Canada's Customary Obligation to Prevent Transboundary Harm and the Reduction of Emissions

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Abstract

This paper argues that the duty of prevention is a customary international law. Customary international law is a norm accepted broadly by states, and the parameters of this norm are explored in this paper. The central question is whether the customary duty of prevention obliges Canada to reduce greenhouse gas emissions and whether Canada is abiding by this duty. Under the duty, states are required to make a due diligent effort to reduce activities causing harm in other states. This effort does not necessitate an actual cessation of a particular activity. Accordingly, this paper argues that the duty of prevention can be applied in the context of reducing greenhouse gas emissions; hence, Canada must take necessary steps to prevent the harms from such emissions, namely climate

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change. This paper contends that Canada is fulfilling its duty of prevention by enacting a carbon pricing scheme, as evidenced by its adoption of the Greenhouse Gas Pollution Pricing Act.

Keywords: Duty of prevention, customary international law, state practice, opinio juris

Résumé

Ce document affirme que le devoir de prévention relève du droit international coutumier. Le droit international coutumier est une norme largement acceptée par les États, et les paramètres de cette norme sont explorés dans ce document. La question centrale est de savoir si le devoir coutumier de prévention oblige le Canada à réduire les émissions de gaz à effet de serre et si le Canada respecte ce devoir. En vertu de cette obligation, les États sont tenus de faire un effort diligent pour réduire les activités causant des dommages dans d'autres États. Cet effort ne nécessite pas la cessation effective d'une activité particulière. En conséquence, ce document soutient que l'obligation de prévention peut être appliquée dans le contexte de la réduction des émissions de gaz à effet de serre; le Canada doit donc prendre les mesures nécessaires pour prévenir les dommages causés par ces émissions, à savoir le changement climatique. Cet article soutient que le Canada s'acquitte de son obligation de prévention en adoptant un système de tarification du carbone, comme en témoigne l'adoption de la Loi sur la tarification de la pollution par les gaz à effet de serre.

Mots-clés: Obligation de prévention, droit international coutumier, pratique des États, opinio juris

State's actions or inactions are frequently based on a perceived legal obligation, regardless of whether these obligations exist within treaties. This is evident in various instances, such as the immunity granted to foreign heads of state, the principle of non-refoulement, and the norms prohibiting slavery, torture, or genocide. Sovereign states generally adhere to these norms, even if they have not explicitly consented to them. Nevertheless, many legal norms eventually become formalized through consent-based treaties (Follesdal, 2022, p.106). The Paris Agreement (2016; subsequently referred to as "the Agreement") is the leading international treaty on the global commitment to combat climate change. Canada ratified the treaty in 2016 while voicing its commitment to implementing climate change policies at all levels of government (Grassie, 2019, p. 237). The goal of the Agreement is to hold global temperature rise to 2°C while pursuing efforts to limit this increase to 1.5°C (Paris Agreement 2016, Article 2(a)). Article 4 establishes a binding commitment on all Parties to maintain a Nationally Determined Contribution (NDC), and to undertake domestic measures to achieve these aims by reducing emissions (Paris Agreement 2016, Article 4). How these measures are achieved is left to the individual country. The Agreement is silent on quantifiable binding commitments.

The purpose of this paper is to comprehend an international legal principle, specifically the customary duty of prevention, and the case study of Canada is used to understand how domestic states abide by international obligations, whether these obligations have been codified in a treaty. In this paper, I ask whether there is an additional obligation – beyond the Paris Agreement - under international law requiring states to reduce emissions. I argue that the answer is yes: there is a customary international law (CIL) in which states must prevent transboundary harm, and therefore, minimize engagement in activities causing significant cross-border damage. I trace the development of the CIL duty of prevention to understand whether it applies to climate change, and what states must do to fulfill their customary obligation. This is an understudied facet of international law, as there is limited scholarly work examining how domestic environmental law in Canada intertwines with CIL, and whether Canada is abiding by CIL in its approach to reducing emissions. This is a significant topic, considering that states around the world are

increasingly striving to mitigate emissions and adapt to climate change.

This paper makes a novel contribution to the established literature concerning CIL by meticulously delineating the historical advancement of the duty of prevention through treaties and various case law from international tribunals. The existing literature on the historical evolution of the duty within international case law and treaties is lacking. Additionally, I adopt a unique perspective through applying international case law to the realm of domestic Canadian law to determine whether Canada is abiding by its obligations under the duty of prevention. While recent academic works have contended that the duty of prevention constitutes a facet of CIL, the discourse surrounding whether an individual domestic state, in this case Canada, abides by the duty remains deficient.

I advocate for the adoption of a carbon-pricing scheme. Despite not reducing emissions all at once, a carbon pricing scheme is arguably one of the most effective measures available for individual states to curtail its emissions. I argue that a pricing scheme is compatible with and fits within the contours of the CIL duty of prevention, and by adopting a nation-wide carbon pricing mechanism, Canada is abiding by its commitments under CIL. The intention of this paper is not to establish the implementation of the scheme in Canada as a response to the CIL duty of prevention. Rather, its objective is to argue that Canada is indeed adhering to this duty. Notably, some, but not all Canadian provinces have already embraced a pricing scheme well in advance of the Paris Agreement, underscoring a psychological belief to prevent the harms stemming from climate change, otherwise known as opinio juris (Good, 2018, p. 3). By delving into Canada's carbon pricing scheme, this research offers valuable insights for states striving to navigate the path of reducing emissions.

The duty of prevention compels states to prevent persons or industries within its jurisdiction from carrying out harmful cross-border activities (Simlinger & Mayer, 2019, p. 187). While this CIL is referred to in various terms – such as the no-harm principle and the obligation to prevent transfrontier pollution – I refer to the norm as the duty to prevent transboundary harm or the duty of prevention. Under the duty of prevention, states are obligated to minimize greenhouse gas

(GHG) emissions from flowing cross-boundary and causing harm in other countries. As this paper will demonstrate, states have frequently received damages from various international tribunals after suffering cross-boundary harm. In the context of climate change, loss and damages has now been codified under Article 8 of the Paris Agreement (Paris Agreement, 2016, Article 8).

To comprehend the rationale behind the widespread commitment of states to reducing emissions, it is imperative to delve into the evolution of CIL and unravel the driving forces compelling states to address transboundary harm emanating from emissions. Proof of a CIL finds its origins across various avenues, including international tribunals, treaties, and the scholarship of international legal experts. I navigate the history of the duty of prevention, commencing with the Trail Smelter case, and through a series of cases within the International Court of Justice (ICJ). While no formal hierarchy is established among international tribunals, the ICJ remains the primary judicial organ of the United Nations (Nucup, 2019, p. 146). Hence, ICJ decisions matter by contributing to framing the development of international law, although the Court will rarely, if ever, solely shape a particular branch of law. Furthermore, this research will analyze several treaties and declarations, which individually may not conclusively constitute CIL, yet collectively epitomize state practice and opinio juris. The historical landscape of international case law and the array of treaties pertaining to the duty of prevention contributes to bolstering the credibility of establishing this norm as a CIL.

This paper is organized into five parts. In the first part, I define the components of CIL: state practice and opinio juris. When these two thresholds are met, a customary duty becomes binding on all states. In the second part, I identify the duty of prevention as a CIL, which was first defined in the Trail Smelter (1941) case. Since Trail Smelter, several cases brought before the ICJ have examined the duty of prevention. The ICJ even explicitly identified the duty as a CIL. Along with decisions from the ICJ, this paper will examine the numerous international treaties pertaining to the duty of prevention.

The third section includes my evaluation of the contours of the duty to understand the appropriate standard of care. The arguments are

compared to the Draft Articles on the Prevention of Transboundary Harm from Hazardous Activities (2001) (hereinafter ILC Prevention Articles), a United Nation's report from leading jurists, professors, and diplomats. A state must make a due diligent effort to prevent the harm from occurring. Or simply, a state must exert its "best efforts". I advocate that for a state's action or inaction to reach the duty of prevention, the harm must reach the threshold of being considered beyond a de minimus risk, meaning the risk must be greater than a minimum risk. The fourth part argues that the duty of prevention applies in the context of climate change. Climate change clearly is a significant risk and states, while not required to cease an activity altogether, must actively seek to reduce emissions.

Finally, this paper identifies whether Canada is obligated to reduce emissions under CIL. Canada follows a modified monist approach to CIL, meaning that unless domestic legislation displaces the CIL, it must be respected. Canada has a clear duty under international law to prevent transboundary harm by reducing its emissions, and therefore, this duty flows directly into Canadian domestic law. There is no domestic legislation displacing this CIL; rather, the recently enacted Greenhouse Gas Pollution Pricing Act (GGPPA) (2018) entrenches a federal carbon pricing scheme, which has been upheld as constitutional by the Supreme Court of Canada (SCC). This carbon pricing scheme affirms Canada's adherence to the CIL duty of prevention. Essentially, the Canadian example functions as a case study illustrating how a state adheres to the duty of prevention.

Customary International Law

CIL is a norm binding on all countries which cannot be altered by any single state (Brownlie 2008, 6). It can be unwritten or encoded. To become a custom, an international rule or principle must meet a two-part test. The first part of the test requires state practice; the second requires acceptance of this practice as law, or opinio juris (UN ILC 2018, pp. 122-123). This test has been widely accepted by states, judicial decisions, international institutions, and scholars (Peterson 2017, 357; Wood 2014, p. 22). CIL is reflected in Article 38(1) of the Statute of the International Court of Justice (1946), which provides that "[t]he Court, whose function is to decide in accordance with international law such disputes as are submitted to it, shall apply … (b) international custom, as evidence of a general practice accepted

by law" (Art 38(1)). Therefore, the ICJ frequently analyzes specific customs, making it an appropriate means of determining a CIL. However, difficulties arise when discerning both general practice and acceptance of law, since states often do not practice a particular usage because they feel legally compelled to do so.[12]

State practice

State practice refers to states practicing a particular rule or principle. It has three elements: duration, generality, and uniformity. Duration is simple: while an exact duration is not required, the continued practice of a usage over time contributes to evidence of a custom (Wood, 2014, p. 43). Even so, in the North Sea Continental Shelf Case (1969), the ICJ held that the passage of a considerable period was unnecessary to form a custom (p. 43). This implies discretion when evaluating whether a particular principle becomes a CIL.

Generality refers to the widespread nature of the practice: the principle must be recognized by most, but not all nations (LeBel J., 2014, p. 5). To determine generality, courts examine the number, or distribution, of states following the relevant practice. The practice of states whose interests are specifically affected are given more weight (Wood, 2014, p. 37). The International Law Association (ILA, 2000) indicates that if "participation is sufficiently representative, it is not normally necessary for even a majority of states to have engaged in the practice, provided that there is no significant dissent" (p. 25). The problem in determining generality is detecting the value of abstention by a substantial number of states concerning a practice that other states follow. If a state is silent on the issue, it may denote a tactical agreement or a simple lack of interest on the issue (Brownlie, 2008, p. 7). When deciding if a practice has become a CIL, a tribunal must discern whether silence is because states are practicing the custom, whether it is a strategical decision, or if there is simply a lack of care.

[12]It should be noted that the terms "custom" and "usage" are often used interchangeably; however, these terms have different meanings. A usage is a general practice that does not reflect a legal obligation, while in contrast, a legal obligation is essential for a custom. Therefore, to become a custom, a belief that a particular practice is law must be demonstrated (Brownlie 2008, 7).

The third requirement, uniformity, is that relevant practice must be consistent amongst states. While complete uniformity is not required, substantial uniformity is (ILA, 2000, p. 42). A subtle but important difference. When states are specifically affected: the practice of the most affected states should be extensive (North Sea Continental Shelf 1969, p. 53). However, some inconsistency is not fatal (ILA, 2000, p. 42). Hence, complete uniformity is unnecessary. To illustrate how some inconsistent practice is not detrimental to a custom, the ICJ in Fisheries Jurisdiction (1951) stressed that "too much importance need not be attached to the few uncertainties or contradictions" (para. 136). Thus, an individual state failing to follow or acknowledge a particular usage in all instances is not detrimental to that usage reaching customary status.

In sum: 1) no particular duration is required, although the passage of time is evidence of generality; 2) the practice must be generally recognized by most, but not necessarily all nations; and 3) state practice must be found consistently (particularly among the most affected states), yet it need not be absolute. These three elements - duration, generality, and uniformity - are the essential ingredients of state practice. This paper argues that state practice is consistent with the duty of prevention by following the principles of duration, generality, and uniformity. But first, I discuss opinio juris - an essential element to a CIL.

Opinio juris

CIL depends not only on state practice (that is, on observable regularities of behaviour), but also on acceptance of these regularities as law by states. This is called opinio juris, which is the psychological or subjective element of a CIL (Slama, 1990, 606-607; Bodansky, 1995, 109). The ICJ defined opinio juris in the North Sea Continental Shelf (1969) case: "[n]ot only must the acts concerned amount to a settled practice, but they must also be such, or be carried out in such a way, as to constitute evidence of a belief by the state parties that a practice is rendered obligatory by the existence of a rule of law requiring it" (44). States must act from a sense of legal obligation, instead of being motivated by courtesy, fairness, or morality (Brownlie, 2008, 8). In other words, a state must feel compelled to follow the practice stemming from a legal obligation, rather than undertaking the practice out of habit. In reality, since a

comprehensive survey of state practice can be difficult, the opinio juris element of a custom is generally given priority because it can be more easily assessed (Anne & Duvic, 2018, 91-92). The concept of opinio juris may seem similar to the generality concept of state practice, but note the focus is on the psychological belief itself, not the actions of a state.

According to Brownlie (2008), the ICJ has adopted two different approaches in determining whether an opinio juris exists. In the first approach, the ICJ assumes the existence of opinio juris based on evidence of general practice, a consensus in the literature, or in the previous determinations of the ICJ or other international tribunals. For the second approach, a more rigorous methodology calls for additional positive evidence of state action recognizing the validity of the rules in question (Brownlie, 2008, p. 8). A non-exhaustive list of examples of such evidence includes public statements made on behalf of states, official publications, government legal opinions, decisions by national courts, and conduct in connection with resolutions or treaties (Wood 2014, pp. 45-70). The second approach depends on the discretion of the court and the nature of the issue. As I elaborate on later, the ICJ has primarily adopted the first approach concerning the duty of prevention. The fact the ICJ is using the less rigorous approach in determining the opinio juris of the duty of prevention suggests that the psychological belief is firmly entrenched, since the rigorous approach is used more often when opinio juris is difficult to discern.

Similar to state practice, and the concept of generality, there is no need to demonstrate an opinio juris in each individual state for a particular usage to form a legal obligation (Slama, 1990, p. 654). In the Paramilitary Activities Case (1986), the Court indicated that opinio juris can be determined through general opinion or general recognition. The Court claimed that the word “general” here means “the aggregate of many individual opinions” (p. 98). The Court used the subjective element to find a legal obligation of a specific group of states that were parties to a multi-party convention to establish a CIL (Paramilitary Activities Case, 1986, p. 117). This essentially means that opinio juris can be formed regionally. This is important in the context of reducing emissions since wealthy industrialized states’ behaviour differs from those of developing or industrializing states.

What matters is that states are following a usage because of a legal obligation. With opinio juris and state practice clearly defined, this paper conveys that the duty of prevention largely stems from international courts and treaties. Thus, what contribution can these two devices have in determining a CIL?

Can international courts and treaties determine CIL?
Can an international court's decision determine a CIL? What about an international treaty? Can international courts, such as the ICJ, use treaties to decide whether certain usages amount to a CIL? According to Dupuy (2008), when writing on international environmental law, scholars often cite the largest number of possible opinions, treaties, and recommendations when finding a particular rule compulsory (p. 453). This number counting tactic is often problematic when demonstrating the compulsory character of a norm; in other words, to prove that the norm has been integrated into the 'corpus juris' of general international law. Other conditions must be met; a mere reiteration of different international documents does not actually consider what a particular state believes is binding. However, the ICJ may satisfy the existence of opinio juris if the belief is confirmed in state practice, and in return, the combination of state practice and opinio juris may lead to the declaration of a CIL (Dupuy, 2008, p. 453). Essentially, what is needed is concrete evidence of state practice.

The question becomes how much credibility does the ICJ, or other international courts, have in stating a particular rule or principle is a CIL? The Wood (2014) report, which dissects the ILC Prevention Articles, claims: "[w]hile the decisions of international courts and tribunals as to the existence of rules of customary international law and their formulation are not 'practice', such decisions serve an important role and subsidiary means for determination of rules of law" (p. 34). The report also asserts that the pronouncements of the ICJ may carry great weight (Wood, 2014, p. 34). However, states rarely seek recourse at the ICJ for environmental disputes, and when there is a dispute, the Court rarely decides to pronounce itself on the specific legal status of the norm in question. Furthermore, the ICJ is restricted to the specific facts of the case and the specific formulation of the legal question by the disputing parties (Dupuy, 2008, p. 453).

While ICJ decisions are not state practice, the ICJ can examine state practice (uniformity, duration, generality), and whether a particular state appears to have an internalized psychological belief in a particular usage. After the examination, the ICJ may then declare that a usage is a CIL. Hence, an ICJ declaration carries a normative force through its in-depth analysis of the customary nature of a usage. For this paper, the various ICJ decisions discussed provides a contextual analysis proving the duty of prevention as a CIL.

Regarding treaties, the ICJ has indicated that treaties may signify the existence of a CIL. In the Paramilitary Activities Case (1986), the ICJ considered the relationship between treaties and custom, finding that multilateral conventions "may have an important role to play in recording and defining rules deriving from custom, or indeed in developing them" (p. 98). Further, the ICJ recognized that customary rules may emerge which are identical to those of treaty law, and which exist simultaneously with treaty obligations (Paramilitary Activities Case 1986, p. 98). In the North Sea Continental Case (1969), the ICJ found that state practice, including signing and ratifying a particular convention, could create a CIL (p. 73). The ICJ identified the conditions to be fulfilled for a new rule to become a CIL resulting from a treaty:

It would in the first place be necessary that the provision concerned should, at all events, potentially, be of a fundamentally norm-creating character such as could be regarded as forming the basis of a general rule […] with respect to the other elements usually regarded as necessary before a conventional rule can be considered to have become a general rule of international law, it might be that, even without the passage of any considerable period of time, a very widespread and representative participation in the convention might suffice of itself, provided it included that of states whose interests were specifically affected. (North Sea Continental Shelf Case 1969, p. 41-42).

It is important to note the use of the term "fundamentally norm-creating character". In the Advisory Opinion on the Legality of the Threat or Use of Nuclear Weapons (1996), the Court claimed that some non-binding resolutions "may sometimes have normative value" (p. 226), adding

they can, in certain circumstances, provide evidence important for establishing the existence of a rule or the emergence of an opinio juris. To establish whether this is true of a given General Assembly resolution, it is necessary to look at its content and the conditions of its adoption; it is also necessary to see whether an opinio juris exists as to its normative character. Thus, it should not be assumed that the mere fact a large number of states being a Party to a treaty establishes a customary norm for all. (Legality of the Threat or Use of Nuclear Weapons, 1996, p. 245)

Thus, essential to whether a treaty develops into a CIL is whether there is a "normative character" or a "fundamentally norm-creating character".

Establishing a CIL necessitates the finding of state practice and opinio juris. But the ICJ can determine both and declare that a particular usage is a custom. Although not determinative of a CIL, the ICJ making this declaration carries great weight. A treaty having a "normative character" may also contribute to the formation of a CIL. As this essay will demonstrate, the duty of prevention has consistently been brought to the ICJ, and in one case, declared a custom. In addition, there are several international treaties explicitly mentioning that states have a duty to prevent specific transboundary harms. The ICJ decisions, combined with treaties, ought to firmly establish the duty of prevention as a CIL.

The Duty to Prevent Transboundary Harm

This section examines whether the duty to prevent transboundary harm has reached CIL status. It argues that the answer is yes, especially since the ICJ has formally claimed that the duty is a CIL. Regarding state practice, the three necessary elements – duration, generality, uniformity – have all been met. Further, in finding state practice, the ICJ has cited prior decisions and treaties to determine that the duty of prevention has reached customary status. To emphasize, two approaches to opinio juris have been identified. The first approach involves the ICJ assuming the existence of opinio juris based on various factors, including general state practice and determinations made by international courts and tribunals. On the other hand, the second approach requires additional positive evidence beyond what is considered in the first approach, such as public statements, decisions by national courts, or government legal

opinions. Examining the two perspectives on opinio juris, the ICJ typically embraces the more flexible criterion – the first approach – when addressing the duty of prevention. This implies that the duty holds the status of a well-established CIL.

Trail Smelter and *Corfu Channel*

Trail Smelter is the most significant case related to the duty of prevention, and perhaps within international environmental law. Prior to this case, there was a dearth of evidence regarding environmental policies or legal disputes addressing the issue of pollutants crossing international boundaries. Since Trail Smelter, numerous treaties and cases have identified the duty to prevent transboundary harm as international law, some even as a CIL. The question before the Court was what level of continuing relief a polluting state owes to an affected state. This was framed as a question of law to be ascertained by looking at the nature of the duty of relief. To accomplish this task, the Court examined the content of the international "rule", which was assumed to be always a general principle applicable to transboundary pollution (Merrill, 1997, p. 948). In Trail Smelter (1941), Canada was held liable for the damages caused by pollutants discharged into the atmosphere by a smelter in British Columbia, which then blew towards the U.S. state of Washington (1910). In Washington, a group of rural farmers claimed damages from the waste emitted by the smelter, since this caused injury to plant life, soil, and crop yields. Notably, this was not an ICJ decision. The case was brought forward by the United States and was referred to the International Joint Commission, a bilateral Canada-U.S. tribunal tasked with overseeing transborder issues between two countries. Ultimately, Canada was held liable for $350,000 in damages (Trailer Smelter, p. 1941, 1910-1960). The Commission made an important assertion, one which forms the basis of the duty of prevention: "[u]nder the principles of international law, as well as the law of the United States, no State has the right to use or permit the use of its territory in such a manner as to cause injury to properties or persons therein, when the case is of serious consequences and the injury is established by clear and convincing evidence," (1960). In other words, a country has a duty to protect other states against injurious acts caused from within its jurisdiction.

Since 1941, numerous international cases, declarations, and resolutions have supported the ratio in Trail Smelter.

Following Trail Smelter, the ICJ in Corfu Channel (1949) held Albania responsible for damaging British warships in the North Corfu Strait (p. 4). The warships had sailed through part of Albanian territorial waters, and two of the ships struck water mines, causing explosions killing 44 people. The dispute was whether Albania was responsible for the explosions and resulting damage and loss of human life (Corfu Channel, 1949, p.15, 22). The Court claimed that every state is under "an obligation not to allow knowingly its territory to be used for acts contrary to the rights of other States" (p. 21). Much like in Trail Smelter, the Court referred to "certain general and well-recognized principles" that existed independent of treaty law (Corfu Channel, 1949,p. 22). Thus, the ICJ recognized the existence of general principles of law prohibiting states from violating the rights of, or inflicting damage on, other states. Ultimately, the ICJ determined that Albania was liable for damages of £843,947 to be paid to the United Kingdom (Corfu Channel Assessment, 1949, p. 10).
Following both Corfu Channel and Trail Smelter, the ICJ was silent for a considerable period on the duty to prevent transboundary harm. However, international treaties and declarations emerged furthering the development of the duty within CIL.

Principle 21 and Principle 2 and treaty law

As mentioned earlier, for a treaty to form a CIL, it needs to have a "fundamentally norm-creating character" or "normative character". The duty has been articulated in two important declarations: the 1972 Stockholm Declaration and the 1992 Rio Declaration. Under Principle 21 from Stockholm:

States have, in accordance with the Charter of the United Nations and the principles of international law, the sovereign right to exploit their own resources pursuant to their own environmental policies, and the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction. (Stockholm Declaration, 1972, Principle 21).

Principle 21 was reproduced almost verbatim in Principle 2 of the Rio Declaration (1992). Together, both declarations have exercised considerable influence on the development of international environmental law and have since been duplicated in multiple treaties (Kiss & Shelton, 2007, p. 284). This repetition provides an example of treaties contributing to developing the "normative character" of a CIL. While Rio and Stockholm received significant international attention, there are many other less notable treaties clearly establishing a belief that the duty of prevention results in a legal obligation.

Although there are over 200 international agreements dealing with environmental matters, only a handful deal specifically with transboundary pollution (Merrill 1997, 933). Article 192 of the UN Convention on the Law of the Sea (1992) expresses the general requirement of prevention by affirming that "[s]tates have the obligation to protect and preserve the marine environment" (Art. 192). The marine environment is a resource that is commonly used by many states. Damaging the marine environment can potentially undermine another state's enjoyment of this resource. Article 7 of the UN Convention on the Non-Navigational Uses of International Watercourses (1997) affirms the same duty in international freshwater (Art. 7). Furthermore, the preamble and Article 1 of the Convention on Biological Diversity (1993) lists various measures ensuring the conservation and sustainable use of biological resources within state parties, implying that neighbouring states are impacted if these resources are depleted (Art. 1). Other multilateral environmental agreements have dealt with transboundary pollution directly: the 1991 Convention on Environmental Impact Assessment in a Transboundary Context (1997), the Convention on the Protection and Use of Transboundary Watercourse and International Lakes (1996), the Convention on Long-Range Transboundary Air Pollution (1983), the Montreal Protocol on Substances that Deplete the Ozone Layer (1989), the United Nations Framework Convention on Climate Change (1994), and the Cartagena Protocol on Biosafety to the Convention on Biological Diversity (2003). Importantly, Article 8 of the Paris Agreement (2016) states that "Parties recognize the importance of averting, minimizing and addressing loss and damage associated with adverse effects of climate change" (Art. 8). At the 2022 Conference of Parties in Cairo, several developed states

pledged funds for the loss and damage caused by excessive emitting, albeit only marginal amounts (Gelles, 2022). While Article 8 does not form a binding requirement, it recognizes that states are aiming to reduce damages in other states stemming from climate change, which resembles the duty of prevention.

Since determining the formation of a CIL is not a quantitative analysis, the volume of treaties does not determine a custom. Thus, the relatively small number of environmental treaties addressing transboundary pollution and the duty of prevention is not determinative of a CIL. Still, a limited number of treaties implementing the duty of prevention contributes to establishing a CIL, especially when these treaties are consistent with state practice and opinio juris. As the next section highlights, several decisions of states causing environmental damage in other states' boundaries has been brought to the ICJ.

ICJ case law

The ICJ has issued five important decisions dealing specifically with the duty to prevent transboundary harm. In the ICJ's first decision since Principle 21 of the Stockholm Declaration was adopted, a dispute arose between New Zealand and Australia against France concerning atmospheric nuclear tests conducted in the South Pacific by the French Government. These cases are referred to as the Nuclear Test Cases I (1974). The main issue was whether the radioactive fallout from the testing was inconsistent with rules of international law. The Court found that since France intended to cease testing in the South Pacific, the objectives of the applications had been accomplished and the issue no longer existed. However, in both cases, Principle 21 was addressed (Australia v. France, 1974, para. 59). For example, Australia argued that Principle 21 was at "the very center of the problem in the present case" and suggested it is a rule of CIL that prohibits atmospheric nuclear tests (New Zealand v. France, 1974, para. 11). It was further argued in both cases that "the traditional standards of state freedom to pursue activities which may affect them must undergo some restriction" (Australia v. France, 1974, para. 28; New Zealand v. France, 1974, para. 11). Regardless of the rulings being against the harmed state, the cases featured additional judicial opinions demonstrating the divide between judges on their views regarding the legal status of the duty of prevention.

The separate dissents of Petrén J. and Castro J. in Australia v. France (1974) arrived at different conclusion on the customary status of the duty of prevention. Judge Petrén claimed that the argument brought forth by Australia and New Zealand depended on a CIL that prohibited states from conducting atmospheric tests on nuclear weapons giving rise to cross-border radioactive fall-out (Australia v. France, 1974, 305). Yet, Judge Petrén concluded there was no such rule of CIL due to a lack of state practice, as not enough states manufacturing nuclear weapons were refraining from carrying out atmospheric tests because of a belief that it was prohibited under international law (Australia v. France, 1974, 306). More simply, state practice was lacking in generality and uniformity.

In comparison, Judge Castro found generality and uniformity by taking a different approach in his dissenting opinion. He noted that Australia's complaint against France was "based on a legal interest which has been well known since the time of Roman law," namely the sic utere principle (Australia v. France, 1974, 388). He claimed it is a feature of modern law that property owners are liable for smoke and smells that overstep the physical limits of their property by referring to Trail Smelter and Corfu Channel (Australia v. France, 1974, 388-389). Therefore, Castro J. believed that France should cease the deposit of the radioactive fall-out upon other territories. These contrasting opinions illustrate Brownlie's (2008) judicial approaches to interpreting CIL. Judge Petrén adopted a strict interpretation when finding opinio juris; there was simply a lack of evidence of consistent state practice. On the other hand, Castro J. took a more liberal interpretation, stating that the principle was applied in prior (but limited) case law and stems from a general principle of property law (sic utere).

Nuclear Tests II (1995) was submitted to the ICJ when France decided to carry out a series of underground nuclear tests in the South Pacific. In response, New Zealand attempted to reactivate the proceedings from 1974. The question before the ICJ was whether the new tests violated New Zealand's rights under international law, and whether it was unlawful for France to undertake tests without conducting an environmental impact assessment. The Court concluded that since France was now dealing with underground

tests, while the 1974 case concerned atmospheric tests, the Court would not reactivate the case despite the new arguments from New Zealand (Nuclear Tests II, 1995, paras. 6, 63). However, in obiter dictum, the Court stated the present order was "without prejudice to the obligations of States to respect and protect the natural environment, obligations to which both New Zealand and France have in the present instance reaffirmed their commitment," (Nuclear Tests II, 1995, para. 64). The "obligations of States" indicates the Court recognized states' commitment to reduce environmental harms from flowing cross-boundary.

The Nuclear Tests II (1995) decision was not without dissent. In the case, New Zealand argued that the duty to prevent transboundary harm was a "well established principle of customary international law" and France recognized that a general obligation to protect the environment existed (Nuclear Tests II, 1995, Oral Proceedings, p. 11). There were three dissenting judges: Judge Weeramantry, Judge Kormoa, and Judge Palmer. Judge Weeramantry provided the most emphatic statement that "no nation is entitled by its own activities to cause damage to the environment of any other nation" and that this was a rule of CIL (Nuclear Tests II, 1995, p. 347). Judge Kormoa claimed: "under contemporary international law, there is probably a duty not to cause gross or serious damage which can reasonably be avoided, together with a duty not to permit the escape of dangerous substances" (Nuclear Tests II, 1995, p. 378). Judge Palmer did not address the principle's legal status, but recognized that the "obvious and overwhelming trend of these developments from Stockholm and Rio has been to establish a comprehensive set of norms to protect the global environment" (Nuclear Tests II, 1995, p. 409). While the three dissenting judges did not officially establish the duty to prevent transboundary harm as a CIL, they nonetheless contributed to its development.

In the Legality of the Threat or Use of Nuclear Weapons (1996), which was an Advisory Opinion, the ICJ dealt with nuclear weapons environmental impact, asking whether "the threat or use of nuclear weapons in any circumstance is permitted under international law" (para. 1). The Court recognized that the environment "is under daily threat and that the use of nuclear weapons could constitute a catastrophe" (para. 29). Furthermore, the environment "is not an

abstraction but represents the living space, the quality of life and the very health of human beings, including generations unborn" (Use of Nuclear Weapons, 1996, para. 29). The Court further claimed: "[t]he existence of the general obligation of States to ensure that activities within their jurisdiction and control respect the environment of other States or of areas beyond national control is now part of the corpus of international law relating to the environment" (Use of Nuclear Weapons, 1996, para. 32). Moreover, Principle 21 of the Stockholm Declaration was invoked. Although the Court found that the use of nuclear weapons was not specifically prohibited by existing international law, it emphasized that international law indicates "important environmental factors that are properly taken into account" during armed conflict (Use of Nuclear Weapons, 1996, para. 32). The importance of this decision is that the duty of prevention was recognized as being part of the corpus of international law relating to the environment.

Gabčíkovo-Nagymaros (1997) provides additional support for the duty of prevention forming CIL. This case involved the construction of a barrage system on the Danube River effecting Hungary and Czechoslovakian. Hungary eventually abandoned a section of the project due to concerns for its natural environment. Czechoslovakia began looking for alternative solutions. Among them was Variant C, a proposal to unilaterally divert the river. In 1993, Slovakia, which was now an independent state, proceeded to dam the river, and the dispute was submitted to the ICJ (Gabčíkovo-Nagymaros, 1997, para. 22-23). The Court emphasized "the great significance that it attaches to respect for the environment" (Gabčíkovo-Nagymaros, 1997, para. 53). The Court recited the Advisory Opinion on the Legality of Nuclear Weapons, discussing the general obligation on states to ensure activities respect the environment of areas beyond national control as being part of "the corpus of international law relating to the environment" (Gabčíkovo-Nagymaros, 1997, para. 53). This indicates that the Court considered the general obligations referred to in the Legality of Nuclear Weapons to have a customary status.

Further cementing the duty of prevention's CIL status is Pulp Mills (2010). A dispute arose when Uruguay began constructing two pulp mills along the banks of the Uruguay River, which borders Argentina.

In 1975, both countries entered an agreement requiring a party that is undertaking potentially damaging activities on the River to notify the other; importantly, this party could proceed only if the notified country had no objections (Pulp Mills, 2010, para 80). In 2006, Argentina filed an application to the ICJ instituting proceedings. It expressed concerns that the mills posed "major risks of pollution of the river, deterioration in biodiversity, harmful effects on health and damage to fish stocks" (Application Instituting Proceedings, 2006, para. 15). The ICJ repeated a statement from Corfu Channel that it is "every State's obligation not to allow knowingly its territory to be used for acts contrary to the rights of other States" (Pulp Mills, 2010, para. 101). It was also said that the "duty of prevention, as a customary rule, has its origin in the due diligence that is required of a State in its territory," (Pulp Mills, 2010, para. 101). Due diligence is an important phrase, which will be demonstrated later in this essay is paramount to the standard of care for the duty of prevention. The Court further pointed to the Advisory Opinion on the Legality of Nuclear Weapons to claim that the "corpus of international environmental law" obligates states to use all means at its disposal to avoid environmentally damaging activities from causing harm in other states (Pulp Mills, 2010, para. 101). Therefore, the Pulp Mills decision further solidified the duty of prevention as a CIL.

By analyzing the statements made in the above-mentioned cases, it appears the ICJ is willing to infer an opinio juris from the general practice of protecting the environment. The Court has also grounded its arguments within international treaties. As indicated earlier in this essay, decisions by the ICJ are highly influential in determining the customary status of a usage. There is a clear line of international case law dealing with the duty of prevention and several international treaties and declarations. This long line of agreement at the international level indicates that the duty of prevention has become a CIL. Still, another issue arises: prior case law has not dealt with GHG emissions specifically. This must be addressed to determine whether the duty of prevention applies within the context of climate change. To do so, we must examine what is required of a state, or the contours of the duty of prevention.

The Operation of the Duty

To determine whether the duty to prevent transboundary harm applies to emissions, the contours of the duty must be understood. The question is what steps a state must take to prevent transboundary harm. The main issue relates to the standard of care applicable to the obligation of states to ensure activities within their jurisdiction do not cause cross-boundary damages (Wood, 2014, 34; Mayer, 2022, 96). This essay argues the standard of care is that states must make a due diligence effort when preventing significant transboundary damage. Note the importance of the word significant. This essay analyzes the ILC Prevention Articles (2001) to determine what level of risk is needed before a state is required to act. Ultimately, it concludes the risk must be beyond a de minimus range.

Due diligence

The most coherent interpretation of the standard of care for the duty of prevention is a due diligence obligation. The due diligence obligation is stated directly in the ILC's Prevention Articles (2001). Regarding transboundary harm from hazardous activities, the ILC claims that "the obligation of the State of origin to take preventive or minimization measures is one of due diligence" (ILC's Prevention Articles, 2001, Art. 3). This conclusion is supported by the wording of the duty of prevention in Principle 21 and Principle 2 as an obligation "to ensure" – a phrase that has often been used to suggest due diligence rather than strict liability (ILC's Prevention Articles, 2001, Art. 3). There need not be an intention to injure from the originating state; instead, states must take all measures to control and restrain likely harmful activity that can reasonably be excepted (Beyerlin & Marauhm, 2000, p. 284). The duty does not impose an absolute duty to prevent harm, but rather requires each state to prohibit those activities known to cause significant harm to the environment, such as mitigating harm from lawful activities that may deteriorate the environment (Kiss & Shelton, 2007, p. 91; Mayer, 2022, p. 103). The obligation is thus one of due diligence, not of absolute cessation.

The due diligence standard needs further clarification to understand what level of effort is expected from a state in the context of climate change. The ILC Prevention Articles requires states to "take all appropriate measures to prevent significant transboundary harm or at any event to minimize the risk thereof," (ILC's Prevention Articles,

2001, Art 3). It follows that "due diligence is manifested in reasonable efforts by a State to inform itself of factual and legal components that relate foreseeability to contemplated procedure and to take appropriate measures, in timely fashion, to address them" (ILC's Prevention Articles, 2001, Art 3(7)). In the same sense, the ICJ in the Pulp Mills (2010) case, which explicitly mentions due diligence, considered that a state must "use all the means at its disposal in order to avoid activities which take place in its territory, or in any area under its jurisdiction, causing significant damage to the environment of another State" (para. 101). Furthermore, in Certain Activities (2015), Judge Donoghue expanded the scope by stating a failure to exercise due diligence of preventing transboundary harm may engage state responsibility "even in the absence of material damage to potentially affected States" (Certain Activities, 2015, para 50). Therefore, it appears the state is required to use all "reasonable efforts" or "means at its disposal" to reduce the risk.

The criterion of "reasonableness" entails a considerable degree of uncertainty. It must be discerned what "reasonableness" requires in the context of preventing transboundary harm. "Reasonableness" means states must do the "best they can" with the relevant technical standards, such as the "best available technology" and "best environmental practices" (Handle, 2008, 540; De Sadeleer, 2020, p. 128). Or more simply, the state of origin must exert its "best possible efforts" to avert or minimize the risk. In Trail Smelter (1941), it was accepted that a due diligence standard was applied, having regard to the capacity of Canada, via improving emissions control technologies to limit transboundary damage (Stephens, 2009, p. 158). Trial Smelter (1941) and the ILC Prevention Articles (2001) suggest that due diligence obligations may be imposed according to a state's "capabilities", which considers differences in their economic and technological development stages (Takano 2018, p. 40). When a state makes a reasonable due diligence effort to prevent significant transboundary harm, it cannot be made responsible for harm that occurs nonetheless, but the state still must act to prevent further damages (Simlinger & Mayer, 2019, p. 187). This interpretation - that states must do the best they can within their capabilities - is consistent with the reasonableness criteria. It cannot be expected that a state will go above and beyond its "best possible efforts" to prevent the transboundary harm.

The degree of risk

A state must make a due diligence effort to reduce risk; however, a different issue arises when applying a state's effort to the degree of risk. Not all transboundary harms are equal. Some carry a far greater risk than others. A nuclear fallout is catastrophic, but an individual car exhaust is marginal. In this regard, the extent of the required diligence increases in proportion with the severity of the risk, meaning a higher standard of care applies to activities which may be considered more hazardous than average (De Sadeleer, 2020, p. 96). The ILC Prevention Articles (2001) indicates "the standard of due diligence is that which is generally considered to be appropriate and proportional to the degree of risk of transboundary harm in the particular instance," (Art. 3(11)). In other words, the regulation that must be implemented varies, with a higher level of due diligence required as the risk increases.

There are three different interpretations when evaluating the level of risk that compels a state's due diligence effort. Two of these interpretations are done by the ILC. Under the ILC Prevention Articles (2001), "the State of origin shall take all appropriate measures to prevent significant transboundary harm or at any event to minimize the risk thereof" (Art. 3). According to Handl (2008), the ILC divides situations into events involving "significant transboundary harm", where states are required to "prevent", and those where states must "minimize the risk thereof" (540). Therefore, the two threshold factors are "significant transboundary harm" and "risk thereof". The third interpretation is the de minimis threshold (Beyerlin and Marauhm, 2000, p. 294; De Sadeleer, 2020, p. 94). This paper argues in favour of adopting the de minimis threshold because it necessitates a lower criterion for compelling states to prevent transboundary harm.

The "significant transboundary risk" threshold, while sounding simple, is actually far more convoluted than the de minimis approach. Article 2(a) of the ILC Prevention Articles (2001) clarifies the threshold of "significant transboundary harm" as including risk both of a "high probability of causing significant transboundary harm and a low probability of causing disastrous transboundary harm" (Art. 2(a)). When determining the scope of the obligation to prevent the

occurrence of “significant transboundary harm”, it is necessary to account for the combined effect, the likelihood of occurrence, and the magnitude of the injurious impact (ILC Prevention Articles, 2001, Art. 2(2)). Therefore, the “significant transboundary harm” threshold appears capable of incorporating climate change, since it considers the combined effect of all the potential consequences. Yet, it is not exactly clear when this threshold is crossed. Uncertainty remains as to what is a “significant transboundary harm”, and what is a “low probability of causing disastrous transboundary harm”. As will be shown, the de minimis approach provides greater clarity as to when a state is required to act.

For the ILC Prevention Article’s (2001) second approach, the ILC does not provide an explanation as to what a “risk thereof” entails. Alternatively, Handl (2008) claims a “risk thereof” means a “mere risk of significant transboundary harm,” (p. 540). Under this interpretation, a state is obligated to minimize the transboundary harm. However, confusion remains as to what actions a state must take to minimize the “risk thereof”. According to Handl (2008), the ILC’s approach is problematic because it differentiates between certain harm (to be prevented) and less than certain harm (to be minimized). This differentiation is based on the probability of the harm alone, rather than the composite of probabilities and consequences of the future event. Under this normative scheme, a ‘mere’ risk of significant transboundary harm does not attract an obligation of prevention, rather it is simply of minimization (Handl, 2008, p. 540). Therefore, uncertain future harm, no matter how potentially catastrophic its nature and scope, does not eo ipso attract a legal obligation to regulate the risk bearing activity. Consequently, the ILC’s interpretation of the duty of prevention under “risk thereof” does not compel state action, clearly contradicting established case law and international treaties.

A different approach to analyzing whether a “significant transboundary risk” occurs is by requiring a lower threshold. Beyerlin & Marauhm (2000) argue that a de minimis burden of proof is the most appropriate; meaning that if the harm is not minor, the threshold is crossed (294). This approach can be read consistently with the ILC Prevention Articles (2001), as the commentaries define “significant” as something more than “detectable”, which need not reach the level

of “serious” or “substantial” (Art 2(4)). In other words, the harm must entail real detrimental effects in areas such as human health, industry, poverty, environment, etc. But the de minimus approach is far simpler. By simply stating the harm must be beyond only a minimum risk, it avoids the potential debate over the ILC Prevention Articles (2001) approach of interpretating the “low probability of causing disastrous transboundary harm” (Art 2(a)). It also avoids any diplomatic squabbling over when the duty to prevent arises. Afterall, some may argue that GHG emissions will not cause disastrous harm, especially since “disastrous” harm is not defined in the ILC Prevention Articles (2001). Emphasizing a de minimis approach will lead to fewer problems in finding that the harm caused by GHG emissions crosses the burden of proof. This will compel states to act in the form of mitigating the damage much quicker.

Climate change is potentially catastrophic, and the cross-border flow of emissions is clearly more than minor. Of course, this raises the question, if every state is producing emissions, is there a duty to prevent the harmful effects? Not every state produces an equal number of emissions, some produce only a negligible amount. Still, states cannot claim that just because every state is producing emissions, the duty to prevent harm is an unnecessary CIL.

The Duty in The Context of Climate Change

The case law from the ICJ demonstrates that the duty of prevention is a recognized CIL. However, these cases, for the most part, dealt with singular instances of harm. For example, Trail Smelter (1941) concerned a single factory in Canada. In Corfu Channel (1949), Albania was held responsible for specific damages to British warships and the deaths of 44 people in the North Corfu Strait. Additionally, Pulp Mills (2010) and Gabčíkovo-Nagymaros (1997) deal with specific, identifiable instances of harm caused by damage to waterways. The facts of these cases are different from the harms caused by GHG emissions, which occur many years later, especially considering that emissions are produced by virtually every aspect of the economy. While the Nuclear Tests Cases dealt with the accumulation of atmospheric pollution, ultimately the victim state was unsuccessful in its claim.

If these cases deal only with specific harms, can the duty of prevention be applied in the context of climate change? This paper argues that it can. The Legality of Nuclear Weapons (1996) provides a useful analogy to GHG emissions. What is relevant is not the quantity of emissions by a state in a single year, but its emission over decades because of inadequate policy decisions by national governments over time (Mayer 2018, 266). Measuring emissions over time is essential to assessing the risk.

Many scholars arguing against the duty of prevention being applied to climate change misunderstand the functionality of the actual duty. The observation of widespread transboundary harm indicates that the duty of prevention does not support a specific result. Yet, states are consistently making significant efforts to avoid or reduce transboundary harm. Therefore, the duty of prevention relates to the conduct of states, as opposed to the outcome (Mayer, 2022, pp. 108-109). In other words, its purpose is not to eliminate all harmful GHG emissions, but to balance the duty to prevent transboundary harm with the state's right to develop its economy (Dupuy, 1991, p. 64; Gupta & Schmeier, 2020, p. 733). When seen through this perspective, clearly the duty is not all-or-nothing. Since it is impossible to eliminate emissions immediately, states must be granted the right to continue emitting harmful substances to develop their economies. Instead, the duty to prevent transboundary harm obliges states to slowly eliminate its emissions.

Climate Change and the Legality of Nuclear Weapons Case

Before analyzing whether the duty of prevention applies in the context of GHG emissions, this paper will summarize the consequences of climate change. Although the "[g]lobal economic impacts from climate change are difficult to estimate," the International Panel on Climate Change suggests that an increase of the global average temperature by 2°C would cause global annual economic losses at a minimum between 0.2 and 2.0% of global incomes (Christopher B Field et al., 2014, pp. 4-7). Stemming from the increase in frequency and intensity of extreme weather events, climate change adversely impacts food security, affects terrestrial ecosystems, and contributes to desertification and land degradation

(Almut Arneth et al., 2020, p. 9). As the majority in the SCC noted in the landmark GPPAA Reference:

Canada is also expected to continue to be affected by extreme weather events like floods and forest fires, changes in precipitation levels, degradation of soil and water resources, increased frequency and severity of heat waves, sea level rise, and the spread of potentially life-threatening vector-borne diseases like Lyme disease and West Nile virus. (GGPPA Reference 2021, para 10).

The impacts of climate change are already having a massive toll on human life. The World Health Organization estimates that climate change is currently causing the deaths of 150,000 people worldwide each year, and this is expected to increase by 250,000-300,000 between 2030 and 2050 (WHO). Emitting GHG emissions is incredibly destructive; it does not matter where the emissions originate, because emissions collectively impact the entire world.

Simlinger and Mayer (2019) argue that climate change differs from the previously mentioned ICJ cases in at least three pivotal ways. First, damages from climate change result not from a single act of a state but from states longstanding reliance on fossil fuels. Second, damages from climate change occur because of the concomitant conduct of multiple states, with the resulting harm not confined to a single state but affecting virtually all states. Finally, the harm results not from one activity, but from an accumulation of many activities over decades (Simlinger and Mayer, 2019, p. 187). These three reasons create difficulties when applying the duty to prevent transboundary harm to climate change.

The Legality of the Threat of Nuclear Weapons (1996) represents an important analogy in the context of climate change. As Simlinger and Mayer (2019) highlight, some states in their submissions (Mexico, Egypt, and Ecuador) argued that the possibility of repeated use of nuclear weapons could cause a nuclear winter leading to a cataclysmic upheaval of the climate system, destroying most of earth's life (Simlinger and Mayer 2019, p. 187). When mentioning that the damages caused by nuclear weapons could not "be contained in either space or time" and had "the potential to destroy all civilization and the entire ecosystem of the planet", the ICJ made no

distinction between immediate damage and damage cumulatively caused (Legality of the Threat of Nuclear Weapons, 1996, para. 35). In doing so, the Court implied that duty of prevention applied equally to both.

These facts are analogous to GHG emissions. If two states launch nuclear weapons at each other in a short period, the consequences are the devastation of our planet's environment. States which have no part in the conflict still suffer significantly over time. Similarly, if multiple large emitting states continuously emit GHGs over a long period, the result has the potential to be comparatively devastating. Furthermore, small developing countries, where emissions are negligible, will be innocent bystanders. The differences in the immediacy between a nuclear war and the slower nature of climate change should not be a deciding factor since the ultimate consequences are both potentially catastrophic. Consistent with the ILC Prevention Articles (2001), the focus ought to be on the significance of the risk. The duration of how the risk unfolds is irrelevant to a state's duty to prevent transboundary harm. But unlike the claims in the ILC Prevention Articles (2001), if the risk meets the de minimus threshold, a state's obligation is engaged.

GHG emissions are not explicitly mentioned as an example in the ILC Prevention Articles (2001). But this does not mean that GHGs are excluded from the duty of prevention. The ILC Prevention Articles (2001) simply summarizes the multilateral treaties in which the duty to prevent transboundary harm has already been agreed, including treaties addressing nuclear accidents, space objects, international watercourses, management of hazardous wastes and the prevention of marine pollution (Art. 5). It should be noted that the Articles were written in 2001, before states agreed under Article 8 of the Paris Agreement (2016) to "recognize the importance of averting, minimizing and addressing loss and damage associated with adverse effects of climate change" (Art. 8). As Mayer (2016) indicates, those arguing that emissions are inapplicable to the duty of prevention are operating under a misunderstanding. This misunderstanding is the belief that the duty to prevent transboundary harm requires a state to eliminate the harmful activity all together (Mayer, 2016, p. 92). The exclusion of references to GHG emissions in the ILC Prevention

Articles does not undermine the applicability of the duty of prevention to climate change.

It is often assumed that including GHG emissions in the duty of preventing transboundary harm would create unrealistic objectives, such as industrialized states forced to eliminate a given activity (Mayer 2016, 92). However, Trail Smelter (1941) reads:

It would not be to the advantage of the two countries concerned that industrial effort should be prevented by exaggerating the interests of the agricultural community. Equally, it would not be to the advantage of the two counties that the agricultural community should be oppressed to advance the interest of industry. (Trail Smelter, 1939)

The duty of prevention does not create an absolute duty of cessation, which would have been impossible to fulfill, or at least impossible to impose on the parties in Trail Smelter (1941). Rather, it is about the balancing of interests in a sustainable manner, including the right to emit with minimizing the consequences of such emissions. Under this balancing act, and as this essay will demonstrate next, the principle of sovereignty remains important to a state's right to develop.
Sovereignty

The principle of state sovereignty over natural resources is applicable to the duty to prevent harm by allowing for states to conduct activities that utilize the natural resources within their territories, even when these activities adversely impact the environment. This is rooted in the principle of permanent sovereignty over natural resources formulated in various UN resolutions since 1952 (Sands, 2003, p. 236; Mayer, 2022, p. 97). For example, the UN General Assembly in 1962 adopted a landmark resolution that the "rights of peoples and nations to permanent sovereignty over their natural wealth and resources must be exercised in the interest of their national development of the well-being of the state concerned" (Res. 1803). This right is also reflected in several environmental treaties. For example, the 1992 Climate Change Convention (1994) reaffirmed "the principle of sovereignty of states in international co-operation to address climate change" (Preamble). Additionally, the 1992 Convention on Biological Diversity (1993) acknowledged that states have "sovereign rights … over their natural resources" and that "the

authority to determine access to genetic resources rests with national governments and is subject to national legislation" (Art. 15(1)). The Paris Agreement (2016) adds that the framework will be "respectful of state sovereignty" (Art 13(3)). This obligation results from the requirement of peaceful co-existence between states' interests, but neither the principle of sovereignty nor the principle to prevent transboundary harm is absolute (De Sadeleer, 2020, p. 86).

While states have a duty to prevent transboundary harm, they are still free to extract resources within their borders. This includes activities that release emissions. Yet, the duty implies a compromise between the territorial sovereignty of the state of origin and the territorial integrity of the state likely to be affected. Since the contemporary international legal system is based on states being equal sovereigns, states could not be equal if one state was permitted to seriously interfere with the internal affairs of another. For example, one state could not be an equal sovereign with another if it was permitted to render the territory of another uninhabitable through causing environmental harms that cross international borders (Beyerlin & Marauhm, 2000, p. 40). States then have exclusive rights to permanent sovereignty over its natural resources and non-exclusive rights to the protection of global commons (Mayer, 2022, p. 100). The duty of prevention, when applied to sovereignty, means states are not obligated to eliminate every source of harmful activity, just a due diligent effort to minimize risk beyond the de minimus threshold.

The transboundary outlook of the duty of prevention and its concern for territorial integrity are still very much present in the principle of prevention. Under certain circumstances, states have moved beyond the sovereignty paradigm to protect the environment irrespective of the location of harm (Anne & Duvic, 2018, p. 234). With this balancing act between the sovereign right to develop resources and the duty of prevention, states are allowed to continue their emitting activities while taking the necessary steps to prevent or minimize the future harms of climate change. Since the ICJ clearly labelled the duty of prevention as a CIL, and the duty applies in the context of climate change, the question then becomes whether Canada is abiding by its obligations. As this essay will demonstrate, Canada is abiding by the duty of prevention through the implementation of a

carbon pricing scheme, which enables economic development while mitigating the risks of climate change.

Customary Law and the Duty of Prevention in Canada

Canada, as a wealthy industrialized country, has long contributed to climate change by emitting more compared with other states. In fact, Canada ranks tenth in the world in emissions (Government of Canada, 2022, p. 7). Therefore, Canada has considerable responsibility to prevent transboundary harm through reducing its emissions. How is Canada meeting this responsibility? This essay argues that a carbon pricing system, which Canada has adopted under the GGPPA, exemplifies that Canada is complying the duty of prevention. In addition, Canada's actions of taking steps to reduce emissions further demonstrates an opinio juris. But first, it must be established how CIL applies to Canada.

Canada's adoption of CIL

International law is incorporated into domestic law in two ways: (1) the dualist approach and (2) the monist approach. Canada takes a dualist approach to treaties, but a modified monist approach to CIL norms unless domestic legislation overrides it. The dualist method requires an international law to be expressly received (or transformed) by some executive and/or legislative action. Thus, the only way treaties become binding in Canada as a matter of domestic law is when they are transformed through domestic legislation. In contrast, under the monist approach, international law is directly incorporated into domestic law and is immediately effective without additional legislative or executive action (Judge LeBel, 2014, p. 4).

When it comes to CIL, Canada adopts a modified monist approach. In Canada, CIL is directly integrated into the common law and takes effect immediately. Unlike treaties, CIL does not require additional legislative or executive action for its incorporation. This integration is referred to as the doctrine of incorporation or adoption. Nevertheless, this incorporation is subject to modification if there is any legislation that contradicts the CIL. In such cases, the legislation takes precedence and displaces the application of CIL within the Canadian legal system (Van Ert, 2008, p. 184). In general, Canada

takes a monist approach to CIL unless domestic legislation overrides it.

The landmark Nevsun (2020) case is the judicial authority on the matter of CIL in Canada. The case involved three individuals who were conscripted to work in an Eritrean mine that was majority owned by the Canadian company Nevsun. The conditions in the mine were horrific, and claims were brought forth involving forced labour, slavery, cruel and inhumane treatment, and crimes against humanity, which were said to be peremptory norms (jus cogens) from which no derogation is permitted (Nevsun, 2020, para 7). Abella J's. majority affirmed that CIL is automatically part of Canadian common law, and a Canadian company breaching a CIL can theoretically be remedied. The SCC ruled that the "automatic incorporation" of norms of CIL "is justified on the basis that international custom, as the law of nations, is also the law of Canada," (Nevsun, 2020, para 93). Therefore, if the twin requirements of CIL (state practice and opinio juris) are met, CIL becomes fully integrated into Canadian domestic law. As indicated in the decision, consistent with the modified monist approach, legislatures are of course free to change or override CIL; but like all common law, no legislative action is required to give CIL effect in Canada (Nevsun, 2020, para 94). Since the duty of prevention is a CIL, the duty automatically applies to Canadian domestic law. This is consistent with the doctrine of incorporation and legislation in Canada has only reaffirmed the preventative duty.

The Greenhouse Gas Pollution Pricing Act

The GGPPA (2018) came into force in 2018. The key purpose is to incentive the behavioural changes necessary to reduce GHG emissions. To achieve this purpose, carbon pricing policies are applied throughout the provinces. The Act has two key parts. Part 1 of the legislation is the fuel charge, which is the price per tonne of the various GHGs emitted, while Part 2 is the Output Based Pricing Mechanisms, or a cap-and-trade. For Part 1, the price per tonne was set at $20 for 2019, rose to $50 per tonne in 2022, with a loose goal of achieving carbon neutrality by 2050 (GGPPA, 2018, Schedule 4). Yet, this charge is revenue neutral, and 90 percent of the proceeds are returned to individuals within a jurisdiction in the form of a Climate Action Incentive Payment, while the remaining 10 percent is

given to small businesses and institutions to reduce emissions through the Climate Action Incentive Fund (GGPPA Reference 2021, para 31). Part 2 of the GGPPA (2018) allows large emitters covered by the Output-Based Pricing System (OBPS) to provide compensation for the portion of emitted GHGs that exceed their applicable emissions limit based on sector specific percentages (section 168). Industries that emit below their cap receive a credit, while facilities that exceed their limit must pay a charge to the federal government.

By implementing a carbon price, Canada is meeting its due diligence obligations under the duty of prevention. As previously discussed, states have an obligation to make a due diligent "best effort" to prevent foreseeable damage, or at least minimize the risk of harm. Experts frequently argue that carbon pricing is the most effective tool for reducing emissions; hence, a carbon price could represent a state's "best efforts". For example, the Federal-Provincial-Territorial Working Group on Carbon Pricing Mechanisms, which was created by the federal government to determine the effectiveness of carbon pricing, claimed "[m]any experts regard carbon pricing as a necessary policy tool for efficiently reducing GHG emissions," (Factum of Attorney General of Ontario, para 24). Furthermore, the High Level Commission on Carbon, comprised of economists and climate change scientists from around the world, reported that a well-designed carbon price is an indispensable part of a strategy for reducing emissions in an efficient way (World Bank Group, 2017, p. 8). Stiglitz (2019), an American Nobel Prize winning economist, advocates for a detailed carbon price to apply to all sectors of the economy, albeit not with a "single price" applied uniformly. Not applying the price uniformly abides by the principles of state practice disused earlier. This is consistent with how the Canadian carbon price was designed, as certain exemptions are carved out for large emitters that may opt out of the carbon price and enter the OBPS (GGPPA Reference, 2021, para 34). Therefore, by implementing carbon-pricing, Canada is doing its "best effort" to reduce emissions. It should be noted that while a carbon price is one way for a particular state to meet its CIL, there are several other ways (such as command and control regulation), to abide by the duty of prevention. To compare, carbon pricing relies on markets to achieve emission

reduction, while command and control relies on regulation, such as performance and technology mandates (Pomerleau & Dolan, 2021).

Around the globe, numerous industrialized wealthy countries have begun implementing carbon pricing strategies. For example, in Europe, eighteen countries have implemented a carbon tax. The price ranges from less than €1 per metric ton of carbon emissions in Poland and Ukraine to more than €100 in Sweden (Asen, 2021). In July 2021, the EU proposed a new legislation that would impose a carbon price on imported goods. While this policy has yet to be implemented, it would be the first of its kind, and aims to protect domestic industries that are abiding by EU's emission reduction policies (Plumer, 2021). Approximately 40 countries around the world have implemented a carbon pricing mechanism (World Bank). With a few exceptions, these carbon prices have all been implemented in wealthy industrialized countries. Wealthy industrialized states, which have contributed more to the problem, have a heightened ability to implement more stringent policies to prevent transboundary harm. This heightened ability may come in the form of a carbon price.

Considering a large portion of countries have not implemented a carbon price, how can a carbon price represent compliance with the CIL duty to prevent the transboundary harm stemming from GHG emissions? In other words, there is a lack of generality and uniformity. As mentioned earlier, a CIL can still be found amongst a group of states. It is unnecessary for all states to take similar measures against foreseen consequences because due diligence obligations may be imposed according to a state's "capabilities" (Takano, 2018, p. 39). This due diligence approach is consistent with the "common but differentiated capabilities" (CBDR) principle, which recognizes that developed countries acknowledge their historic responsibility and may have an additional responsibility based on their enhanced abilities (Rio Declaration 1992, Principle 7). Notably, CBDR has not reached customary status, but it still provides some "steering" effect on state behaviour. CBDR considers states' socio-economic differences when goals and benchmarks are applied to global development agendas (Beyerlin, 2008, p. 442). Hence, when analyzing the level of due diligence involved, it is important to consider a state's capacity. Canada has not only contributed more to the problem of climate change, but it has more resources than

developing states to reduce its emissions (Stone, 2004, p. 292). As a wealthy industrialized economy, Canada has a heightened ability to prevent transboundary pollution, while simultaneously allowing for its sovereign right to develop. It should be stressed that for Canada a greater emphasis is placed on its duty of prevention compared to a developing state. Under this approach, Canada has a more burdensome "best effort" to prevent transboundary harm. In light of the GGPPA and the subsequent Reference decision, carbon pricing is a sufficient means to abide by its customary duty of prevention.

The Greenhouse Gas Pricing Pollution Act Reference

In March 2021, the SCC delivered a landmark decision known as the Re Greenhouse Gas Pricing Pollution (2021). The case primarily dealt with the constitutionality of the GGPPA. Wagner C.J, writing for the majority, recognized that the presence of the Paris Agreement was a factor influencing the decision to uphold the GGPPA. Even though Canada's obligations under the Paris Agreement was not a decisive factor, Wagner C.J. recognized that "[a]ddressing climate change requires collective national and international action. This is because the harmful effects of GHGs are by their very nature not confined within borders" (para 12). While the SCC did not consider CIL, this statement reflects the need for Canada to prevent transboundary harm. In upholding the GGPPA, Wagner C.J recognized that collective action is needed by Canada and acknowledged that harm crossing borders ought to be prevented. Taking the inverse approach, if the GGPPA was held unconstitutional, and the nation-wide carbon pricing scheme was abolished, would Canada be abiding by the CIL duty of prevention? Since Canada is a federalist state, the provinces have a great deal of discretion in establishing their own climate policies. Before the GGPPA became law, only British Columbia, Alberta, and Ontario had carbon pricing mechanisms. Also, Canada was seriously behind in meeting its emission reduction targets under the Paris Agreement: Canada's overall emissions had decreased by 3.8 percent from 2005 to 2016, far short of the Paris Agreement goals of a 30 percent reduction by 2030 (GGPPA Reference, 2021, paras 23-24). This trajectory virtually guaranteed that Canada would not meet its Paris Agreement commitment and fail in fulfilling the customary duty to prevent transboundary harm.

Besides the GGPPA, there is no other federal legislation tackling climate change, with one exception: the Canadian Net-Zero Emissions Accountability Act (2021). This legislation enshrines Canada's commitment to set national targets for the reduction of GHG emissions with the objective of attaining net-zero by 2050 (Net Zero Act, 2021, Preamble). The Net-Zero Act (2021) sets the 2030 emission reduction target as more ambitious than what Canada has committed to under the Paris Agreement, which is between 40 and 45 percent below 2005 levels, compared with the 30 percent reduction under the Paris Agreement (Net-Zero Act, 2021, section 7). The Net-Zero Act demonstrates that Canada is committed to reducing its emissions; but unlike the GGPPA, there is nothing setting out how to fulfill the commitment. It is more of a commitment to commit, meaning Canada is creating a law to reduce its emissions, but how this will be done is handled through other legislation, such as the GGPPA. Without the GGPPA, Canada cannot abide by the CIL duty to prevent transboundary harm with the Net-Zero Act alone.

Conclusion

The duty to prevent transboundary harm is a CIL. It was established in Trail Smelter and has been consistently repeated in treaties after the 1972 Stockholm Declaration. The ICJ has explicitly stated it is a CIL, thereby recognizing the combination of state practice and opinio juris. As a result, all states are bound by the obligation to make a due diligence effort to reduce transboundary harms. This due diligence effort is based on a state's capabilities. In other words, this due diligence effort must be reasonable.

The fact that states continue to pollute does not negate the duty's CIL status. The discussion in the ICJ case law illustrates that states accept and feel bound by the duty to prevent transboundary harm, even if the duty is violated. Climate change represent a form of harm that is covered under the CIL duty to prevent transboundary harm.

Canada follows a modified monist approach to a CIL: Canada is bound by any CIL that is not displaced by legislation. To date, legislation has not displaced the prevention duty. In fact, the GGPPA reiterates this duty. The nation-wide carbon pricing scheme established by the GGPPA is consistent with the implementation of

the CIL duty to prevent transboundary harm. The adoption of the GGPPA demonstrates that Canada is taking legislative action to implement a CIL, using its due diligent "best efforts" to reduce emissions through a carbon price. The GGPPA does not require an absolute cessation of emissions. Some industries – particularly those involved in creating emissions - will feel its impact more than others, but this fact does not negate Canada's overarching obligation to prevent transboundary harm.

Canada has made clear international commitments to reduce emissions under the Paris Agreement. Canada has an additional, simultaneous, duty under CIL to do so. While the Paris Agreement quantifies the actual reduction target Canada must meet under international law, the prevention duty places a concomitant commitment on Canada to prevent the harm from occurring. The GGPPA helps to address both treaty and CIL obligations. The expectations are that the prices associated with the per tonne of GHGs emitted will lead to reductions that exceed Canada's commitments and will therefore assist Canada in meeting the due diligence standard of preventing transboundary harm.

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