&context=law_globalstudies>, (last visited January. 3, 2021).

33) Zhonghua Renmin Gongheguo Minshi Susong Fa [Civil Procedure Law] (promulgated by the Standing Comm. Nat'l People's Cong., March 8, 1982, effective Oct. 1, 1982), art. 282 (China) (providing that a Chinese court may refuse to execute a judgment when doing so would contradict Chinese law or violate state sovereignty, security, or public interest); Minsa sosong beob [Civil Procedure Act], Act No. 217, Feb. 22, 1958, amended by Act No. 14193, Mar. 29, 2016, art. 217, P 1 (S. Kor.) (requiring recognition of the rendering court, proper service of process, consistency with Korean law, and reciprocity for the judgment of a foreign court to be executed by a Korean court).

34) See Hilton v. Guyot, 159 U.S. 113, 163-64, 210 (1895) (explaining a lack of reciprocity is a "distinct and independent ground" to not grant "comity," or "the recognition which one nation allows within its territory to the legislative, executive or judicial acts or another nation."); see also Antonio F. Perez, "The International Recognition of Judgments: The Debate Between Private and Public Law Solutions", *19 BERKELEY J. INT'L L. 44,* (2001), pp. 58-59.

35) Henry et al., supra note 12, at 607 (noting Korea and China's preference for diplomatic preference to address

judgment against a Chinese polluter, a Chinese court would need to determine if that judgment is upholdable under Chinese law.[36] A viable, long-term solution might involve China and South Korea replicating the success of Trail Smelter and the United States' and Canada's bilateral enforceability mechanism agreement.[37]

Korean environmental organizations could begin lobbying their government to start discussions with Beijing about negotiating a bilateral agreement with an enforcement mechanism (i.e., the Tribunal to the Convention of Ottawa). Because in both the 2010 Korean motor vehicle emissions case and Trail Smelter causation hinged on conclusive scientific evidence, scientific monitoring and data collection are clearly key to transboundary air pollution litigation.[38]Ministerial talks are necessary for international relations; however, a bilateral air quality governance mechanism supported by scientific cooperation coupled with a legally binding dispute resolution mechanism that reflects the principles of Trail[39]Smelter will likely best serve both nations in the long term.

2. Environmental legal response from East Asia

This commitment has been expressed in unambiguous terms at the official level and has been pursued, on the whole, with remarkable success. As a result of its externally-oriented

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transboundary pollution issues and avoidance of utilizing each other's judicial systems because of the strict reciprocity requirements).

36) Zhonghua Renmin Gongheguo Minshi Susong Fa [Civil Procedure Law] (promulgated by the Standing Comm. Nat'l People's Cong., March 8, 1982, effective Oct. 1, 1982), art. 282 (China).

37) The Trail Smelter Tribunal was successful because both parties consented to the Convention of Ottawa and the Tribunal's ultimate findings and the U.S. was able to present the Tribunal with enough scientific evidence to conclusively prove causation. See Trail Smelter (United States v. Canada), 3 R.I.A.A. 1905, 1923-24 (Ottawa Con. 1941) (utilizing meteorological data on air currents to determine concentrations of Sulphur dioxide emitted from the smelter); Convention for Damages Resulting from Operation of Smelter at Trail, British Columbia, U.K.-U.S., art. 12, Apr. 15, 1935, T.S. No. 893.

38) Seoul Central District Court [Dist. Ct.], 2007Ga-Hap16309, Feb. 3, 2010, 43-44 (S. Kor.), <http://www.law.go.kr/%ED%8C%90%EB%A1%80/(2007%EA%B0%80%ED%95%A916309>, (last visited January. 3, 2021); Trail Smelter, 3 R.I.A.A. at 1923-24 (relying on scientific data and monitoring of Sulphur dioxide emissions from the smelter in order to determine causation and damages).

39) See Chung Min-Jung, "International Law-Related Resolutions of the 20th National Assembly with a Focus on Territorial Sovereignty and International Environmental Law", *6 S. KOR. Y.B. INT'L L. 313,* (2018), p. 317.

economic strategies, the region (with some exceptions) has been able to undergo industrialization at a pace unseen elsewhere and in many instances has attained living standards comparable with those prevailing in leading developed countries.[40] The almost single-minded quest for material transformation, however, has led to imbalances which are not only undesirable in the short-term but may also prove detrimental to smooth long-term economic progress. Wide disparities in income and wealth, for example, are common in East Asia and policy-making styles are oriented toward the authoritarian end of the spectrum.[41] This detracts from social cohesion and under mines policy learning.[42]

Equally note worthy is the worrisome scale of environmental degradation,[43] which has potentially serious adverse consequences, including, paradoxically, serious economic damage. This side of the globalization equation has recently been accorded some long over due attention, highlighting the need for a more balanced policy agenda in the region. As matters stand, efforts to "humanize" globalization in Asia have not yet yielded concrete results.[44] These

40) See generally The World Bank, The East Asian Miracle: Economic Growth And Public Policy (Oxford University Press, 1993). Four East Asian countries—Japan, Hong Kong, Singapore, and Korea have arisen from the poverty of post-war years to figure in the top 30 of 162 countries listed on the UNDP Human Development Index. Malaysia, Thailand and the Philippines are ranked in the top 70. U.N. Development Programme, Human Development Report 2001: Making New Technologies Work For Human Development 141-42 (2001).

41) See generally Daniel A. Bell Et Al., Towards Illiberal Democracy In Pacific Asia (1995). See Also Christopher Lingle, Singapore'S Authoritarian Capitalism: Asian Values, Free Market Illusions, And Political Dependency (1996).

42) See generally Kihan Lee, "Korean Environmental Policies and Environmental Cooperation issues in northeast asia", 2003 *Justice*, Bubjo, (2003). pp. 215-244.

43) See generally U.N. Economic and Social Commission for Asia and the Pacific [hereinafter ESCAP], State of the Environment in Asia and the Pacific 2000 (2000), available at <http://www.unescap.org/enrd/environ ent/activities/soe.htm> (last visited January. 3, 2021).

44) Not withstanding many declarations made by Asian governments at various international and regional conferences, the position of women is a case in point. For example, although the 1994 Jakarta Declaration for the Advancement of Women in Asia and the Pacific, adopted by the Second Asian and Pacific Ministerial Conference on Women in Development, "emphasiz[es] the importance of the empowerment of women as a cornerstone of sustainable development and the strategic role of women as agents and beneficiaries of development and in the alleviation of poverty," actual implementation of national plans for women's involvement in environmental decision making, thus far, has been rather slight. Jakarta Declaration ond Plan of Action for the Advancement of Women in Asia and the Pacific, June 7-14, 1994, U.N. Doc. E/CN.6/1995/5/Add.1 (1995), available at <http://www.un.org/documents/ecosoc/cn6/1995/ecn61995-5add1.htm> (last visited January. 3, 2021). See also Women 2000: Gender Equality, Development and Peace for the Twenty First Century: Note by the Secretary-General, U.N. GAOR, 23rd Sess., Annex, U.N. Doc. A/S-23/8 (2000).

efforts continue to focus primarily on integrating individual countries in to the world trade system. Attention, however, has begun to shift towards capacity-building as a mechanism to address concerns about financial risks and poverty, and there have been some attempts to address, in practical terms, the positive role of civil society in environmental decision-making.[45)]

Ⅳ. Conclusion

The prospect of a broader international liability regime for transboundary pollutionis remote. States show little interest in going beyond their aspirational statements. Yet we continue to discuss liability, "because it cuts to the core question of whether international environmental law should involve only governmental obligations to monitor and to prevent ecological damage, or whether it should broaden to provide a viable remedy to citizens when ecological damage does occur." If the latter is correct, and in the absence of successful treaties, domestic law can offer an alternative mechanism to implement liability standards in relation to transboundary pollution. But first, we must identify what international environmental law expects from states in this area.

The answer, in my view, lies in the duty to ensure prompt and adequate compensation. In this paper, I pointed the direction in which our thinking should go as far as victims' right to compensation is concerned. I isolated the notion of prompt and adequate compensation as an overarching and emerging principle of international environmental law. I argued that states have a duty to ensure its availability, not necessarily by assuming liability themselves but by laying out the necessary conditions for civil proceedings. Explained how private international law could, under certain conditions, help ensure prompt and adequate compensation in a way that we do not fully understand yet. I will now look at the details

45) See, e.g., ESCAP, State of the Environment, supra note 69, at ch. 14 (providing an account of the increased activity of non-governmental organizations (NGOs) in the region and the improvement of linkages between these organizations and governmental institutions—including concrete examples of the institutionalization of NGO-government partnerships).

of this process.

This paper shows that state responsibility to increased treaty making in the area of civil liability has not been entirely successful. But it has provided the ILC with enough precedents to settle on a promising way forward. Instruments such as the ILC Principles on the Allocation of Loss and the UNEP Guidelines on Liability have helped reach a point where “the web of responsibility for environmental harm seems today less inextricable than it did before.” I refer primarily to the ILC Principles on the Allocation of Loss to explain what the duty to ensure prompt and adequate compensation entails in private international law, and how Canadian law responds to its requirements.

I want to make one last general comment before moving on. The footnotes in this first chapter highlight a critical disconnect between how vigorously we discuss liability for transboundary pollution, and how rarely the victims of transboundary pollution sue polluters and obtain a judgment on the merits. There is also a disconnect in how enthusiastically we promise deterrence in the wake of private litigation and how little empirical evidence exists to support such a broad claim. This does not bode well for legal research in this area, which already tends to feed on itself rather than on actual cases. We must pay close attention to those disconnects: to be mindful of the law’s fundamental struggle to grasp complex ecological problems, to question how neutral or blind private international law really is, to identify the real obstacles to litigation, and not to take for granted that their removal will inevitably lead to a brave new world of enforcement by like-minded individuals who have converging views on how to protect the environment through domestic courts. The difficulties and controversies explored in this thesis have inhibited the full potential of private law to address transboundary pollution, but other socio-legal phenomena are also at play.

References

1. Oriental literature

Chung Min-Jung, “International Law-Related Resolutions of the 20th National Assembly with a Focus on Territorial Sovereignty and International Environmental Law”, *6 S. KOR. Y.B. INT’L L. 313,* (2018), p. 317.

Kihan Lee, “Legislation on Environmental Liability in the U.S.A.” *Korean Environmental Law Review,* (1993), pp. 217-251.

_____, “The U.S Comprehensive Environmental Response, Compensation and Liability Act”, *Korean Environmental Law Review,* (1993). pp. 317-351.

_____, “Korean Environmental Policies and Environmental Cooperation issues in northeast asia”, *2003 Justice*, *Bubjo,* (2003). pp. 215-244.

_____, “A Comparative Study of the Citizen Participation in Environmental Enforcement”, *17 Dankook University Law Review*, (2009), pp. 517-551.

2. Western literature

Alan E Boyle, “State Responsibility and International Liability for Injurious Consequences of Acts Not Prohibited by International Law: A Necessary Distinction?” (1990) p. 39.

Alan E Boyle et al., “International Law and the Liability for Catastrophic Environmental Damage” *105 Am Soc’y Intl L Proc 423,* (2011), pp. 423-438.

Antonio F. Perez, “The International Recognition of Judgments: The Debate Between Private and Public Law Solutions”, *19 BERKELEY J. INT’L L. 44,* (2001), pp. 44-89.

Convention on Civil Liability for Bunker Oil Pollution Damage, 23 March 2001, Can TS 2010 No 3, 40:6 ILM 1493.

Convention on the Liability of the Operators of Nuclear Ships, 25 May 1962, *57:1 AJIL 268. pp*. 268-278.

Convention Related to Civil Liability in the Field of Maritime Carriage of Nuclear Material, 17 December 1971, 974 UNTS 255, UKTS (Misc) 1972 No 39, 11:2 ILM 277.

Christopher Lingle, Singapore'S Authoritarian Capitalism: Asian Values, Free Market Illusions, And Political Dependency (1996).

Daniel A. Bell Et Al., Towards Illiberal Democracy In Pacific Asia (1995).

Eric A Feldman, "Compensating the Victims of Japan's 3-11 Fukushima Disaster", *16:2 Asian Pac L & Pol'y J 127,* (2015), pp. 127-155.

_____, "Fukushima: Catastrophe, Compensation and Justice in Japan" *62:2 DePaul L Rev 335,* (2013), pp. 335-356.

Gerhard Hafner & Isabelle Buffart, "The Work of the International Law Commission: From Liability to Damage Prevention" in Kerbrat & Maljean-Dubois, pp. 234–35.

Henry Fountain, Calculating Air Pollution's Death Toll, Across State Lines, N. Y. TIMES (Feb. 12, 2020).

Jaye Ellis, "Extraterritorial Exercise of Jurisdiction for Environmental Protection: Addressing Fairness Concerns" *25:2 Leiden J Intl L 397,* (2012), pp. 397-414.

Karl S Coplan, *"Citizen Enforcement" in LeRoy C Paddock, Robert L Glicksman & Nicholas S Bryner,* eds, Elgar Encyclopedia of Environmental Law, vol2: Decision Making in Environmental Law (Cheltenham: Edward Elgar, 2016) p. 416.

Laura S. Henry et al., "From Smelter Fumes to Silk Road Winds: Exploring Responses to Transboundary Air Pollution over South Korea", *11 WASH. U. GLOBAL STUD. L. REV. 565, (2012),* pp. 565-626.

Linda Ross Meyer, *"Catastrophe: Plowing Up the Ground of Reason" in AustinSarat, Lawrence Douglas & Martha Merrill Umphrey,* eds, Law and Catastrophe (Stanford: Stanford University Press, 2007) p. 19.

Matthew A. Shapiro & Toby Bolsen, "Transboundary Air Pollution in South Korea: An Analysis of Media Frames and Public Attitudes and Behavior", *E. ASIAN COMM UNITY REV. 107,* (2018), pp. 107–126.

Michel Montjoie, "The Concept of Liability in the Absence of an Internationally Wrongful Act" in Crawford, Pellet & Olleson, p. 503.

NLJT Horbach, “The Confusion About State Responsibility and International Liability” *4:1 Leiden J Intl L 47,* (1991). pp. 47-74.

Robert V Percival, “Liability for Environmental Harm and Emerging Global Environmental Law” *25:1 Md J Intl L 37* (2010), pp. 37-63.

Re Oil Spill by the Amoco Cadiz Off the Coast of France on March 16, 1978, 954 F (2d) 1279, 1992 US App Lexis 833 (7th Cir 1992).

R. Henry Weaver & Douglas A Kyser, “Courting Disaster: Climate Change and the Adjudication of Catastrophe” *93:1 Notre Dame L Rev 295,* (2017), pp. 295-356.

Sandrine Maljean-Dubois, “International Litigation and State Liability for Environmental Damages: Recent Evolutions and Perspectives” in Jiunn Rong Yeh, ed, Climate Change Liability and Beyond (Taipei: National Taiwan University Press, 2017) p. 27.

U.N. Economic and Social Commission for Asia and the Pacific [hereinafter ESCAP], State of the Environment in Asia and the Pacific 2000 (2000).

U.N. Development Programme, Human Development Report 2001: Making New Technologies Work For Human Development 141-42 (2001).

[Abstract]

A Comparative of Legal Study of International Environmental Liability and Dispute Resolution

-Focus on the China and Korea-

Kihan Lee*

Transboundary air pollution between China and South Korea starts with desertification in China and southeasterly "yellow dust" storms act as vectors for various kinds of pollutants, including fine particulate matter, nitrogen oxide, These pollutants are carried by wind towards South Korea sulfur dioxide, aerosols, ozone, and heavy metals. and can cause numerous health problems, including respiratory and eye diseases. While air pollution within China is well understood, attributing causation for this pollution becomes complicated once it reaches South Korea. Studies have estimated as much as 49% of South Korea's air pollution can be attributed to China. Meanwhile, the National Aeronautics and Space Administration (NASA) led a 2016 international effort which determined that only 15% of South Korea's particulate matter is attributable to South Korean anthropogenic sources while most of the remainder comes from China. Despite its complexity, the China-South Korea transboundary air pollution problem is not unsolvable. State responsibility entails the violation of an obligation under international law primary norms typically found in treaties, customary international law or general principles of international law. State liability entails the compensation of damage in the absence of a wrongful act.** The latter is concerned with the transboundary risk associated with legitimate activities occurring in a state's territory (including activities carried out by private actors). Transboundary pollution is a prime example because it occurs as a result of activities which may not be unlawful or inherently reprehensible (energy production, for instance). State responsibility/liability has no direct equivalent in domestic liability law, but the two can easily capture the same kind of conduct. The so-called regulatory liability of the state in tort, for

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instance, targets the failure of public authorities to ensure compliance with environmental law. Trial and appellate courts have grappled with claims brought by victims against polluters and the public authorities who had been negligent in overseeing or investigating the operations. I will overview the issue for the civil liability of transboundary air pollution in international environmental law context, the present statutory structure, and the future challenges of international environmental law. I introduce the concepts of responsibility and liability in international environmental law, which paved the way for the proliferation of civil liability regimes and the development of the duty to ensure prompt and adequate compensation.

[Key Words] Environmental law, environmental dispute resolution, transboundary air pollution, environmental norms, external legal approaches