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Rethinking Force Majeure in Public International Law

by Myanna Dellinger*

I. Introduction

Climate change is one of today's most significant and complex problems. The number and level of severity of extreme weather events is increasing rapidly around the world.¹ One year after the next, we learn that heat records have been broken once again.² Climate change has been traced

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1. See NAT'L CLIMATE ASSESSMENT, EXTREME WEATHER (2014), <http://nca2014.globalchange.gov/highlights/report-findings/extreme-weather> (discussing how severe weather and extreme climate events have increased over the last five decades).

2. See *2016 Climate Trends Continue to Break Records*, NASA (July 19, 2016), <https://www.nasa.gov/feature/goddard/2016/climate-trends-continue-to-break-records> (stating "global surface temperatures . . . have broken numerous records through the first half of 2016"); Climate Council, *2016: Heat Record Broken Again*, CLIMATE COUNCIL (Jan. 19, 2017), <https://www.climatecouncil.org.au/2016-hottest-year-report> (noting the global average temperature of 2016 was warmer than the previous temperature record set in 2015).

to a wide range of severe problems around the world, ranging from the obvious damage caused by hurricanes, floods, extreme rainfall, prolonged droughts, wildfires and a host of other weather-related issues to the perhaps less obvious such as physical and mental illnesses, “civil unrest, riots, mass migrations and perhaps wars caused by water and food shortages.”³ “It is no longer rationally debatable that climate change will take a huge toll on human health and prosperity as well as pose significant risks to national security if it is not curbed.”⁴

Science has demonstrated that human activity is “extremely likely” to have contributed significantly to this increasingly volatile and problematic weather situation.⁵ At the same time, the developed nations that, to a very large extent, caused the climate change problem also clearly indicated in the negotiations leading up to the new Paris Agreement on climate change, as well as in the Agreement itself, that they are *not* willing to accept financial liability for any loss and damage caused by climate change.⁶ The matter is, at bottom, one of an alleged lack of sufficient resources and a similarly alleged inability to correctly apportion liability for the problem along with, of course, lack of political will to undertake legal responsibility for the financially severe consequences that are likely to arise because of climate change.

However, financial liability for loss and damage caused by severe weather events may arise not only under the United Nations Framework Convention on Climate Change (UNFCCC) regime, but also under established notions of customary international law such as the “no harm” rule, which creates a

3. Myanna Dellinger, *An “Act of God”? Rethinking Contractual Impracticability in an Era of Anthropogenic Climate Change*, 67 HASTINGS L.J. 1551, 1553 (2016).

4. *Id.*

5. Intergovernmental Panel on Climate Change, *Climate Change 2013: The Physical Science Basis*, SUMMARY FOR POLICYMAKERS 3, 17 (2013), http://www.climatechange2013.org/images/report/WG1AR5_SPM_FINAL.pdf [hereinafter IPCC I].

6. See U.N. Paris Agreement art. 8, *opened for signature* Apr. 22, 2016 (entered into force Nov. 4, 2016) [hereinafter U.N. Paris Agreement]; Wil Burns, *Loss and Damage and the 21st Conference of the Parties to the United Nations Framework Convention on Climate Change*, 22 ILSA J. INT’L & COMP. L. 415 (2016) (citations omitted).

duty not to allow one's territory to be used in ways that cause harm to other states.⁷ In this context, nation states may seek to avoid a finding of legal wrongfulness under the *force majeure*, necessity, or distress doctrines of law. This article analyzes whether nations will be able to do so and critiques the arguments that are likely to arise in invoking these defenses. Many of the arguments that have traditionally been viable and that made legal (as well as practical) sense no longer do so given modern knowledge about climate change and its causes and effects.

The article proceeds as follows: The history of the excuse doctrines that could and are applied in the context of "severe weather" will be briefly described to create a view of current law in the light of its development over time. Similarly, the traditional legal distinction between "man" and "nature" will be examined as this differentiation, at worst, no longer makes sense in relation to climate change and, at best, is one without significance. Because this article solely addresses the excuse doctrines that may apply to legal liability on nation states in the climate change context, the Paris Agreement on climate change (the "Agreement") becomes relevant as it would have been fair and equitable to apportion loss and damage under this Agreement. However, as the Agreement explicitly states that developed nations will *not* be liable for loss and damage under the treaty provisions,⁸ the article will proceed to analyze alternative theories of nation state responsibility for internationally wrongful acts. Finally, the article critiques the modern potential applicability of these doctrines for reasons of law and public policy.

7. See generally 'No-Harm Rule' and Climate Change, LEGAL RESPONSE INITIATIVE (July 24, 2012), <http://legalresponseinitiative.org/wp-content/uploads/2013/07/BP42E-Briefing-Paper-No-Harm-Rule-and-Climate-Change-24-July-2012.pdf> [hereinafter *No-Harm Rule*].

8. Article 8 of the UNFCCC Paris Agreement states that the Agreement will "not involve or provide a basis for any liability or compensation" for loss and damage. See U.N. Paris Agreement, *supra* note 6.

II. History of Weather-related Excuses

In public international law, the doctrines of *force majeure*, necessity, and distress operate to preclude the legal wrongfulness of an act.⁹ The doctrines are invoked in the context of alleged “irresistible forces” or “unforeseen events” that the party or nation state in question could neither have prevented nor controlled. Such events include climatic events such as hurricanes, heavy rain, windstorms, blizzards, and floods.

“The majority of legal systems of the world have adopted rules concerning the consequences of the occurrence of irresistible, unforeseen or unforeseeable, or uncontrollable supervening events in the validity or performance of legal obligations.”¹⁰ The rules appear in “treaties, practice, case-law, and doctrinal commentary.”¹¹ They are known by a variety of terms such as “*force majeure*, fortuitous event[s], impossibility, acts of God, unavoidable necessity, physical necessity, frustration, [and] impracticability.”¹² Yet, all these notions cover the notion of what has often simply become known as “*force majeure*.”¹³

The origin of *force majeure* can be traced to ancient Roman law.¹⁴ It then—as now—applied to the legal consequences of supervening events that had a demonstrable causal connection to injurious consequences.¹⁵ “In the following centuries, domestic legal systems would borrow from these notions to develop their own rules concerning allocation of risk in the view of the occurrence of supervening events.”¹⁶ Public international law came to realize that “the breach of international obligations [could be] justified or excused due to

9. ALINA KACZOROWSKA-IRELAND, PUBLIC INTERNATIONAL LAW 453 (5th ed. 2015).

10. Federica I. Paddeu, *A Genealogy of Force Majeure in International Law*, 82 BRITISH Y.B. INT’L L. 381, 385 (2012).

11. *Id.*

12. *Id.*

13. *Id.* at 385-86.

14. *Id.* at 386.

15. Paddeu, *supra* note 10, at 386.

16. *Id.* at 386-87.

the occurrence of supervening events.”¹⁷ States have long been considered to have a natural law duty of self-preservation:

‘[A] nation is bound to preserve itself’. In view of this duty, the state ‘ought to avoid those things which can bring about its destruction’, but only insofar as it is in its power since ‘no one is bound to do the impossible’ ‘[T]hat which is to be imputed to bad fortune, and is not subject to our control, must be patiently endured and entrusted to divine providence’. [But] [j]ust as it was impossible for a man ‘to resist a superior force’, so it was impossible for a state to ‘protect itself from destruction by a superior force’. As examples of this superior force, [one writer] referred to earthquakes, extraordinary floods, ‘the wrongful act of a stronger nation’ or internal struggles, famines or pestilences, all of which could bring about the destruction of the state.¹⁸

In private law, the notion that what later became known as “acts of God” could work to provide a defense to liability that first appeared in English-language common law in 1581 in the famous English “Shelley’s Case,” where it was found that the death of a party to the contract made performance impossible.¹⁹ The notion of an “act of God” evolved from the early (almost literal) construct to mean something beyond human agency and control, such as severe weather events.²⁰ Courts sitting in torts found that, for reasons of fairness, parties should not be found negligent for failing to prevent the negative effects of events which they could neither reasonably have foreseen nor prevented.²¹ This “act of God” doctrine worked its way beyond torts law into admiralty, private national and international

17. *Id.* at 393.

18. *Id.* at 401 (citations omitted).

19. Dellinger, *supra* note 3, at 1565.

20. *Id.* at 1601.

21. *Id.*

contracts law, and environmental law in English-speaking countries.²²

Today, the doctrine of *force majeure* is very relevant to a range of different situations facing nation states. For example, it has been applied to the question of the suspension and continued validity of treaties: “[I]f the state that has promised succours finds herself unable to furnish them, her inability alone is sufficient to dispense with the obligation; and if she cannot give her assistance without exposing herself to evident danger, this circumstance also dispenses with it.”²³ This raises the question of whether nation states may use the doctrine to avoid treaty obligations or seek retreat from the UNFCCC and/or the Paris Agreement because of problems caused by climate change while, at the same time, having contributed to the problem as all nation states have. This could be the topic of further research, but is outside the scope of this article.

“The most commonly quoted example [of the idea] was that of an irresistible force,” which may preclude the legal wrongfulness of a natural force, such as a storm, forcing a vessel to enter a foreign, but closed, port.²⁴ Under such circumstances, the “vessel [is] not subject to the consequences of [the] entry.”²⁵ *Force majeure* also allows “innocent passage through neutral waters to a belligerent vessel during war.”²⁶ Under the law of war, “blockades could be affected by *force majeure* in numerous ways.”²⁷ Neutral vessels may enter a “blockaded port without breach of the blockade making it liable to capture in cases of *force majeure*.”²⁸ Tsunamis may “damage a nuclear plant, rendering it impossible for [a] state . . . to provide energy to a neighbouring state.”²⁹ Hunger so severe may arise from continued droughts that nations with populations at risk of famine may fail to perform international obligations to deliver crops to other nations, preferring instead

22. *Id.* at 1567.

23. Paddeu, *supra* note 10, at 403 (citing MONSIEUR DE Vattel, LAW OF NATIONS § 92 (1883)).

24. *Id.* at 405.

25. *Id.* (citations omitted).

26. *Id.* at 406 (citations omitted).

27. *Id.* at 407.

28. Paddeu, *supra* note 10, at 407 (citations omitted).

29. *Id.* at 463.

to feed its own obligations.³⁰ In these and other situations, nation states may invoke the excuse doctrines to prevent a finding of legal wrongfulness on their parts. However, as will be demonstrated below, they may still be held legally liable for the *financial* consequences of their actions or non-actions, although these were not legally *wrongful*. This is a significant differentiation and concern in the context of climate change with the recognized risks of costly consequences to both public and private entities around the world.

III. “Man v. Nature” Distinction

The notion that some events are beyond the control of humankind runs beneath the excuse doctrines in both public and private law. But from where does this notion stem?

Humankind has, for a long time, distinguished between what may be considered to be acts of “God” or “nature” on one side, or “man” on the other. “We still distinguish between what is ‘man-made’ and what is ‘natural’ in many contexts.”³¹ “We think we ‘react’ to – or adapt to – natural events rather than ‘create’ them”³² even in spite of today’s clear scientific knowledge that we are greatly affecting our natural environment. We tend to see ourselves as separate and almost untouchable entities somewhat removed from and superior to the natural world we inhabit.³³ This is a “viewpoint that is becoming archaic and that is challenged to an increasing, although still somewhat controversial, extent.”³⁴ “Our thoughts about what ‘nature’ is and is not generate consequences for humankind and for our environment”³⁵ via the laws and policies we create and thus the action or inaction in relation to such issues as climate change.

The law still encompasses these views to a very large extent. For example, United States food labeling requirements and practices distinguish between such notions as “manmade,”

30. *Id.*

31. *See* Dellinger, *supra* note 3, at 1568.

32. *Id.*

33. *Id.* at 1567.

34. *Id.* at 1568.

35. *Id.*

“natural,” “organic,” “processed,” or “unprocessed.”³⁶ Drug and cosmetics labeling similarly differentiate between the natural and the man-made. Arguably, this makes little sense given the fact that all marketed food products require some form of human participation. “Separation of the human and the ‘natural’ is increasingly being recognized in this context as more of a [continuum than a sharp] division”³⁷

“Public land use law in the United States is also marked by a significant debate about what is ‘natural’ and what is ‘human.’”³⁸ The Wilderness Act, for example, made early use of such attempts at differentiating man from nature as classifying whether an area was “untrammeled by man.”³⁹ “The Wilderness Act defined the purpose of wilderness not in terms of any inherent value, but in terms of its value as a ‘resource’ for human use, enjoyment, and consumption.”⁴⁰ The legal differentiation between human entities as natural entities and the rest of nature remains clear, albeit arguably no longer logical given our severe interference with our natural environment.

At bottom, many of the events that have the greatest impacts on us today can be traced to *human* action or inaction.⁴¹ We cannot continue blaming nature for all the consequences of our actions that we currently witness. “We are simply *not* separate from nature; we are an integral physiological part of it. Just as nature has an effect on us, so do we have a clear effect on it.”⁴² In few other contexts does this have a clearer practical impact than when it comes to climate change. Continuing to ascribe “extreme” weather events to “nature” or “God” makes little sense given today’s readily available knowledge about the scientific causes and

36. Jill M. Fraley, *Re-Examining Acts of God*, 27 PACE ENVTL. L. REV. 669, 681-82 (2010).

37. *Id.* at 682.

38. Dellinger, *supra* note 3, at 1569. See also *id.*; Sean Kammer, *Coming to Terms with Wilderness: The Wilderness Act and the Problem of Wildlife Restoration*, 43 ENVTL. L. 83, 109 (2013).

39. Dellinger, *supra* note 3, at 1569; Fraley, *supra* note 36, at 682.

40. Dellinger, *supra* note 3, at 1569 (citing National Wilderness Preservation System, 16 U.S.C. § 1131 (2012)).

41. Dellinger, *supra* note 3, at 1569.

42. *Id.*

effects of climate change: IPCC scientists are 95 to 100% certain that the cause is human activity.⁴³ The law relating to defenses based on weather calamities ought to reflect modern factual reality. “[A]s our understanding of our natural surroundings improves,”⁴⁴ so should the law and its judicial applications. “For example, where underground water flows were once also seen as ‘mysterious’ and inexplicable phenomena, science has now documented how and where water flows. Water law changed with this understanding.”⁴⁵ So should the law in relation to climate change loss and damage.

Time has now come to rethink the ability of nation states, as well as private parties, to avoid financial liability based on weather events that were once successfully argued to be unpreventable and unforeseeable by the parties. “Extreme” weather events are no longer so; they are becoming the order of the day. “[L]aw is itself a human construct.”⁴⁶ Excuse doctrines based on unwarranted perceptions that we have not and cannot affect the weather must be reconstructed to reflect modern on-the-ground reality. The law is often considered to adapt too slowly to the realities of modern life, such as in the technical areas and, here, the scientific and meteorological. At the same time, the general public is losing faith in the judiciary’s ability to progressively solve some of today’s most urgent societal problems.⁴⁷ If willing to reinterpret those parts of the weather-related excuse doctrines that are left to the discretion of the courts, judges would be able to regain some of that faith. Doing so may arguably also act as impetus for legislatures around the world to review the unfortunate inaction and unwillingness to take the regulatory action that is so urgently needed to stem the super-wicked problem of climate change. Needless to say, the codifications of such concepts of *force majeure*, necessity, and distress ought similarly to take changing weather realities and the effects thereof on legal liability into account.

43. IPCC I, *supra* note 5, at 4, n.1, 17.

44. Dellinger, *supra* note 3, at 1570.

45. *Id.*

46. *Id.* at 1569.

47. *Id.* at 1591.

IV. Liability for Loss and Damage under the Paris Agreement

Climate change has long been recognized to present the risk of costly adverse consequences on both private and public funds. These include “an array of potential economic impacts, such as damage to infrastructure from coastal erosion and flooding, declines in crop production, or loss of fisheries.”⁴⁸ Moreover, climate change poses a very real risk of “non-economic damages, such as loss of biodiversity and ecosystem services, loss of culture and sovereignty, and decline of indigenous knowledge.”⁴⁹

These risks are not insignificant. In fact, climate change may manifest itself in impacts of a potentially “inconceivable magnitude.”⁵⁰ Although there has been very little detailed research to date to quantify potential loss and damage costs over this century and beyond, the estimates that have been made are truly daunting. For example, the UNFCCC has found that it could cost about “USD 70-100 billion per year by 2030 to deal with the worst impacts of climate change.”⁵¹ Others estimate the true annual cost to reach USD 300 billion or more.⁵² A recent study by the non-governmental organization Action Aid pegged the mean cost of climate change impacts at \$275 trillion between 2000 and 2200.⁵³ The

48. Burns, *supra* note 6, at 418.

49. *Id.*

50. *Framing the Loss and Damage debate: A conversation starter by the Loss and Damage Vulnerable Countries Initiative*, LOSS & DAMAGE, Aug. 2012, at 1, 3, <https://www.germanwatch.org/fr/download/6673.pdf> [hereinafter Framing]. See also Ainun Nishat et al., *A Range of Approaches to Address Loss and Damage from Climate Change Impacts in Bangladesh*, LOSS & DAMAGE, June 2013, at 1, 24, <http://www.loss-and-damage.net/download/7069.pdf>.

51. *No-harm Rule*, *supra* note 7, at 3. See also *Investment and Financial Flows to Address Climate Change*, UNITED NATIONS FRAMEWORK CONVENTION ON CLIMATE CHANGE (2007), http://unfccc.int/resource/docs/publications/financial_flows.pdf.

52. See Martin Parry et al., *Assessing the Costs of Adaptation to Climate Change: A Review of the UNFCCC and Other Recent Estimates*, INT'L INST. FOR ENV'T & DEV, Aug. 2009, at 1, <http://pubs.iied.org/pdfs/11501IIED.pdf>.

53. Lies Craeynest, *Loss and damage from climate change: the cost for poor people in developing countries*, ACT!ON AID, Nov. 2010, at 1, 11,

African Climate Policy Center of the United National Economic Commission for Africa's assessment of potential loss and damage on the continent concluded that these impacts could reduce GDP in many sectors between 1% (in a "2°C World") up to 5% (in a "4+°C World").⁵⁴ Of course, losses are not only monetary in nature, but may well take on life and death consequences as well. "A report of the Global Humanitarian Forum estimated that climate change already causes 300,000 deaths per year throughout the world and seriously impacts the lives of 325 million people."⁵⁵

This sobering reality has led to increasing focus on the concept that has become known as "loss and damage."⁵⁶ While the term "loss and damage" is not defined under the UNFCCC or other legal instruments, a generally recognized definition is "those impacts of climate change that will neither be mitigated, nor adapted to."⁵⁷ Burns has stated:

In this context, 'loss' is construed as 'irrecoverable negative impacts,' such as loss of freshwater resources or culture or heritage, while 'damage' are climatic manifestations from which

http://www.actionaid.org/sites/files/actionaid/loss_and_damage_-_discussion_paper_by_actionaid_-_nov_2010.pdf.

54. Michiel Schaeffer et.al, *Loss and Damage in Africa*, U.N. ECON. COMM'N FOR AFR., May 2014, at 1, 17, <http://www.unclearn.org/sites/default/files/inventory/uneca32.pdf>.

55. *No-harm Rule*, *supra* note 7, at 3. See also GLOBAL HUMANITARIAN FORUM, HUMAN IMPACT REPORT: CLIMATE CHANGE – THE ANATOMY OF A SILENT CRISIS 1, 1 (2009), http://www.preventionweb.net/files/9668_humanimpactreport1.pdf.

56. See generally Burns, *supra* note 6.

57. Mizan R. Khan et al., *Assessing Microinsurance as a Tool to Address Loss and Damage in the National Context of Bangladesh*, LOSS & DAMAGE, June 2013, at 1, 9, <http://loss-and-damage.net/download/7078.pdf>. See also Intergovernmental Panel on Climate Change, *Climate Change 2014: Impacts, Adaptation, and Vulnerability*, SUMMARY FOR POLICYMAKERS 1, 1 (2014), https://www.ipcc.ch/pdf/assessment-report/ar5/wg2/ar5_wgII_spm_en.pdf (stating that residual loss and damage will occur from climate change despite mitigation and adaptation action); Urmi Goswami, *UN Climate Change Negotiations 2012: Developing and developed countries divided on 'loss and damage'*, ECON. TIMES (Dec. 8, 2012, 6:26 AM), <http://economictimes.indiatimes.com/news/economy/policy/un-climate-change-negotiations-2012-developing-and-developed-countries-divided-on-loss-and-damage/articleshow/17528764.cms>.

ecosystems and human institutions can recover, such as impacts on infrastructure related to violent weather events or damage to mangroves from coastal surges.⁵⁸

In short, climate change will have severe financial and other impacts on nations and their constituents in the years to come.

Perhaps precisely because of the sheer potential magnitude of the problem of climate change, developed nations have, so far, no matter how inequitably this may appear, refused to accept any legally binding loss and damage provisions under the Paris Agreement. Ultimately, the parties to the UNFCCC opted *not* to establish a discrete loss and damage mechanism under the Agreement, but rather to make the existing loss and damage provision under the Warsaw International Mechanism for Loss and Damage (“WIM”) “subject to the authority and guidance of the Conference of the Parties serving as the meeting of the Parties to [the Paris] Agreement” (“CMP”).⁵⁹ In other words, the WIM is still applicable under the Paris Agreement in spite of the years since its adoption.

Whereas the WIM “may be enhanced and strengthened,”⁶⁰ the Decision of the Parties (“Decision”) also expressly and indicatively provides that the loss and damage provision of the Agreement – Article 8 - will “not involve or provide a basis for *any* liability or compensation.”⁶¹ “This provision was critical for engendering support by developed countries, who for the most part opposed [the] creation of potential legal remedies for climatic impacts,”⁶² whereas “[m]any developing countries fought to include a loss and damage provision in the Paris Agreement, believing that this would increase the issue’s

58. Burns, *supra* note 6, at 417.

59. U.N. Paris Agreement, *supra* note 6, at art. 8.

60. *Id.*

61. U.N. Framework Convention on Climate Change, *Report of the Conference of the Parties on its twenty-first session, held in Paris from 30 November to 11 December 2015*, 51 U.N. Doc. FCCC/CP/2015/L.9/Rev.1 (Dec. 12, 2015) [hereinafter *Report of the Conference*].

62. Burns, *supra* note 6, at 425.

saliency in the years to come”⁶³ Some doubt remains as to the legal status of the Decision, which may thus not preclude action for liability. On the other hand, the Decision remains important for interpreting Article 8 of the Agreement. It speaks in no uncertain terms about the Parties’ intended effects of the Agreement on loss and damage liability, namely to not create “any.” Should it come to any legal action against nations for loss and damage in the climate change context, this could be highly determinative despite quibbles regarding the exact legal effects of one instrument versus the other.

Having said that, it should also be noted that some nations, such as Micronesia, renounced the attempts by otherwise potentially liable nations to reject liability as follows:

The Government of the Federated States of Micronesia declares its understanding that its ratification of the Paris Agreement does not constitute a renunciation of any rights of the Government of the Federated States of Micronesia under international law concerning State responsibility for the adverse effects of climate change, and that no provision in the Paris Agreement can be interpreted as derogating from principles of general international law or any claims or rights concerning compensation and liability due to the adverse effects of climate change.⁶⁴

This was likely done in order to, and may have the effect of, preserving Micronesia’s legal rights to claim liability for loss and damage under the “no harm” principles stemming from, among other things, the Trail Smelter decision analyzed further below.

Whereas the preamble to the Paris Agreement mentions such laudable intentions as “the principle of equity and common but differentiated responsibility” and “the specific

63. *Id.* at 424.

64. U.N. Paris Agreement Micronesia Ratification, *opened for signature* Apr. 22, 2016 (entered into force Nov. 4, 2016).

needs and special circumstances of developing country Parties, especially those that are particularly vulnerable to the adverse effects of climate change,”⁶⁵ the preamble is not legally binding and thus has little, if any, legal effect. In combination with the parties specifically renouncing the legal liabilities for financially adverse consequences of climate change on each other’s territories in the COP Decision, it is fair to say the Paris Agreement did not bring more hope in the treaty context as regards financial liability.

Thus, the most relevant provision to loss and damage under the UNFCCC umbrella is still the WIM. This was established to address climate change-associated loss and damage, both in terms of extreme weather and slow-onset events in vulnerable developing countries.⁶⁶ The WIM is tasked with three primary functions, reflecting both functional modes of action (action approaches) and systemic modes of actions (signaling areas of concern):⁶⁷

1. “Enhancing knowledge and understanding of comprehensive risk management approaches to address loss and damage.” Methods to facilitate this will include seeking to address gaps in knowledge and expertise to address loss and damage, collection, sharing, management and use of relevant data and information and a collation of best practices, challenges and lessons learned;

2. “Strengthening dialogue, coordination, coherence and synergies among relevant stakeholders.” This function is to be effectuated by spearheading and coordinating assessment and implementation of approaches to address loss and damage, and to foster dialogue, coordination and synergies among pertinent

65. U.N. Paris Agreement, *supra* note 6, at preamble.

66. *Report of the Conference*, *supra* note 61, at art. 8, ¶ 1.

67. Laura Schäfer & Sönke Kreft, *Loss and Damage: Roadmap to Relevance for the Warsaw International Mechanism*, GERMANWATCH & BROTFÜR DIE WELT, Mar. 2014, at 1, 9-10, <https://germanwatch.org/en/download/9002.pdf>.

stakeholders, institutions and key processes and initiatives;

3. “Enhancing action and support, including finance, technology and capacity building.” This should include providing technical support and guidance to those seeking to address loss and damage, information and recommendations to the Conference of the Parties on how to reduce risks and manifestations of loss and damage, and efforts to mobilize expertise, financial support, technology and capacity-building.⁶⁸

However, none of these “soft law” provisions are likely to be able to result in any one nation or region (e.g., the EU) being held legally liable for the climate change-related loss and damage incurred by other nations. In addition to the problem presented by the vagueness of the WIM provisions, the problem of traceability between one arguably culpable nation or group of nations and the asserted victim nation remains difficult, as will be analyzed further below, but also presents an obstacle to nation state liability for loss and damage caused by climate change. In short, it is, at best, questionable how effective the WIM will be in assisting nations seeking to hold other nations financially liable for loss and damage.

The Paris Agreement does, however:

[S]et[] forth a number of potential areas for facilitation and cooperation in the context of loss and damage, including establishment of early warning systems, emergency preparedness, responses to slow onset and irreversible events, comprehensive risk assessment and management, establishment of risk insurance facilities, addressing of non-economic losses, and strategies to enhance resilience of human institutions and ecosystems.⁶⁹

68. Burns, *supra* note 6, at 422.

69. *Id.* at 425.

“The Parties also requested that the WIM Executive Committee establish an information clearinghouse for insurance and risk transfer mechanisms, as well as a task force to address climate-related population displacement.”⁷⁰ “Finally, the Agreement authorized the CMP to enhance and strengthen the WIM in the future.”⁷¹

In short, legal liability for loss and damage caused by climate change is, on balance, unlikely to arise under the WIM/UNFCCC regime. The provisions therein are simply too vague when it comes to a potential finding of liability and, at the same time, sufficiently clear when it comes to the renunciation of it. The battle was arguably lost before and during the Paris Agreement negotiations. Thus, nation states looking to hold other nations responsible for climate change-induced financial losses will have to look to other legal venues. This includes taking a renewed look at the generalized provisions of international law including customary international law. These will be analyzed next.

V. State Responsibility for Internationally Wrongful Acts

“Every internationally wrongful act of a State entails the international responsibility of that State.”⁷² Nation states may thus be liable to each other for both direct and indirect legal wrongs. “A direct wrong arises when one State is in direct breach of an obligation owed to another State, e.g. the breach of a treaty” of which both parties are members or the breach of a customary obligation.⁷³ Indirect liability arises where a state is in breach of a duty owed to the national of another state, rather than the state itself.⁷⁴

Two further bases for state responsibility exist: the “risk” or “objective” theory of responsibility and the “fault” or

70. *Id.*

71. *Id.*

72. U.N. International Law Commission, *Draft articles on Responsibility of States for Internationally Wrongful Acts, with commentaries*, art. 1, U.N. Doc. A/56/10 (2001) [hereinafter DARSIVA].

73. KACZOROKSA-IRELAND, *supra* note 9, at 450, 459.

74. *Id.* at 450.

“subjective” theory of responsibility.⁷⁵ Under the objective theory, a nation may be held liable for both the acts of the officials or organs of the state, even in the absence of any “fault” of its own.⁷⁶ The Caire Claim (France v. Mexico) exemplifies this approach: Caire, a French national, was tortured and killed in Mexico by Mexican soldiers in a failed ransom attempt.⁷⁷ In applying the doctrine of objective responsibility and holding Mexico liable, the President of the Claims Commission explained that:

[T]he doctrine of “objective responsibility” . . . may devolve upon [the nation state] *even in the absence of any “fault” of its own* . . . The state also bears an international responsibility for all acts committed by its officials or its organs which are delictual according to international law, regardless of whether the official organ has acted within the limits of its competence . . . However, . . . it is necessary that [the officials or organs] *should have acted* . . . or that, in acting, *they should have used powers or measures appropriate to their official character*.⁷⁸

As regards the way nation states should have acted, they arguably should have taken (and still should take) greater steps to alleviate climate change under their duty not to knowingly allow their territories to be used for acts contrary to the rights of other States,⁷⁹ as will be analyzed next.

The doctrine of objective responsibility appears to have somewhat wider support than that of subjective

75. *Id.* at 457.

76. *Id.*

77. Estate of Jean-Baptiste Caire (Fr.) v. United Mexican States, 5 R.I.A.A. 516, 529-531 (1929).

78. *The Basis and Nature of State Responsibility*, CHEGE KIBATHI & CO: LAW LEARNERS (Dec. 14, 2013), <http://www.ckadvocates.co.ke/2013/12/the-basis-and-nature-of-state-responsibility/> (last visited Mar. 7, 2017).

79. See The Corfu Channel Case (*U. K. v. Alb.*), Judgment, I.C.J. 4, 22 (1948); Trail Smelter Case (*U. S. v. Can.*), 3 U.N. REP. INT’L ARB. AWARDS 1905 (1941) [hereinafter Trail Smelter Case].

responsibility.⁸⁰ However, scholars have also “argued that to see State responsibility exclusively in the light of either approach is misleading.”⁸¹ The better view is that the “content of a particular duty—will depend not upon a general principle but upon the precise formulation of each obligation of international law.”⁸²

Accordingly, without applying the subjective/objective differentiation, established principles of international law hold that every internationally wrongful act is an act *or* omission on the part of a State which 1) “is attributable to the State under international law” and 2) “constitutes a breach of an international obligation of the State.”⁸³

Decades ago, the Trail Smelter arbitration case famously established the now broadly accepted view that nation states may be held liable for damages caused by pollution emanating from facilities in one nation and harming a neighboring state, even where the facilities at issue are privately owned and thus arguably not directly attributable to the nation from which the pollution stems.⁸⁴ In the case, the United States sued Canada for violating American sovereignty by allowing Canadian territory to be used in a manner that caused severe pollution in the United States.⁸⁵ At bottom, the case arose as follows: during the early 20th century, the Canadian zinc and lead smelting company Cominco was operating in Trail, British Columbia, a few miles from the American border.⁸⁶ This industrial process emitted sulfur dioxide causing injury to plant life, forest trees, soil, and crop yields in Washington

80. KACZOROKSA-IRELAND, *supra* note 9, at 459.

81. *Id.*

82. IAN BROWNLIE, SYSTEM OF THE LAW OF NATIONS: STATE RESPONSIBILITY, PART 1 40 (1983).

83. DARSIIWA, *supra* note 72, at art. 1, 2.

84. *See generally* Trail Smelter Case, *supra* note 79.

85. *Id.* at 1912-13.

86. *Id.* at 1913; *see* Dene Moore, *U.S. Ruling Over Teck's Rail, B.C. Smelter May Have Ripple Effect*, THE GLOBE AND MAIL (Dec. 16, 2012, 4:08 PM), <http://www.theglobeandmail.com/report-on-business/industry-news/the-law-page/us-ruling-over-tecks-rail-bc-smelter-may-have-ripple-effect/article6459408/> (“[C]omplaints about the contamination from the Trail smelter surfaced as early as the 1940s, when farmers from Washington state sued Cominco . . . over air pollution from the smelter.”).

State.⁸⁷ American farmers claimed damages from the waste emitted by the smelter.⁸⁸ After several rounds of failed negotiations, the United States charged Canada for these injuries.⁸⁹ The case was referred to the International Joint Commission, a bilateral tribunal overseeing issues regarding the two countries.⁹⁰ The tribunal held that it is the responsibility of a State to protect other states against harmful act by individuals from within its jurisdiction at all times:

[U]nder the principles of international law, as well as of 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 by fumes in or to the territory of another or the properties or persons therein, when the case is of serious consequence and the injury is established by clear and convincing evidence.⁹¹

Canada eventually accepted responsibility for the actions of the smelting plant.⁹² As a result, Canada was forced to pay for COMINICO's past pollution instead of it "conflict resolution put the onus on Canada to compensate for COMINICO's *past* pollution rather than forcing COMINICO to prevent *future* harm to U.S. soil."⁹³ In addition to the duty not to knowingly allow a national territory to be used for acts contrary to the rights of other states (the "transboundary harm principle"), the legacy of this decision also came to include the polluter-pays principle as well as the duty to establish regulatory regimes to

87. See Catherine Prunella, *An International Environmental Law Case Study: The Trail Smelter Arbitration*, INTERNATIONAL POLLUTION ISSUES (Dec. 2014), <https://intipollution.commons.gc.cuny.edu/an-international-environmental-law-case-study-the-trail-smelter-arbitration/> ("Sulfur dioxide and particulate matter from the metals were the constituents of the smelter smoke produced at Trail.").

88. Trail Smelter Case, *supra* note 79, at 1917.

89. *Id.* at 1907.

90. *Id.* at 1918.

91. *Id.* at 1965.

92. See *id.* at 1933 (stating "the Dominion of Canada has completely fulfilled all obligation with respect to the payment [of past damages]").

93. See *supra* notes 80, 89.

prevent environmental degradation, which, in turn, allow nations to take positive steps to control pollution. The failure by states to meet these responsibilities may mean that they are breaching international law.

“Subsequently, the no-harm rule has been incorporated in various law and policy documents.”⁹⁴ For example, Principle 21 of the 1972 Stockholm Declaration provides that:

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.⁹⁵

Principle 2 of the 1992 Rio Declaration on Environment and Development, Article 3 of the Convention on Biological Diversity, and the preamble of the UNFCCC repeat Principle 21 of the Stockholm Declaration almost verbatim.⁹⁶ Article 194 paragraph 2 of the 1982 United Nations Convention on the Law of the Sea (UNCLOS) mention the doctrine that “[s]tates

94. *No-harm Rule*, *supra* note 7, at 1.

95. U.N. Conference on the Human Environment, *Report of the United Nations Conference on the Human Environment*, Principle 21, U.N. Doc. A/CONF.48/14/Rev.1 (June 5-16, 1972).

96. U.N. Conference on Environment & Development, *Rio Declaration on Environment and Development*, Principle 2, U.N. Doc. A/CONF.151/26 (Vol. 1) (Aug. 12, 1992); U.N. Convention on Biological Diversity, *opened for signature* June 5, 1992, art. 3 (entered into force Dec. 29, 1993); U.N. Framework Convention on Climate Change, Preamble, U.N. Doc. FCCC/INFORMAL/84 (1992). *See also* U.N. Convention on the Law of the Non-navigational Uses of International Watercourses, *opened for signature* May 21, 1997 (entered into force Aug. 17, 2014); U.N. Conference on Trade and Development, *International Tropical Timber Agreement*, U.N. Doc. TD/TIMBER.3/12 (Feb. 1, 2006); U.N. Convention, *The Stockholm Convention on Persistent Organic Pollutants*, *opened for signature* on May 22, 2001, U.N. Doc. UNEP/POPS/CONF/4, App. II (2001) (entered into force May 17, 2004); U.N. Convention to Combat Desertification in Those Countries Experiencing Serious Drought and/or Desertification, *Final Text of the Convention*, U.N. Doc. A/AC.241/27 (Sept. 12, 1994).

shall take all measures necessary to ensure that activities under their jurisdiction or control are so conducted as not to cause damage by pollution to other States and their environment”⁹⁷

“While it has been questioned whether the no-harm rule is adequately reflected in actual state practice to represent customary international law, its existence has been authoritatively confirmed by the International Court of Justice (ICJ).”⁹⁸

In the advisory opinion on the threat or use of nuclear weapons, the ICJ explicitly stated that “[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.”⁹⁹

“The Court repeated these findings in the case concerning the Gabčíkovo-Nagymaros dam (*Hungary v. Slovakia*)¹⁰⁰ and most recently in the case concerning Pulp Mills on the River Uruguay (*Argentina v. Uruguay*).”¹⁰¹

“The Trail Smelter arbitration is widely accepted as the [foundational basis] for the development of the no-harm rule.”¹⁰²

97. U.N. Convention on the Law of the Sea, *opened for signature* Dec. 10, 1982, art. 194(2) (entered into force Nov. 16, 1994).

98. *No-harm Rule*, *supra* note 7, at 2.

99. *Id.*

100. *Id.*

101. *Id.* According to the Legal Responsive Initiative:

The latter judgment states that ‘[a] State is thus obliged to 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.’ *Id.* In this connection, the ICJ refers to the no-harm rule as the ‘principle of prevention’ and points out that as a customary rule it has its origins in the due diligence that is required of a State in its territory.

Id.

102. *Id.*

However, “while the case only dealt with transboundary harm to other (neighbouring) [sic] states, the Stockholm principles and other subsequent international agreements also include, [more broadly], the global commons.”¹⁰³ “States are under an obligation to protect the environment of other states and in areas *beyond* national jurisdiction from damage caused by activities on their territory.”¹⁰⁴ This notion is not limited to neighboring states. For example, in a case between Argentina v. Uruguay, the ICJ stated that “[a] State is [] obliged to 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.”¹⁰⁵ Article 2(c) of the International Law Commission’s Draft Articles on the Prevention of Transboundary Harm from Hazardous Activities also defines “transboundary harm” as “harm caused in the territory of” another state “whether or not the States concerned share a common border.”¹⁰⁶

The 2001 Draft Articles on Responsibility of States for Internationally Wrongful Acts provide for two situations in which a state may be responsible for unlawful acts committed by private persons namely, under Article 8: 1) when their conduct is “directed or controlled by a State”¹⁰⁷ or, 2) under Article 11, when their conduct is “acknowledged and adopted by a State.”¹⁰⁸

Further, Section 601 of the Restatement (Third) of Foreign Relations Law provides that:

A state is obligated to take such measures as may be necessary, to the extent practicable under the circumstances, to ensure that activities within its jurisdiction or control . . . are conducted so as not to cause significant injury to

103. *No-harm Rule*, *supra* note 7, at 2.

104. *Id.* (emphasis added).

105. *Pulp Mills on the River Uruguay (Arg. v. Uru.)*, Judgment, 2010 I.C.J. at 56, ¶ 101 (Apr. 2010).

106. U.N. International Law Commission, *Draft Articles on Prevention of Transboundary Harm from Hazardous Activities, with commentaries*, art. 2(c), U.N. Doc. A/56/10 (2001).

107. *DARSIWA*, *supra* note 72, at art. 8.

108. *Id.* at art. 11.

the environment of another state or of areas beyond the limits of national jurisdiction.¹⁰⁹

Finally, the preamble to the United Nations Framework Convention on Climate Change clearly states that that “[s]tates have . . . the sovereign right to exploit their own resources pursuant to their own environmental and developmental 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.”¹¹⁰ These provisions clearly make the “no harm” principle applicable in the climate change context:

[T]here is a general consensus that transboundary interference must be “of serious consequence” and cause at least “significant”, “substantial” or “appreciable” harm. Minimal, trivial or simply detectable impacts do not meet that threshold. A detrimental effect on matters such as human health, property or agriculture broadly measurable in monetary terms is required to trigger the application of the no harm rule.”¹¹¹

Nation states may thus, as a starting point, be held liable for damage to the territory of another nation. This is, in general, a no fault rule¹¹²:

The notion of fault or *culpa* is particularly inappropriate in respect of State responsibility for wrongful acts because: it requires the discovery of the intentions or motives of a wrongful act; and it misunderstands the main

109. RESTATEMENT (THIRD) OF FOREIGN RELATIONS LAW § 601 (1)(b) (AM. LAW INST. 1987).

110. U.N. Framework Convention on Climate Change, Preamble, U.N. Doc. FCCC/INFORMAL/84 (1992).

111. *No-harm Rule*, *supra* note 7.

112. DARSİWA, *supra* note 72, at art. 1, 2; KACZOROWSKA-IRELAND, *supra* note 9, at 459.

purpose of imposing responsibility on a State which is to restore the equality of states *vis-à-vis* their international obligations which has been disturbed by the commission of a wrongful act.¹¹³

The lack of fault may nonetheless still be invoked in some cases for some limited purposes. For example, the lack of fault may be invoked as an element of particular excuse doctrines and thus preclude state responsibility in certain circumstances as will be analyzed further below. Fault is also taken into account in the determination of compensation.¹¹⁴ A state may be held liable where, for example, “it has knowledge of the circumstances of a wrongful act of another state and notwithstanding this provides aid and assistance to that state”¹¹⁵ or “directs and controls another State in the commission of an internationally wrongful act.”¹¹⁶

A few examples of nations being held responsible for acts damaging other nations’ territories despite the lack of fault serve to illuminate the doctrine. When NATO forces led by the United States mistakenly bombed the Chinese embassy in Belgrade, the United States paid damages despite the fact that no culpability or fault was at issue.¹¹⁷ Similarly, China paid damages to the United States for mob damage to the United States diplomatic mission in China during demonstrations subsequent to the just mentioned bombing.¹¹⁸

As for compensation, a liable nation state must make “full reparation for the injury caused by the commission of the internationally wrongful act.”¹¹⁹ This “may take the form of restitution, compensation or satisfaction, either separately or in combination.”¹²⁰

Although climate change poses a typical tragedy-of-the-commons style problem caused by a multitude of nation state

113. KACZOROWKSA-IRELAND, *supra* note 9, at 459.

114. *Id.*

115. DARSIVA, *supra* note 72, at art. 16.

116. *Id.* at art. 17.

117. KACZOROWKSA-IRELAND, *supra* note 9, at 469.

118. *Id.*

119. *Id.* at 453.

120. *Id.*

and private actors and is not solvable by any one particular actor or nation state, it has become increasingly implausible for at least some nation states to continue to argue that they have not “caused” or been at “fault” for causing the problem. This particularly applies to the historically and currently major CO₂ emitters such as the USA, EU, China, and India. Clearly, these and other nations have contributed very significantly to the substantive problem because of decades of regulatory inaction and, in the case of some, downright denial of responsibility for the underlying problem, if not even the very existence of the problem itself. This weighs in favor of finding that they can indeed be faulted for the problem caused in such large part by these nations. The counter-argument in this context is typically that of causation, namely that so long as a problem is not sufficiently attributable to one particular actor, that actor should not bear the legal and financial consequences of the problem. In other words, the problem remains the traceability between the polluting activities in each individual nation and the overall problem. However, with modern scientific knowledge, each nation’s historic and current share of the problem has become known to a sufficiently specific extent so that liability could, for example, be attributed on a pro-rata basis reflecting historical CO₂ emissions until a certain year and, thereafter, current emissions. Nation states clearly have knowledge of the circumstances of the wrongfulness of not curbing climate change. The fact that many still stall in taking action in this regard is either irrelevant to the liability argument or adds to the justifiability of holding them liable.

As a starting point, the standard of liability is, as mentioned, a no-fault standard.¹²¹ Thus, even if a nation state claims – and, granted, arguably correctly so – that *it* did not cause climate change since a multitude of actors did, it suffices that the particular nation *should have* acted by taking appropriate measures against this problem as its causes and effects became known. It has become reckless for nation states to continue to ignore a problem of this national and international severity knowing full well how at least some action – regulatory and otherwise – could have been and still

121. See DARSIIWA, *supra* note 72, at art. 1, 2; KACZOROWKSA-IRELAND, *supra* note 9, at 459.

can be taken against it by at least developed nations. Under Trail Smelter and its progeny, nation states are in violation of the law where they allow their territories to be used in ways that cause damage to other nations. Further, “the legal literature increasingly describes the principle of prevention as emanating from the concept of due diligence – a standard of care [attributable to] government authorities.”¹²² Thus, despite the foreseeability of events or lack thereof, proportionate measures which were capable of protecting the environment were and are often *not* taken. A state may thus be considered careless and potentially liable for the resulting harm.

When the injurious action is “controlled” by a state, as is the case with most CO₂-creating activities in developed nations around the world, nations may be held liable. In addition to the lack of sufficient regulatory action, nation states still provide aid and assistance to other states with the knowledge that the recipient states continue activities that add to the climate change problem. Although it is, of course, sound international policy to provide aid and assistance to other states, the time may well have come to more closely earmark such assistance to activities that do not further contribute to climate change. For equitable reasons, the donor states should then arguably also step up their own climate change-curbing action so as to not demand more from others than what developed nations themselves do, but that is the direction developments in this context need to go anyway.

In short, if developed nations continue to delay or refuse taking effective steps to curb climate change, they may, under customary international law and international legal principles, albeit not the UNFCCC Paris Agreement, incur legal liability under the no-harm rule. This problem is becoming more and more relevant as the number and severity of climate change-induced severe weather events increase. The financial risks caused by climate change are significant. This is, of course, precisely why developed nations, who to a very large degree caused the underlying problem in the first place, now seek to avoid financial liability. If, however, liability actions are

122. *No-harm Rule*, *supra* note 7, at 5. See PATRICIA BIRNIE, ALAN BOYLE & CATHERINE REDGWELL, *INTERNATIONAL LAW & THE ENVIRONMENT* 143-52, 453 (3d ed. 2009).

brought against them, they are likely to invoke one or more of the excuse doctrines addressed next.

VI. Excuse for the International Wrongness of State Acts

As a threshold matter, it is important to note that the following “exculpatory defenses preclude the [legal] *wrongfulness* of an act, but not necessarily the *responsibility* of the perpetrating State.¹²³ The matter of whether, in a situation where a State takes action that causes injury to another State or its nationals, but the action is not unlawful, that State will still be under an obligation to pay compensation is addressed in Article 27 of the DARSIIWA: “The invocation of a circumstance precluding wrongfulness . . . is without prejudice to . . . the question of compensation for any material loss caused by the act in question.”¹²⁴ Importantly, thus, is

[t]he fact that an act of State *is* lawful will not necessarily mean that the respondent State will have no duty to pay compensation. In particular, in a situation of distress or necessity there is no reason why a State, which acts for its own benefit, should not pay compensation for any material harm or loss caused by its act.¹²⁵

Nonetheless, states would, in all likelihood, first attempt to seek a determination that their allegedly wrongful acts were not so from a legal standpoint. This could make their case against liability stronger as well.

The wrongfulness of an act of a state may be precluded based on the provisions on *force majeure*, necessity, or distress. These doctrines have, among other places been addressed in detail by the International Law Commission’s Articles on the Responsibility of States for Internationally Wrong Acts (“ILC

123. KACZOROWKSA-IRELAND, *supra* note 9, at 506 (emphasis added).

124. DARSIIWA, *supra* note 72, at art. 27.

125. KACZOROWKSA-IRELAND, *supra* note 9, at 453 (emphasis added).

Articles”).¹²⁶ The extent to which these provisions may apply to weather-related losses, and whether such losses can be attributed to the action or inaction of a nation state, will be analyzed next.

1. Force Majeure

Article 23 provides that “[t]he wrongfulness of an act of a State not in conformity with an international obligation of that State is precluded if the act is due to *force majeure*, that is the occurrence of an irresistible force or of an unforeseen event, beyond the control of the State, making it materially impossible in the circumstances to perform the obligation.”¹²⁷ *Force majeure* does not apply if the situation is “due, either alone or in combination with other factors, to the conduct of the State invoking it[:] or [if] the state has assumed the risk of that situation occurring.”¹²⁸

International tribunals have accepted *force majeure*, which is also recognized in the majority of the legal systems around the world.¹²⁹ It is a general principle of international law that applies to a wide range of situations where a nation state has been “compelled to act in a manner not in conformity with the requirements of an international obligation incumbent upon it” because of a superseding event.¹³⁰ Such an event could be extreme weather that diverts state aircraft or ships into the territory of another state or, problems caused by earthquakes, floods, or drought. “[A] tsunami could damage a nuclear [power] plant, rendering it impossible for the state to comply with an international obligation to . . . provide energy to a neighbouring state.”¹³¹ *Force majeure* might also stem from human intervention such as the loss of control of a portion of a

126. Articles 23 and 25 may also apply to situations of treaty withdrawal. However, this is outside the scope of this article.

127. DARSIIWA, *supra* note 72, at art. 23.

128. *Id.*

129. Paddeu, *supra* note 10, at 476.

130. U.N. Legislative Series, *Materials on the Responsibility of States for Internationally Wrongful Acts*, art. 23, U.N. Doc. ST/LEG/SER.B/25 (2012) [hereinafter *Legislative Series*].

131. Paddeu, *supra* note 10, at 463.

state's territory as a result of insurrections or the destruction of territory by a third state.¹³² The doctrine of *force majeure* has traditionally been invoked in cases where ships and aircraft were forced into the territory of other nations because of severe weather.¹³³ The same may, of course, happen in the future. Drones would fall under the doctrines as well, as might persons (civilians or military personnel) allegedly "forced" to cross boundaries to, for example, obtain water in cases of severe drought. As air streams and water currents may shift in yet unpredictable ways, pollutants may also enter the territory of other nations in currently unexpected ways.

The following elements must be satisfied for the defense to be available: First, the act "must be brought about by an irresistible or unforeseen event."¹³⁴ "Irresistible" means that "there must be a constraint which the State was unable to avoid or oppose by its own means."¹³⁵ In other words, there can be no element of free choice that could be exercised by the nation. "Unforeseen" requires that the event was neither actually foreseen nor of "an easily foreseeable kind."¹³⁶ Second, the event must have been "beyond the control" of the state.¹³⁷ Thus, the doctrine does not apply if the situation has been "brought about by the [state's own conduct] . . . even if the resulting injury itself was accidental and unintended."¹³⁸ "A State may not invoke *force majeure* if it has caused or induced the situation in question."¹³⁹ In other words, the situation must not be "due, either alone or in combination with other factors, to the conduct of the State invoking it."¹⁴⁰ However, if the state has merely "contributed" to the situation, the defense *may* still be available under the circumstances of the case.¹⁴¹ In that respect, a good faith standard applies to the analysis of the degree to which the state "caused" or "contributed to" the

132. Legislative Series, *supra* note 130, at art. 23.

133. *Id.* at art. 24.

134. *Id.* at art. 23.

135. *Id.*

136. *Id.*

137. Legislative Series, *supra* note 130, at art. 23.

138. *Id.*

139. *Id.*

140. *Id.* (emphasis added).

141. *Id.*

problem.¹⁴² Third, the event must have made compliance with the international obligation “materially impossible” to perform the obligation.¹⁴³ In the *Rainbow Warrior Arbitration*, for example, France claimed that the urgent repatriation to France, without the consent of New Zealand, of a member of the French Secret Service who had placed explosives on the Rainbow Warrior because of an alleged medical emergency amounted to an absolute and material impossibility, thus warranting the excuse of *force majeure*.¹⁴⁴ The tribunal disagreed.¹⁴⁵

Crucially, in the climate change context, the successful invocation of *force majeure* will require more than a situation having become more difficult in general.¹⁴⁶ Mere economic difficulties or political problems also will not suffice.¹⁴⁷ On the other hand, “the degree of difficulty associated with *force majeure* . . . , though considerable, is less than is required” under other articles that relate to “impossibility,” such as Article 61, governing the right to withdraw from a treaty.¹⁴⁸ In practice, the defense has failed on this prong in many of the cases in which it has been invoked.¹⁴⁹ *Force majeure* will also not excuse a performance “if the State has undertaken to prevent the particular situation arising or has otherwise assumed that risk.”¹⁵⁰

In the early cases, the doctrine was analyzed in cases of property damage caused by the outbreak of wars, insurrection and civil unrest, and pillaging by tribes.¹⁵¹ Only occasionally did the defense prevail. In one weather-related case, the Venezuelan government and a French company concluded a

142. Legislative Series, *supra* note 130, at art. 23.

143. *Id.*

144. See U.N. Secretary-General, *Ruling on the Rainbow Warrior Affair Between France and New Zealand*, 26 I.L.M.1346 (1987).

145. *Id.*

146. See generally Legislative Series, *supra* note 130, at art. 23.

147. *Id.*

148. *Id.*

149. *Id.* (“In practice, many of the cases where ‘impossibility’ has been relied upon have not involved actual impossibility as distinct from increased difficulty of performance and the plea of *force majeure* has accordingly failed.”).

150. *Id.*

151. Paddeu, *supra* note 10, at 410-11, 414, 419, 420-21.

contract for the construction of a railway.¹⁵² The work was interrupted by floods, inundations, fires, earthquakes and the Crespo revolution.¹⁵³ The French company suspended its operations and claimed damages for the problems caused by the natural events and the war.¹⁵⁴ Both parties invoked *force majeure*: the company “claimed that it had suspended its operations due to *force majeure* brought about by the revolution and the government’s failure to pay” for its debts to the company.¹⁵⁵ The government claimed not to be responsible for damages caused to the company’s assets because of the natural events and accidents caused by open fire.¹⁵⁶ It also sought to avoid liability for its debts to the company because of the war.¹⁵⁷ The umpire upheld the Venezuelan government’s plea of *force majeure* in relation to the war activities and further held that the government was not responsible for the suspension of the company’s operations because the situation in the country was part of those “misfortunes” which were “incident to government, to business, and to human life.”¹⁵⁸ However, tribunals may very well look differently at weather situations today. With the availability of scientific knowledge about what causes weather events, where they will occur, and the expected degree of severity, nation states may be unlikely to attribute problems they have arguably caused to mere misfortunes of life.

More recently, other considerations also highly relevant to climate change problems have been addressed and reconfirmed as follows: “*Force majeure* is ‘generally invoked to justify *involuntary*, or at least unintentional conduct.’”¹⁵⁹ The “unforeseen external event [must be one] against which [the

152. *French Company of Venezuelan Railroads*, 10 R.I.A.A. 285, 335 (1905).

153. *Id.* at 335-38.

154. *Id.* at 291, 316.

155. *Id.* at 287.

156. *Id.* at 330-31.

157. *French Company*, *supra* note 152, at 297, 331-32.

158. *Id.* at 353.

159. Legislative Series, *supra* note 130, at art. 23 (citing case between New Zealand and France concerning the interpretation or application of two agreements concluded on July 9, 1986, between the two States relating to the problems arising from the *Rainbow Warrior Affair*, arbitral award, 30 April 1990, para. 77, reproduced in UNRIAA, vol. XX, pp 252-253).

nation] has no remedy. . . .”¹⁶⁰ A strict meaning is attached to this requirement: The constraint must be one “which the State was unable to avoid or to oppose by its own means . . . The event must be an act which occurs and produces its effect without the State being able to do anything which might rectify the event or might avert its consequences.”¹⁶¹

Does it still follow legally for a nation state to assert *force majeure* in defense of such unauthorized entries because of “extreme” weather? As with the doctrines of good faith and risk assumption, it is becoming more and more implausible for at least the historically largest CO₂ emitters to continue to argue that they should, in good faith, be exempt from liability for the severe problems that are now arising because of historic (and current) greenhouse gas emissions. The largest emitters must be said to have assumed that the problem would arise. To a large extent, they postponed action that could have remedied some of the worst climatic effects that we are now beginning to witness. Of course, this stems from a lack of political will to take such action, but under the law, mere political difficulties do not warrant a finding of non-liability under the excuse of *force majeure*.

Further, it makes less and less common sense to claim that allegedly extreme or severe weather events causing aircraft, vessels or even people to enter the territory of another state without prior consent should be excused because such weather was not actually foreseen or of an easily foreseeable kind. Common sense does and should continue to drive the development of the law as well. With today’s readily available knowledge about climate change, arguments that almost any kind of weather-related event that could correctly have been considered extreme and unforeseeable *in the past* are becoming increasingly implausible. “Extreme weather is rapidly becoming the new norm [around the globe].”¹⁶² What were previously seen as actually unforeseen, if not altogether unforeseeable, events are now typically the exact opposite:

160. *Id.* at art. 23.

161. *Id.*

162. Mid-Atlantic Transition Hub, *MATH Builds Mid-Atlantic Extreme Weather Resilience*, TRANSITION U.S., <http://transitionus.org/stories/math-builds-mid-atlantic-extreme-weather-resilience> (last visited Apr. 17, 2017).

highly foreseeable regarding the frequency, location, time of year, and degree of severity. They should thus be foreseen as well. Nation states, as well as private actors, must become more practically and legally prepared for severe weather posing more and more problems of increasing severity as experience has already amply demonstrated by now. The law should come to reflect this new reality in both the private and public spheres.

The legal difficulty remains, however, whether the problem can, narrowly, be said to be due to the actions or inactions of certain nations or whether these have merely contributed to the problem, in which case the defenses may still be available. Clearly, some nations have contributed significantly to the substantive problem because of decades of regulatory inaction and, in the case of some, downright denial of responsibility for the underlying problem, if not even the very existence of the problem itself. For the defense to lie, the situation must thus not be due singly *or* in combination with *other* factors to the invoking state. Some nations persistently rely on the argument that they could not, by their own means, have stemmed the problem. Thus, they will argue, they have not been able to (and are still not able to) “control” the problem and did not “cause” it; they merely “contributed” to an already existing problem. In that case, the doctrine might still be applicable. In other words, the *force majeure* doctrine requires a close causal examination of the extent to which other factors contributed to the problem than the actions of one particular nation state. A multitude of nations and actors caused climate change, but notably, the defense may be denied even where other nations have *also* not taken sufficient regulatory or other action. Unilaterality is thus neither a requirement nor a defense.

Case law also demonstrates that for the defense of *force majeure* to lie, the invoking state must not have been able to do “anything” which “might” rectify the problem or avert its consequences.¹⁶³ Mere financial or political difficulties are, as explained, not enough to warrant the excuse. In the case of climate change, many developed nations now take active steps

163. Paddeu, *supra* note 10, at 457.

to prevent dangerous climate change. Some nations are willing to step up their efforts even more in the future. For example, Denmark's CO₂ emissions have already dropped 22% since 1990.¹⁶⁴ The EU's key climate action targets are 20% greenhouse gas emission reductions by 2020,¹⁶⁵ 40% by 2030, and 80-95% by 2050.¹⁶⁶ The United States and China have, finally, also agreed to undertake action against climate change as have, arguably, all nations under the Paris Agreement. To some extent, it still remains to be seen if the parties also take effective steps to live up to the promises. But it remains clear that nation states can - if the will is there - now take practical, regulatory, financial and other steps to solve the substantive problem. For that reason, too, should the availability of *force majeure* be scrutinized in relation to potential nation state liability for loss and damage to the territories of other nations.

A continued reliance on the isolationist argument—since one particular state or even group of states cannot singularly curb the problem, the defenses described in this article should be available—is clearly undesirable from a practical and public policy point of view. Climate change may soon take on even worse life-and-death consequences than what is already thought to be the case,¹⁶⁷ not to mention the severe economic problems that have become traceable to climate change. Since some nations are now reducing CO₂ emissions significantly, the argument that the actions of one nation or region will not help are no longer warranted. Every action taken helps and, perhaps more importantly, spurs even further action by other

164. Ture Falbe-Hansen, *Danish Carbon Emissions Continue to Drop*, STATE OF GREEN (May 12, 2014), <https://stateofgreen.com/en/profiles/danish-energy-agency/news/danish-carbon-emissions-continue-to-drop>.

165. European Commission, *2020 climate & energy package*, CLIMATE ACTION, https://ec.europa.eu/clima/policies/strategies/2020_en (last visited Apr. 3, 2017).

166. European Commission, *2050 low-carbon economy*, CLIMATE ACTION, https://ec.europa.eu/clima/policies/strategies/2050_en#tab-0-0 (last visited Mar. 8, 2017).

167. The intense 2003 heat waves in Europe were blamed for more than 70,000 deaths. Wynne Parry, *Recent Heat Waves Likely Warmest Since 1500 in Europe*, LIVE SCIENCE (Mar. 17, 2011, 2:02 PM), <http://www.livescience.com/13296-european-russia-heat-waves-climate-change.html>.

nations.¹⁶⁸ The argument often raised by some nations in defense of a general unwillingness to adopt climate change regulations because of other nations' alleged unwillingness to do the same has become unjustifiable in light of the now increasing action taken by at least some developed nations and regions, such as the EU. With the availability of knowledge demonstrating the severe consequences of climate change and the financial and many other advantages of taking action sooner rather than later, the international finger-pointing and responsibility avoidance must stop. This is a serious situation and can no longer be treated as a race to the bottom at the national or international governance levels.

Although extreme weather events have, of course, always caused problems for humankind, with today's knowledge of the causes and effects of climate change, it is, in short, becoming geopolitically unethical and logically unwarranted to continue to allow nations to prevail on the argument that they were neither in control of nor able to stem the problem. They were precisely able to take regulatory or other action against this very well documented problem of significant international economic and humanitarian effect, but, in the case of many, failed to do so. The more they continue to postpone effective action, the less they should be able to use the excuse doctrines analyzed in this article.

Force majeure may be denied where, as in private law, parties assumed the risk of the problem occurring. Nation states very arguably assume the risk of severe weather-related problems via their continued political unwillingness to address the issue sufficiently, effectively, and quickly at the national levels. Somebody must blink first. Some nations and regions have. Others should now follow. The required "absolute and immaterial impossibility" required for the defense to lie is simply no longer present when parties are currently - or should be - well aware of what action they can take to stem the problem. Again, mere political unwillingness to do so does not warrant a finding that the defense may lie.

Finally, a good faith standard applies to the issue of *force*

168. See generally Myanna Dellinger, *Narrowed Constellations in a Supranational Climate Change Regime Complex: The "Magic Number" is Three*, 37 FORDHAM INT'L L.J. 373 (2014).

majeure. Some nations may have difficulty prevailing on a good-faith argument that the problem is not due to their actions. This is simply implausible in relation to at least the major historical CO₂ emitters. Granted, clarity of the causation issue through elaboration of the relevant doctrinal phraseology or case precedent would now be helpful in the context of climate change. Under international *force majeure* law, nation states quite simply ought no longer be able to rely on the argument that they have not contributed to the problem. Again, it is time for this finger-pointing to stop.

The climate change situation is brought about by the regulatory neglect of some nations. However, neglect may also work to disqualify nations from successfully using the defense of *force majeure*. Notably, even where the resulting injury may be argued to be “accidental and unintended,” the defense will still not succeed if neglect or affirmative action by the nation state has contributed to the problem in the first place.¹⁶⁹ This is indeed the case in relation to many of the major current and historical CO₂ emitters.

The global climate is rapidly altered by the continued heavy use of fossil fuels and the continuance of problematic infrastructure patterns, among many other things. Although customary international law has long recognized the right of a state to exploit and use natural resources within its territory and poses few, if any, limits to how a nation state may choose to build its internal infrastructure, some limits *are* nonetheless imposed internationally on the related rights and duties when such exploitation patterns cause transboundary harm to the territory of another state, at least under theories described above. In practice, not many cases have yet analyzed and emphasized this point, but with the losses that are likely to be attributable to climate change, this situation may very well change in the near future.

169. Legislative Series, *supra* note 130, at art. 23.

2. Necessity

Article 25 of the United Nations Legislative Series Materials on the Responsibility of States for Internationally Wrong Acts provides that:

Necessity may not be invoked by a State as a ground for precluding the wrongfulness of an act not in conformity with an international obligation of that State unless the act: (a) is the *only way* for the State to safeguard an essential interest against a grave and imminent peril; and (b) does *not* seriously impair an essential interest of the State or States towards which the obligation exists, or of the international community as a whole.¹⁷⁰

In similarity with Article 23 on *force majeure*, necessity may *not* be invoked if the State has contributed to the situation of necessity.¹⁷¹ In contrast to Article 23, however, Article 25 allows for an element of voluntariness in the choice of actions and thus conduct that may be “deliberate, voluntary, not involuntary, [or] intentional” whereas *force majeure* involves conduct that is involuntary or coerced.¹⁷²

It is important to note that the definition of necessity is read very narrowly and presupposes an absolute impossibility of taking other course of action than that which led to the violation of an international obligation. Necessity may excuse the wrongful act, but a state may still be obliged to make compensation.

In contrast to *force majeure*, necessity does not depend on the prior conduct of the state and “does not involve conduct which is involuntary or coerced.”¹⁷³ The situation of necessity

170. *Id.* at art. 25 (emphasis added).

171. *Id.*

172. Paddeu, *supra* note 10, at 466 (citations omitted) (internal quotation marks omitted).

173. Legislative Series, *supra* note 130, at art. 25.

“may be caused by the ‘foreseeable but unavoidable consequences of facts which have long been present.’”¹⁷⁴ The same underlying events could give rise to both the defense of necessity and *force majeure*. For example, a tsunami making it impossible for a nation state to deliver electricity to another as mentioned above may also damage cultivated land, thus creating a food emergency for the population of a state causing it to disregard its antecedent international obligations to provide food for another state out of necessity.¹⁷⁵ Necessity relates to future action, whereas *force majeure* relates to current action. Necessity must be established from an objective point of view, although some measure of uncertainty will *not* preclude use of the plea as long as the state can prove, with some degree of uncertainty, that the threat of harm is not merely apprehended or contingent.¹⁷⁶ For example, in one case, the completion of a system of water locks was considered to result in future environmental harm.¹⁷⁷ This harm allegedly required prophylactic action. The state in question could not, however, prove to any degree of certainty that ecological harm would *in fact* occur; although the Court rejected the plea on the facts, it upheld the principle of ecological necessity in protecting the environment as an “essential interest of the state.”¹⁷⁸ Environmental concerns thus clearly form part of the doctrine.

The requirement that the action taken must be the “only way” to safeguard the essential interest at stake does *not* require the action to be unilateral. In fact, the action may also “comprise other forms of conduct available through cooperative action with other States or through international organizations.”¹⁷⁹ Good faith in such cooperation is, of course, to be expected from the global governance community. The concept is elusive, but might not be stretched so far as to result in the imposition of financial liability on nation states with a

174. Paddeu, *supra* note 10, at 462 (citing Ago, *Eighth Report* – Add. 5-7, 14 (para. 2)).

175. *Id.* at 463.

176. Case Concerning the Gabčíkovo-Nagymaros Project (Hung. v. Slov.), Judgment, 1997 I.C.J. 42 (Sept. 25, 1997).

177. Paddeu, *supra* note 10, at 465.

178. *Id.*

179. Legislative Series, *supra* note 130, at art. 25.

current or historical great impact on climate change.

Necessity is, in short, used to “denote those exceptional cases where the only way a State can safeguard an essential interest threatened by a grave and imminent peril is . . . not to perform some other international obligation of lesser weight or urgency.”¹⁸⁰ It governs situations of grave danger to the essential interests of the nation state itself *or* to the international community as a whole.¹⁸¹ The doctrine forms part of customary international law.

Case law demonstrates the ways in which the doctrine could find relevance in today’s environmentally and resource-stressed world. Recall that the extent of the necessity must be “imminent and urgent,”¹⁸² which is the case with the level of species extinction currently looming on the horizon. In the “*Russian Fur Seals* controversy of 1893, . . .” [Russia argued that] the ‘essential interest’ to be safeguarded against a ‘grave and imminent peril’ was the natural environment” and the extinction of a species considered necessary for economic reasons.¹⁸³ Russia “issued a decree prohibiting sealing in an area of the high seas” that was not subject to the jurisdiction of any state or international regulation citing to the essential precautionary character of the measures.¹⁸⁴ Similarly, where regulatory measures were considered ineffective to conserve straddling stocks of Greenland halibut threatened with extinction, Canada arrested a Spanish fishing ship on the basis of necessity.¹⁸⁵ In yet another case, the British government bombed a shipwrecked Liberian oil tanker to protect the English coastline.¹⁸⁶ The British government did not advance any other legal theory for its conduct other than necessity.¹⁸⁷ No international protest resulted.¹⁸⁸

180. *Id.*

181. *Id.*

182. 2 LORD McNAIR, INTERNATIONAL LAW OPINIONS 232 (1956).

183. DARSIIWA, *supra* note 72, at art. 25.

184. *Id.*

185. Case Concerning Fisheries Jurisdiction (Spain v. Can.), Judgment, 1998 I.C.J. 432, at 54 (Dec. 4, 1998).

186. See generally Albert E. Utton, *Protective Measures and the “Torrey Canyon”*, 9 B.C. L. REV. 613 (1968).

187. *Id.*

188. *Id.*

Species extinction concerns are also of modern relevance given the current threat of mass extinction of species. Climate change will affect the survivability of species. Further, as food and shortages crises are recognized to have the potential to lead to not only broad human and animal survival problems, but perhaps even civil unrest or international armed conflict, necessity may be argued in defense of action to protect a nation's food or water supplies. This has already been done, although to a smaller scale than what may be the case in the future. In one dispute, for example, "the Portuguese government argued that the pressing necessity of providing for the subsistence of certain contingents of troops engaged in quelling internal disturbances justified its appropriation of property owned by British subjects" ¹⁸⁹

In short, necessity has been invoked to protect "a wide variety of interests, including safeguarding the environment, preserving the very existence of the State and its people in time of public emergency, or ensuring the safety of a civilian population." ¹⁹⁰ The relevance to climate change and natural resource shortages as an excuse doctrine is obvious. The lack of regulatory action may, however, be seen as the "conduct" that will *preclude* a nation state from arguing *force majeure* in the extreme weather context. Other regions or nations may, by way of contrast, seek to exceed the regulatory limits established by such bodies as the WTO and the EU or under international conventions for habitat- or species-protective reasons. If unilateral prohibitions on conduct otherwise allowed under international law were to be instigated, as was the case in the Russian Fur seal case, economic necessity may, arguably, once again be raised in defense of taking such prohibitory action. This argument arguably has even more relevance today than before. As cases have also demonstrated, one nation may avoid international repercussions for the arrest of other nations' persons or vessels where such action can be successfully argued to be the "only way" for a state to protect imminently endangered species. As species such as certain large cats, polar bears, rhinos and elephants are now at the

189. DARSIVA, *supra* note 72, at art. 25. See also MCNAIR, *supra* note 182, at 232.

190. Legislative Series, *supra* note 130, at art. 25.

brink of extinction, nations might, for example, arrest persons on the territory of other nations in alleged last-ditch effort to save the species. Where such action violates international law, the nation(s) at issue may well be able to raise the defense of necessity successfully now as has been done in the past.

On the human front, research has already demonstrated the problems that may be caused by future mass migrations of people because of droughts, unrest, and even potential wars caused by climate issues (the “climate refugee” problem). Some nations may seek to reject large amounts of climate refugees, citing to their own lack of resources and other economic issues. Whether current or future human rights and other legal obligations sufficiently cover this issue is beyond the scope of this analysis. However, it is established international necessity law that a nation may take measures “for the protection of its own essential security interests.”¹⁹¹ As the climate change problem worsens into a situation posing greater and greater risks of national, as well as international, security issues, necessity may well be argued successfully in attempts to limit migrants from entering another nation’s territory where the rejecting nation can point to its own grave and imminent problems. As has often been mentioned in this context, few nations are likely to be willing to host all the refugees from, for example, Bangladesh, suffering from vast flooding problems. Nations are unlikely to raise or, of course, succeed on an argument that they are simply not willing to host such climate refugees, but if they can cite to their own objective inability to do so, the matter changes legally under the defenses analyzed here.

Climate geo-engineering has also recently gained much theoretical, if not yet much practical, traction as a potential, albeit risky, “Band-Aid” solution to climate change until more viable and less risky solutions are identified. Many legal challenges surface in this context. An important one of these is who, if anyone, can and should regulate potential geo-engineering implementation activities. So far, no international regulatory framework is directly on point. A rogue nation or even private actors may, in the not too distant future, decide to

191. KACZOROWSKA-IRELAND, *supra* note 9, at 505.

implement some of the most “promising” technologies, such as solar radiation management to protect the local climate (e.g. more shade and rain in a given region) or to test the applicable engineering theories. If accused of violating any potentially applicable laws by or harming other nations that see those activities as threats and not potential solutions to the temperature increase problem, a nation might assert necessity in defense. The same considerations mentioned above would apply. The international community should timely prepare itself legally for the likelihood that geo-engineering activities may soon be implemented by private actors or nations no longer able to, for example, grow sufficient crops or provide its population with sufficient water because of rising temperatures. That preparation includes considering risk and the doctrines mentioned in this article.

As with the doctrine of *force majeure*, the foreseeability element and good faith standard apply, but can arguably not be satisfied by nation states who now, for quite some time, have known about the dire consequences of climate change, yet are only now beginning to take some action – arguably not even enough – to mitigate the problem. Nation states who have contributed significantly to a certain problem should not at the same time be able to invoke the defense of necessity. Most developed nations have indeed contributed significantly to the problem in a manner for which responsibility is allocable, given legal and political will to do so, by examining the historical contributions and assigning liability on a relative basis.

Importantly, the doctrine cannot be invoked if it impairs an essential interest of the international legal community in general or a smaller number of other nations in particular. That is clearly the case with climate change. Nations that have both contributed significantly to the problem, yet at the same time seek to avoid financial responsibility for the now-apparent consequences, thereof ought not be able to invoke the doctrine of necessity. This is so because they precisely place other nations, and indeed the entire global community, at grave risk of financial and indeed human, animal, and plant viability outfalls if they continue to not take sufficient and sufficiently urgent action against climate change. The latter is arguably still the case despite some dawn on the horizon in the

form of the Paris Agreement and some national and subnational action.

Conversely, nations may well be entitled to use the doctrine of necessity where they take action to protect species or human populations from grave peril, such as death or, in the case of animals, species extinction. For example, nations may seek to protect supplies of food and water supplies in cross-boundary situations as these resources become increasingly scarce in a rapidly warming world. If one water-importing nation invaded another to ensure continued water supplies from the exporting nation, the importing nation could arguably assert the defense of necessity. Similarly, and as demonstrated, nations have been excused from the wrongfulness of their acts where they undertook such acts against other nations in order to protect species, even for financial reasons. They may arguably do so again as we are, as a global community, already facing a sixth mass extinction that is exacerbated by climate change. Necessity may well be found to lie in such cases.

Taking cross-border action to, for example, obtain resources in times of urgency may appear problematic, enough even if only of a temporary nature, but worse yet, the steps that may be taken by increasingly desperate nations in a more and more distressed natural environment may not end if resources were to be obtained in the short run. Imagine the following: a region or nation becomes so frustrated with another nation *not* taking effective action against the long-term ecological problems caused by coal-fired power plants that the frustrated nation sends drones into the recalcitrant nation to destroy some or all such power plants in that nation. This is clearly a violation of international law. The infringing nation argues ecological necessity asserting that action had to be taken, even though it admits it is not entirely certain that the action taken will ultimately stem the underlying problem at issue (climate change). Recall that such arguments have been raised successfully in much less controversial cases even though actors in those cases were also not certain that the harm complained of would, *in fact*, occur. In contrast, with today's knowledge of climate change, government entities, as well as private actors, *do* know that ecological harm will arise

from a continued heavy use of fossil fuels. Protection of the environment is an established legal objective and mandate in many arenas. When it comes to the defenses analyzed in this article, environmental protection has been held to be an essential interest of the state. Nations may prevail on defenses in this context even in what may currently be seen as an extreme and provocative instance of action against the property of another state. Recall that no international complaints were raised when Britain destroyed a Liberian oil tanker in order to, precisely, protect the environment. Case precedent does allow for some unilateral action without antecedent consent as long as, of course, the other doctrinal elements set forth above are met.

The question also arises whether nations may rely defensively on the doctrine of necessity in *actively* seeking to stem the underlying problem of climate change. For example, if one nation invaded another to forcibly stop the production of energy from coal- or oil-fired power plants, may the invading nation excuse itself because of necessity? As demonstrated, precautionary ecological interests are clearly covered by the doctrine. To protect not only animal species, as have been done in the past, but also human populations as well as food and water supplies, it is not unthinkable that one nation state may raise this argument in this manner in the future. For example, consider the current extreme drought in the American Southwest and Northern Mexico affecting both United States and Mexico agriculture and water supplies. The Colorado River is running lower and lower, causing problems for farmers in Mexico and the United States alike. Could Mexico claim necessity in entering U.S. territory to extract water from the upstream portions of the river where water may still be available? Looking north, could a future, even further parched, USA enter Canada for urgent water needs to avoid human deaths? Conversely, if Mexico continues to build more coal-fired power plants, could a future U.S. government more keenly interested in curbing climate change than what has been the case so far enter Mexico to physically prevent the construction of such facilities or to demolish existing ones relying on necessity, seeking to protect scarce water resources in the American Southwest that are imperiled by climate change? In

the water examples, certainly an “essential interest” as well as a grave and imminent peril are involved if water is not available for drinking purposes. Recall that the subsistence of contingencies of troops has been invoked as grounds for necessity. Where the very survival of a nation’s population may be at stake for lack of water, or even food, it is not unthinkable that a nation state might seek and become excused from international liability for such urgent action out of necessity in the future. Existing case law supports this, as demonstrated above. Of course, this would seem to require that the nation seeking to invoke the necessity doctrine “comes to the law with clean hands” and thus does not continue to contribute to climate change in as major ways as is currently the case with, for example, the United States in the above example.

3. Distress

Finally, Article 24 may be invoked as a defense to the international wrongfulness of an act of state; however, this doctrine only applies in the very limited circumstances where human life is at immediate risk.¹⁹² The doctrine applies in:

the specific case where an individual whose acts are attributable to the State is in a situation of peril, either personally or in relation to persons under his or her care. The article precludes the wrongfulness of conduct . . . in circumstances where the agent had no other reasonable way of saving life.¹⁹³

As with Articles 23 and 25, an excuse under Article 24 is not available if “the situation of distress is due, either alone or in combination with other factors, to the conduct of the State invoking it.”¹⁹⁴ “In practice, cases of distress have mostly involved aircraft or ships entering State territory under stress

192. Legislative Series, *supra* note 130, at art. 24.

193. *Id.*

194. *Id.*

of weather or following mechanical or navigational failure” in order to save the life of passengers.¹⁹⁵

This doctrine may become relevant in the climate context. Could the doctrine, for example, be invoked by public utility leaders in parts or all of nations urgently needing water or energy for air-conditioning during extreme heat spells to save citizens in the affected regions if such leaders physically retrieved, without prior permission, resources that may not be available in the agent’s own nation from another nation? For example, the summers of 2003 and 2013 saw extreme heat waves and numerous resulting deaths in large portions of Southern Europe¹⁹⁶ where nations have traditionally had both sufficient water as well as electricity for air-conditioning (even though people in that part of the world have not historically relied much on air-conditioning). As summer temperatures in Southern Europe and coastal parts of the Middle East are now often in the very high 30s to low 40s Celsius (105-107 degrees Fahrenheit) or more in summer,¹⁹⁷ could leaders of power providers in affected nations such as Syria forcibly tap into energy lines in neighboring Turkey, or Albania into those in Greece, for electricity using the defense of necessity? Would economically hard-hit Greece be able to rely on the doctrine of distress or necessity to take resources from neighboring or nearby nations for urgent relief reasons without prior permission? Italy, for example, is arguably not much better off

195. *Id.*; KACZOROWSKA-IRELAND, *supra* note 9, at 505.

196. *France Heat Wave Death Toll set at 14,802*, USA TODAY (Sept. 25, 2003, 9:23 PM), http://usatoday30.usatoday.com/weather/news/2003-09-25-france-heat_x.htm# (discussing how deaths were occurring after record-breaking summer temperatures); Rosa Silverman, *Heatwave Deaths: 760 Lives Claimed by Hot Weather as High Temperatures Continue*, TELEGRAPH (July 18, 2013, 7:09 AM), <http://www.telegraph.co.uk/news/weather/10187140/Heatwave-deaths-760-lives-claimed-by-hot-weather-as-high-temperatures-continue.html> (noting how between 540 and 760 deaths in London could be attributed to the heat in 2013).

197 Tom Di Liberto, *Summer heat wave arrives in Europe*, CLIMATE.GOV (July 14, 2015), <https://www.climate.gov/news-features/event-tracker/summer-heat-wave-arrives-europe>; Jon Erdman, *Heat Records Shattered in Germany, France, The Netherlands in June/July 2015 Europe Heat Wave*, THE WEATHER CHANNEL (July 7, 2015, 10:15 AM), <https://weather.com/forecast/news/europe-heat-wave-record-highs-june-july-2015>.

than Greece economically. Could it, under any of these defenses, withdraw resources from much wealthier neighboring Switzerland? Southwestern Europe is not often thought of as a hotbed for international strife because of the lack of natural resources or electricity, but as resources of various kinds are becoming more and more scarce, what has so far been considered a given in international relations – for example, that no highly severe energy or resource conflicts would arise in at least Western Europe – may well become a legally challenging issue in the not too distant future in a world with rapidly rising temperatures and the resulting practical, economic and legal changes. The diplomatic and pragmatic solutions of yesteryear may simply not suffice in the future.

It is then that the above excuses may see a renewed importance for which the international legal community should be prepared. Importantly, however, even though the pure legal wrongfulness of an act is precluded, a perpetrating nation state may, as analyzed above, still be held responsible for the loss caused to another nation.¹⁹⁸ As climate change continues to intensify, the issue of loss, damage, and liability is likely to become much more legally prevalent in the near future.

VII. Conclusion

Climate change poses a severe risk of financial and economic problems for individuals, companies, and nation states around the world. As the negotiations and conclusion of the Paris climate change agreement show, developed nations are unwilling to accept legal liability for loss and damage caused by climate change. Provisions of other international law could, however,, nonetheless result in a finding that nations causing such damage to other nations are financially liable, *even if* the nation state causing the problem did not act in internationally wrongful ways if prevailing under one of the excuse doctrines as analyzed above.

A solution under customary international law as analyzed in this article may not be the most obvious or, granted, even the best way of apportioning financial liability for the injuries

198. KACZOROWSKA-IRELAND, *supra* note 9, at 506 (emphasis added).

that we know are likely to arise because of climate change. Lawsuits are always risky and unpredictable. This is even more so on somewhat uncertain legal grounds such as the ones analyzed here. It would be better if the world community would have simply accepted the risks and, under the UNFCCC, agreed to shoulder the burden equitably and proportionally. That currently does not seem to be the case. Similarly, the international legal climate framework should come to include definitions and rights of climate refugees. Microfunding for particularly vulnerable areas should become feasible, as should better risk insurance programs. But these things are not yet politically feasible, so until this becomes the case, all options for financial burden-sharing should remain on the table.

One of the current major problems of establishing liability for climate change is the perception that “it is impossible to draw a causal connection between one state[’s] emissions and a [particular] natural disaster that leads” to damage.¹⁹⁹ This difficulty has said to make the liability approach untenable.²⁰⁰ Instead:

[A] shared-responsibility approach to climate [change] policy . . . would call upon the international community to assist in the realization of economic, social, and cultural rights not only for all victims of climate harm, but for all people worldwide . . . States would be expected to help protect and restore rights through climate adaptation not on the basis of their contribution to climate change, but on the basis of universally shared “obligations to fulfill human rights for all.”²⁰¹

That is a very laudable idea, but as analyzed above, nations states are *continuing* rather than *reversing* their long history of shirking financial and practical responsibility for

199. See, e.g., Rachel Payne, *Climate Change, Basic Rights, and International Obligations*, THE YALE REV. OF INT’L STUD. (2012), <http://yris.yira.org/essays/681> (last visited Mar. 8, 2017).

200. *Id.*

201. *Id.*

climate change. Developed nations are simply not currently willing to voluntarily undertake the financial responsibility of their historic and ongoing carbon dioxide emissions. One can hope that they will realize the fairness in doing so, but neither does history show this to be the case nor is there little realistic hope that this situation will change any time soon. In the meantime, it is proving more and more likely that many victims – nation states and individuals – will “go uncompensated and suffer.”²⁰²

Human rights law is not more helpful. In the past, human rights law has seldom been used to promote a particular distribution of burdens to achieve a rights objective that could also find use in the climate change context with today’s knowledge of the implications caused by so-called “extreme” weather. “International obligations to assist developing states in fulfilling economic, social, and cultural rights are[,] [for example,] left very vague in the [International Covenant on Economic, Social and Cultural rights].”²⁰³ In fact, the Covenant only requires states to provide “international assistance and cooperation” to achieve the realization of rights.²⁰⁴ “Because the Covenant does not specify a minimum level of foreign assistance”²⁰⁵ and because nation states are likely to look at this as a non-binding mandate anyway, “human rights law has not been read as establishing specific obligations for the international community. Even making good on the oft-reiterated promise by OECD countries to give 0.7% of GNI as official development assistance has rarely been described as a duty under human rights law.”²⁰⁶ Thus, returning to traditional liability for damage caused to another nation as in, for example, the Trail Smelter case, may currently be the most viable option that nations have for obtaining financial assistance in relation to damage caused by other nations’ historical and continued contributions to and exacerbation of climate change.

Although treaty adoption, adherence and exit

202. *Id.*

203. *Id.*

204. *Id.*

205. Payne, *supra* note 199.

206. *Id.*

considerations are beyond the scope of this article, one important aspect should, however, be addressed because of its clear relevance to the analyses in this article, namely the UNFCCC. “The *ultimate objective* of this treaty is to achieve the ‘stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system.’”²⁰⁷ The 2015 Paris Agreement similarly seeks to limit the increase in the global average temperature to “well below 2°C above pre-industrial levels, and [to] pursu[e] efforts to limit the temperature increase to 1.5°C above pre-industrial levels” by 2100.²⁰⁸ The principle *pacta sunt servanda* requires nation states to, in good faith, observe the obligations of treaties to which they are parties whether they are, strictly seen, legally binding or not. However, nations may seek to avoid even such treaty goals without, arguably, having to face repercussions from the international legal community under the necessity and *force majeure* defenses. This is so because Articles 23 and 25 also apply to situations of treaty withdrawal. But notably, “*force majeure* [will] not excuse [a] performance if the State *has undertaken to prevent the particular situation . . . or has otherwise assumed the risk.*”²⁰⁹ This is precisely the case under the UNFCCC umbrella. For that reason, the nations that are party to the UNFCCC and the Paris Agreement may indeed *not* be able to invoke *force majeure* in relation to a possible future claim that the nation states simply cannot live up to the treaty obligations and thus should be allowed to withdraw from a treaty without following normal procedures for doing so. The current great amount of inaction in solving the substantive problem of climate change is, in fact, assuming the known risks of climate change.

Further, the requirement that there be “no other way” to solve an imminent and grave problem than by taking certain action otherwise prohibited under international law may

207. GLOBAL ENERGY TECHNOLOGY STRATEGY, ADDRESSING CLIMATE CHANGE 3, <http://www.globalchange.umd.edu/data/gtsp/docs/GTSP-indfind.pdf> (last visited Apr. 16, 2017); U.N. Framework Convention on Climate Change, art. 2, U.N. Doc. FCCC/INFORMAL/84 (1992).

208. U.N. Framework Convention on Climate Change, *Adoption of the Paris Agreement*, art. 2, U.N. Doc. FCCC/CP/2015/L.9/Rev.1 (Dec. 12, 2015).

209. Legislative Series, *supra* note 130, at art. 23 (emphasis added).

encompass an obligation to cooperate with other states or international organizations. In few international legal contexts has this requirement been as blatantly disregarded by some nations such as the United States and Australia as in relation to climate change action. Thus, if it came to certain recalcitrant nations such as these attempting to invoke the above defenses under international law, question marks could and should correctly be raised in response to such arguments as they related to extreme weather and climate change.

In sum, all three defenses analyzed above rely on a level of nation state “innocence” and inability to prevent what was previously seen as “extreme” weather events that is currently no longer warranted, given modern scientific knowledge about the causes and effects of climate change. Several nation states have, for a very long time, contributed actively, knowingly and significantly to the underlying pollution problem. Several nations displayed neglectful, if not outright reckless, behavior in this context. Granted, it has been and still is very difficult to reach an effective global political solution to the climate change problem. That being said, it very arguably defies logic and common sense to excuse certain nations from international liability based on *force majeure* or necessity for the reasons mentioned above. A hard look at these defense doctrines is currently warranted to ensure that they match modern reality. This may, however, require a geopolitical degree of willingness that is lacking in relation to liability for climate-related problems as it is in relation to effective international solutions to the broader issue of climate change itself. However, international political reluctance should no longer be used as an excuse for not taking all the action that all governance entities in various nations can take to curb climate change. With the Paris Agreement and other new legal developments at the national and subnational levels in, for example, the United States and China, there is fortunately hope that some nations will lead the way forward in this important race. This race should be one to the top, not the bottom.

For the very significant public policy reason of seeking to finally bring about the required effective action against climate change by nations that have so far sought to avoid taking such action, the *force majeure*, necessity and distress doctrines

should, in potential future judicial applications, be critically examined before being applied in relation to the nations that have contributed or still contribute a large extent to the super wicked problem known as climate change. For the reasons described in this article, such nations should not be able to invoke the excuse doctrines in order to obtain a holding of no legal wrongdoing. Even if they are successful in so doing, they might be held liable for the damage caused to other nations by their regulatory inaction. From one point of view, this would be breaking new legal ground as no such liability has yet been assigned at the international plane in the climate change context. But from another point of view, holding nation states liable for damage caused to the territory of other nations simply harks back to the legal principles and ethical notions invoked as early as in the Trail Smelter case. Ultimately, holding nations financially liable for action that they, with the availability of much modern knowledge, could and should have known would cause problems for others might be unpopular to some, but would only be fair to others. At the end of the day, however, law is about fairness and equity. Although that might require an involuntary redistribution of funds in the climate change loss and damage context, such action would both achieve more fairness, but also send a strong signal to rectify the underlying problem. Ways of doing so have become possible. More are surfacing. It is time for nations to act in the right way, taking the risks posed to other nations into account.