

CAN INJURIES FROM CLIMATE CHANGE AND ECOSYSTEM DESTRUCTION BE CIVIL RICO INJURIES?

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I. INTRODUCTION

The Racketeer Influenced and Corrupt Organizations Act (RICO) was intended to prevent organized crime from infiltrating legitimate businesses.¹ The statute, which includes both criminal and civil enforcement provisions, creates liability for persons who have, through a pattern of predicate acts, acquired or exercised influence over legitimate businesses through racketeering activity.² Predicate acts that can give rise to RICO violations include money laundering, extortion, and mail or wire fraud.³ Today, it is not

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1. Wesley Kobylak, Annotation, *Civil Action for Damages Under 18 U.S.C.A. § 1964(c) of the Racketeer Influenced and Corrupt Organizations Act (RICO, 18 U.S.C.A. §§ 1961 et seq.) for Injuries Sustained by Reason of Racketeering Activity*, 70 A.L.R. Fed. 538 § 2[a] (1984).

2. The statute proscribes four forms of conduct: (1) using income derived from a pattern of racketeering activity to acquire any interest in an enterprise, (2) acquiring or maintaining interest or control in an enterprise through a pattern of racketeering activity, (3) conducting the affairs of an enterprise through a pattern of racketeering activity, and (4) conspiring to carry out any of the previous three forms of conduct. 18 U.S.C. § 1962 (2018).

3. 18 U.S.C. § 1961(1) (2018).

only conventional organized crime groups that fit this description,⁴ but a potentially wide range of actors that acquire, control, or conduct the affairs of seemingly legitimate businesses using criminally actionable conduct ranging from fraud to money laundering.⁵

RICO has been used to seek damages from a wide variety of actors, from opioid companies to dumpers of hazardous waste.⁶ Some commentators have argued that the statute could be used to hold corporations liable for injuries related to climate change and environmental damage.⁷ In 2022, the first mobilization of RICO for climate purposes emerged when a group of Puerto Rican municipalities sued Exxon Mobil Corp. and other oil and gas industry majors under the statute.⁸ The municipalities argued that the defendants had conducted a purposeful campaign to misrepresent the dangers of their products, which led the world to continue relying on fossil fuels. By facilitating this reliance, the municipalities argued, this campaign drove the destructive 2017 Atlantic hurricane season that caused devastating damage to the municipalities' infrastructure.⁹ While the municipalities' claims were dismissed in September 2025,¹⁰ the complaint still provides insight about climate-related injuries that could plausibly be actionable under RICO.

4. Most federal courts, including the Seventh and Eighth Circuits, have rejected the idea that a civil RICO plaintiff must explicitly allege a connection to organized crime. *Wilcox v. Ho-Wing Sit*, 586 F. Supp. 561, 568 (N.D. Cal. 1984). However, some lower courts disagree on the issue. *Compare id.* (rejecting requirement that plaintiff must allege "nexus" to organized crime), *with Hokama v. E.F. Hutton & Co., Inc.*, 566 F. Supp. 636, 643 (C.D. Cal. 1983) ("[P]laintiffs must allege some link to organized crime, however defined.").

5. In a 2025 case, the Supreme Court recognized that civil RICO has evolved to take on a much broader range of applications than Congress initially intended but concluded that it would be Congress' task to provide a correction "if the breadth of the statute 'leads to the undue proliferation of RICO suits.'" *Med. Marijuana, Inc. v. Horn*, 145 S. Ct. 931, 933 (2025) (quoting *Bridge v. Phoenix Bond & Indem. Co.*, 553 U.S. 639, 660 (2008)).

6. *See, e.g.*, *In re Nat'l Prescription Opiate Litig.*, 452 F. Supp. 3d 745, 762–63 (N.D. Ohio 2020); *Town of Islip v. Datre*, 245 F. Supp. 3d 397, 408 (E.D.N.Y. 2017).

7. *E.g.*, Daina Bray & Thomas M. Poston, *The Methane Majors: Climate Change and Animal Agriculture in U.S. Courts*, 49 COLUM. J. ENV'T L. 145, 237 (2024) (noting potential usefulness of RICO to litigants seeking to target animal agriculture firms that engage in climate-related greenwashing); Denis Binder, *The Potential Application of RICO in the Natural Resources/Environmental Law Context*, 63 DENVER UNIV. L. REV. 535, 558–62 (1986) (considering use of RICO in contexts of toxic waste dumping, corrupt land use planning, and real estate transactions with adverse environmental effects).

8. Bray & Poston, *supra* note 7; Complaint for Damages at 4–6, *Muns. of P.R. v. Exxon Mobil Corp.*, No. 3:22-cv-01550 (D.P.R. Nov. 22, 2022).

9. Amended Complaint for Damages at 4–6, *Muns. of P.R. v. Exxon Mobil Corp.*, No. 3:22-cv-01550 (D.P.R. Nov. 3, 2023).

10. *Mun. of Bayamón v. Exxon Mobil Corp.*, No. CV 22-1550 (SCC), 2025 WL 2630671 (D.P.R. Sept. 11, 2025). The claims against some defendants were dismissed due to lack of personal jurisdiction, while the claims against other defendants (including Exxon Mobil Corp.) were barred by the statute of limitations. *Id.* at *22, *24. The district court reasoned that the municipalities should have known that the defendants' actions had a causal connection with their hurricane-related injuries around

More recently, law firm Hagens Berman, representing a group of homeowners, filed a civil RICO class action against a group of oil majors.¹¹ The complaint alleges that the oil majors' campaign of deception, fraudulent research, and obstruction of government action contributed to climate change, which caused severe weather events and in turn drove increases in the homeowners' insurance premiums.¹² Though the outcome of this case is uncertain, it represents another attempt to seek redress for climate-related injuries by demonstrating the causal relationship between those injuries and heavy-emitting corporations' conduct.

As these cases suggest, RICO may provide a tool for plaintiffs who have been injured due to climate change, ecosystem destruction, or biodiversity loss to recover from the companies that caused their injuries. Several unique features of the statute could make it particularly friendly to such plaintiffs. First, RICO plaintiffs may pursue treble damages for their injuries.¹³ Second, RICO allows plaintiffs to sue not only over discrete, wrongful acts, but over a scheme of wrongful conduct that may include various, individual predicate acts;¹⁴ thus, the statute allows plaintiffs to seek accountability for something more than the sum of the parts. Third, RICO allows a plaintiff to construct a claim that joins as defendants a potentially disparate group of "persons" who have participated in the overall scheme.¹⁵ The latter two features may help plaintiffs to seek damages from certain industry groups by demonstrating the coordinated and deliberate nature of these actors' harmful practices.¹⁶ Finally, RICO's civil provisions include a statutory standing requirement (the requirement for the plaintiff to have sustained a business or property injury *by reason of* the defendants' racketeering activity) that supplants the traditional, prudential standing analysis.¹⁷

While RICO's civil enforcement provisions offer advantages to potential plaintiffs, the statute also requires litigants to clear several legal hurdles. A

the times of the hurricanes themselves because the connections between climate change and intensified storms were well-known. *Id.* at *25.

11. Class Action Complaint, *Kennedy v. Exxon Mobil Corp.*, No. 2:25-cv-02378-JHC (W.D. Wash. Nov. 25, 2025).

12. *Id.* at 5–7.

13. Kobylak, *supra* note 1.

14. 18 U.S.C. § 1961(5) (2018).

15. Binder, *supra* note 7, at 536. By folding various defendants and predicate offenses into one "enterprise" and "pattern of racketeering activity," RICO also broadens the scope of evidence that may be introduced against any individual defendant. Because courts often refuse to sever trials where evidence could be used against any individual defendant, this feature of RICO helps to avoid severance. *Id.*

16. See, e.g., G. Supran et al., *Assessing ExxonMobil's Global Warming Projections*, 379 SCIENCE 153, 153 (2023) ("[I]n private and academic circles since the late 1970s and early 1980s, ExxonMobil predicted global warming correctly and skillfully.").

17. Binder, *supra* note 7, at 551.

plaintiff must meet the basic elements of a RICO claim by showing that certain persons conducted the affairs of, or influenced, an enterprise through a pattern of racketeering activity that caused injury to business or property.¹⁸ To show a pattern of racketeering activity, a plaintiff must demonstrate that the defendants committed at least two violations of predicate laws.¹⁹ A plaintiff's claim must also fall within the federal four-year statute of limitations,²⁰ although the statutory period will begin at the time of the most recent predicate act and may be put on hold until the plaintiff learns of, or should have learned of, their injury.²¹

In order to have standing to bring a civil RICO claim before a court, a plaintiff must have suffered an injury to their business or property.²² In addition, the defendants' activity must be both a "but-for" and proximate cause of the plaintiff's injury.²³ Focusing on RICO's civil enforcement provisions, this Article discusses the implications of these injury-related hurdles for prospective plaintiffs seeking to recover for injuries that arise from companies' contributions to climate change, ecosystem destruction, and biodiversity loss. Part II provides an overview of how companies' contributions to climate change and environmental degradation may be felt by individuals and companies as business-or-property injuries. Part III discusses the implications of the causation requirements for would-be climate and environmental plaintiffs. Part IV explores varieties of injuries that for-profit groups have pled in RICO cases and discusses their relevance for climate and environmental plaintiffs. Part V walks through RICO injuries that individuals and membership organizations have pled. Part VI concludes.

II. RICO BUSINESS-OR-PROPERTY INJURIES THAT FLOW FROM CLIMATE CHANGE, ECOSYSTEM DESTRUCTION, AND BIODIVERSITY COLLAPSE

RICO includes a civil right of action for plaintiffs who have suffered injuries to their business or property.²⁴ Courts have interpreted this language to require an injury that is tangible, immediate (as opposed to speculative), and financially quantifiable.²⁵ Despite these restrictions, courts have

18. Kobylak, *supra* note 1.

19. 18 U.S.C. § 1961(5) (2018).

20. 31A AM. JUR. 2D EXTORTION, BLACKMAIL, AND THREATS § 180 (2023); Agency Holding Corp. v. Malley-Duff & Assocs., Inc., 483 U.S. 143, 143 (1987).

21. BLACKMAIL AND THREATS, *supra* note 20.

22. Kobylak, *supra* note 1.

23. Holmes v. Sec. Inv. Prot. Corp., 503 U.S. 258, 265–68 (1992) (quoting Associated Gen. Contractors of Cal., Inc. v. Carpenters, 459 U.S. 519, 534 (1983)).

24. 18 U.S.C. § 1964(c) (2018).

25. BLACKMAIL AND THREATS, *supra* note 20, § 182.

recognized a wide range of injuries as cognizable under RICO. The diminution in value of a property owner's land, the loss of an individual's job, and the deprivation of access to abortion services have all been recognized as RICO injuries.²⁶ In contrast, injuries that are speculative or difficult to quantify cannot support RICO claims; nor, at least directly, can *personal* injuries such as pain, illness, and emotional distress.²⁷

The business-or-property requirement bars prospective civil RICO plaintiffs from suing directly over personal injuries such as asthma or other medical conditions that may be exacerbated by climate change,²⁸ or for the emotional distress of living through climate disasters.²⁹ However, a Supreme Court opinion handed down in April 2025 suggests that such plaintiffs may be able to recover for certain economic injuries that arise as secondary consequences of these personal ailments. In *Medical Marijuana, Inc. v. Horn*, the plaintiff was a former commercial truck driver who had used a pain relief product whose label falsely stated that it did not contain tetrahydrocannabinol (THC).³⁰ The driver lost his job after testing positive for THC and sued the distributor under RICO.³¹ The Court held that the truck driver's "antecedent personal injury" (his unwitting consumption of THC) did not bar him from suing over the secondary, economic injury (the loss of his job).³² Thus, individuals with personal injuries induced by climate change may be able to recover under RICO for secondary, economic effects of those personal injuries.

The general bar on recovery for personal injuries also leaves open a wide range of business- and property-related injuries caused by climate change, deforestation, and biodiversity loss. This Part explores some of the broad-

26. *Safe Streets All. v. Hickenlooper*, 859 F.3d 865, 885–88 (10th Cir. 2017); *Horn v. Med. Marijuana, Inc.*, 80 F.4th 130, 136 (2d Cir. 2023) (quoting *id.*), *cert. granted*, 144 S. Ct. 1454 (2024), and *aff'd and remanded*, No. 23-365, 2025 WL 978102 (U.S. Apr. 2, 2025); *Nat'l Org. for Women, Inc. v. Scheidler*, 897 F. Supp. 1047, 1069 (N.D. Ill. 1995), *rev'd on other grounds*, 547 U.S. 9 (2006).

27. *Holmes*, 503 U.S. at 274; *Nat'l Org. for Women*, 897 F. Supp. at 1069; *see e.g.*, *Van Schaick v. Church of Scientology of Cal.*, 535 F. Supp. 1125, 1137 (D. Mass. 1982) (holding that neither money former Scientology members spent on church services and literature, nor emotional distress of having to flee the United States, constituted a business-or-property injury).

28. Zorana Jovanovic Andersen et al., *Climate Change and Respiratory Disease: Clinical Guidance for Healthcare Professionals*, 19 BREATHE, July 11, 2025, at 1, 2–5.

29. Eamin Z. Heanoy & Norman R. Brown, *Impact of Natural Disasters on Mental Health: Evidence and Implications*, 12 HEALTHCARE, Sept. 10, 2024, at 1, 1–2.

30. 145 S. Ct. 931, 936–37 (2025).

31. *Id.*

32. *Id.* at 939 (“[T]he business or property requirement operates with respect to the *kinds* of harm for which the plaintiff can recover, not the *cause* of the harm for which he seeks relief. For example, a gas station owner beaten in a robbery cannot recover for his pain and suffering. But if injuries from the robbery force him to shut his doors, he can recover for the loss of his business. A plaintiff can seek damages for business or property loss, in other words, regardless of whether the loss resulted from a personal injury.”).

level impacts of climate change, ecosystem destruction, and biodiversity collapse and discusses how these broad-scale impacts can translate to business and property injuries that may be cognizable under RICO.

A. Climate Change

Climate change has already caused widespread harm to humans, including through economic disruption.³³ The effects of climate change on the global economy are projected to increase as global average temperatures rise.³⁴ The *Municipalities of Puerto Rico* and *Kennedy* cases provide examples of the kinds of property injuries that plaintiffs may sustain due to climate change. The Puerto Rican municipalities' injuries included lost infrastructure such as water systems, energy systems, and roads; lost tax and tourism revenue; and the costs of restocking decimated species.³⁵ The homeowners' injuries in *Kennedy* consisted of higher insurance premiums.³⁶ Many businesses and individuals are already sustaining similar injuries, such as damages to homes or facilities and lost revenue,³⁷ due to the economy-wide impacts of climate change. For example, the agricultural sector has already sustained productivity losses due to climate-change-influenced weather events.³⁸ The future impacts of climate change upon the sector are likely to intensify as the ranges of pests and diseases that harm food crops and livestock expand, and as sea level rise threatens to contaminate irrigation water.³⁹

These sector-wide impacts are felt by businesses as financial and property losses, giving rise to the kinds of injuries that are cognizable under

33. IPCC, *Summary for Policymakers*, in CLIMATE CHANGE 2022: IMPACTS, ADAPTATION, AND VULNERABILITY: CONTRIBUTION OF WORKING GROUP II TO THE SIXTH ASSESSMENT REPORT OF THE INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE 9–15 (H. O. Pörtner et al. eds., 2022).

34. *Id.*

35. Amended Complaint for Damages, *supra* note 9, at 261–62.

36. Class Action Complaint, *supra* note 11, at 101–02.

37. See Jonathan Shaw, *Housing in the Climate Crosshairs*, HARV. MAG. (Apr. 2, 2025), <https://www.harvardmagazine.com/2025/04/harvard-briefing-climate-insurance-housing-crisis>; Gill Einhorn & Dominic King, *How Climate Hazards Are Reshaping Business Realities and Responses*, WORLD ECON. F. (Mar. 26, 2025), <https://www.weforum.org/stories/2025/03/how-climate-hazards-are-reshaping-business-realities-and-responses>.

38. IPCC, *supra* note 33, at 9 (noting that global agricultural productivity has likely slowed over the last half-century due to various effects of climate change, including increases in frequency and intensity of extreme weather events such as droughts and floods; and that food production from fisheries and aquaculture has declined in some regions due to ocean warming and acidification).

39. *Id.* at 14; *Climate Change Impacts on Agriculture and Food Supply*, U.S. ENV'T PROT. AGENCY (Feb. 6, 2025), <https://www.epa.gov/climateimpacts/climate-change-impacts-agriculture-and-food-supply> [<https://web.archive.org/web/20250206060546/https://www.epa.gov/climateimpacts/climate-change-impacts-agriculture-and-food-supply>].

RICO. These injuries may include lost productivity and sales due to drought and the destruction of harvests in extreme weather events. At least one federal district court has held that reduced agricultural productivity may constitute a RICO injury to business or property.⁴⁰ Similarly, the Tenth Circuit has held that allegations of “resource damage” and interference with operations at a cattle ranch gave rise to a cognizable RICO claim.⁴¹

B. Ecosystem Destruction and Biodiversity Collapse

The destruction of ecosystems and species is a significant threat to the global economy, with over half of global gross domestic product reliant on natural resources.⁴² The benefits that ecosystems provide to human society are known as “ecosystem services.”⁴³ Scientists have linked the loss and degradation of forests to the diminishment of ecosystem services, such as cooling local temperatures, soil nutrient cycling, and carbon storage.⁴⁴ Around the world, biodiversity and nature loss may diminish other ecosystem services, which include water filtration, protection from floods, and the prevention of erosion.⁴⁵ Individual species also contribute to the global economy in myriad ways, from preventing the spread of pathogens to inspiring new pharmaceuticals.⁴⁶

As with climate change, the broad-scale harms that arise from biodiversity and nature loss may trickle down to businesses and individuals in ways that give rise to cognizable civil RICO claims. For example,

40. *Comm. to Protect our Agric. Water v. Occidental Oil & Gas Corp.*, 235 F. Supp. 3d 1132, 1171 (E.D. Cal. 2017) (dismissing complaint on other grounds).

41. *Robbins v. Wilkie*, 300 F.3d 1208, 1211 (10th Cir. 2002).

42. WORLD ECON. F., NATURE RISK RISING: WHY THE CRISIS ENGULFING NATURE MATTERS FOR BUSINESS AND THE ECONOMY 8 (2020).

43. G. Martínez Pastur et al., *Ecosystem Services from Forest Landscapes: An Overview*, in ECOSYSTEM SERVICES FROM FOREST LANDSCAPES 1, 1–2 (2018).

44. Yunuen Reygadas et al., *Effects of Deforestation and Forest Degradation on Ecosystem Service Indicators Across the Southwestern Amazon*, 147 ECOLOGICAL INDICATORS, Mar. 2023, at 1, 6; Xinjing Qu et al., *Deforestation Impacts Soil Biodiversity and Ecosystem Services Worldwide*, 121 PNAS, Mar. 11, 2024, at 1, 2.

45. Robert J. Johnston, *Ecosystem Services*, BRITANNICA, <https://www.britannica.com/science/ecosystem-services> (last visited Apr. 5, 2026); Pastur et al., *supra* note 43, at 5.

46. Isabella Gerretsen, *Why We Should Value Scavengers*, BBC (Dec. 8, 2022), <https://www.bbc.com/future/article/20221206-why-we-should-value-scavengers>; Richard Conniff, *What Are Species Worth? Putting a Price on Biodiversity*, YALE ENV'T 360 (Sept. 7, 2010), https://e360.yale.edu/features/what_are_species_worth_putting_a_price_on_biodiversity; Gina Kolata, *We Know Where New Weight Loss Drugs Came From, but Not Why They Work*, N.Y. TIMES (Aug. 17, 2023), <https://www.nytimes.com/2023/08/17/health/weight-loss-drugs-obesity-ozempic-wegovy.html> (discussing role that venomous Gila monster played in development of Ozempic and other weight-loss drugs).

ecotourism businesses are likely to suffer due to the destruction of natural ecosystems that draw tourists. In addition, the destruction of wetlands that formerly helped to absorb flood waters can cause significant losses for insurance companies.⁴⁷

III. CAUSATION REQUIREMENTS FOR CIVIL RICO INJURIES

While climate change, ecosystem destruction, and biodiversity loss may give rise to business-or-property injuries, such injuries would also need to pass muster under two judicially imposed causation requirements in order to be cognizable RICO injuries. Courts require showings of but-for and proximate cause linking a civil RICO plaintiff's injury and a defendant's alleged pattern of racketeering activity.⁴⁸ In general, these causation requirements prevent plaintiffs from bringing claims over injuries that were not caused by the defendants' pattern of racketeering activity (composed of at least two predicate violations)⁴⁹ or are too indirect or attenuated from the racketeering activity.

The but-for cause requirement flows from the statutory language creating a cause of action for civil plaintiffs injured "by reason" of the alleged racketeering activity; this requirement is concerned with general, factual causation.⁵⁰ This causation requirement is generally easily met and not the focus of lengthy judicial discussion.⁵¹ However, the but-for cause requirement has special relevance for civil RICO plaintiffs alleging racketeering activity based on fraud offenses. In this context, but-for cause could be construed to impose a reliance requirement.⁵² However, the Supreme Court held in *Bridge v. Phoenix Bond & Indemnity Co.* that a plaintiff need not show reliance on the defendant's misrepresentation if the underlying predicate violation does not include a reliance requirement.⁵³ Thus, but-for cause may be found even if a third party relied on the

47. WORLD ECON. F., *supra* note 42, at 15.

48. *Holmes v. Sec. Inv. Prot. Corp.*, 503 U.S. 258, 265–68 (1992).

49. 18 U.S.C. § 1961(5) (2018).

50. *Holmes*, 503 U.S. at 265.

51. *See id.* at 268–69 (skipping from acknowledgment of but-for cause requirement to proximate cause discussion without analysis of but-for cause).

52. The defendants in *Bridge* argued that the statutory requirement that a plaintiff be injured "by reason of" the defendants' conduct should impose a first-party reliance requirement in fraud cases—in other words, a requirement for the plaintiff to have relied on the defendants' misstatements. *Bridge v. Phx. Bond & Indem. Co.*, 553 U.S. 639, 648–49 (2008).

53. *Id.* at 649–50.

defendants' misrepresentation, producing results that caused injury to the plaintiff.⁵⁴

This absence of a first-party reliance requirement should help prospective climate plaintiffs alleging that corporations have engaged in patterns of racketeering activity based on acts of fraud that were directed at the general public. The plaintiffs in *Municipalities of Puerto Rico* were able to allege that they relied on the oil and gas majors' deceptive communications.⁵⁵ They further alleged that this reliance led them to "accept a substantial risk that they otherwise would not have taken, by purchasing the [d]efendants' carbon-based products."⁵⁶ Under *Bridge*, however, a different plaintiff making a similar claim—a business, for example—would likely not need to show that it purchased the defendants' carbon-based products in reliance on the defendants' communications. Instead, it might be able to state a RICO claim by alleging that *many* governments and companies promoted and purchased these products in reliance on the defendants' communications, driving climate change and causing climate-related injuries to the plaintiff.

The proximate cause constraint requires "some direct relation between the injury asserted and the injurious conduct alleged."⁵⁷ The proximate cause requirement is not met if the injury is remote or speculative, or if there is an intervening cause between the defendant's conduct and the plaintiff's injury.⁵⁸ A series of three foundational Supreme Court cases demonstrates

54. *Id.* ("[S]uppose an enterprise that wants to get rid of rival businesses mails misrepresentations about them to their customers and suppliers, but not to the rivals themselves. If the rival businesses lose money as a result of the misrepresentations, it would certainly seem that they were injured in their business 'by reason of' a pattern of mail fraud, even though they never received, and therefore never relied on, the fraudulent mailings.").

55. Amended Complaint for Damages, *supra* note 9, at 262.

56. *Id.*

57. *Holmes*, 503 U.S. at 268–69; 31A AM. JUR. 2D EXTORTION, BLACKMAIL, AND THREATS § 181 (2023). While intent to cause the plaintiff's injury may help to establish proximate cause, the Supreme Court has held that it is not the central inquiry. *James Cape & Sons Co. v. PCC Const. Co.*, 453 F.3d 396, 403 (7th Cir. 2006) ("[T]he relevant inquiry to determine proximate cause is 'whether the alleged violation led directly to the plaintiff's injuries.'" (quoting *Anza v. Ideal Steel Supply Corp.*, 547 U.S. 451, 461 (2006))). Though courts generally refer to the directness or indirectness of an injury, the distinction could instead be framed as immediate versus attenuated. *E.g., id.; Holmes*, 503 U.S. at 268–69.

58. BLACKMAIL AND THREATS, *supra* note 20; Pamela Bucy Pierson, *RICO Trends: From Gangsters to Class Actions*, 65 S.C. L. REV. 213, 242, 243 (2013). The Seventh Circuit has written that the proximate cause analysis is relevant when "too many unexpected things had to happen between the defendant's wrongdoing and the plaintiff's injury, in order for the injury to occur—so many unexpected things that the defendant couldn't have foreseen the effect of his wrongdoing and therefore couldn't have been influenced, in deciding how much care to employ in the activity that produced the wrongful act, by the prospect of inflicting such an injury as occurred." *BCS Servs., Inc. v. Heartwood 88, LLC*, 637 F.3d 750, 754 (7th Cir. 2011).

how the requirement may limit civil RICO liability. In *Holmes v. Securities Investor Protection Corp.*, the Securities Investor Protection Corporation (SIPC) alleged that Holmes had engaged in a securities fraud scheme that caused SIPC member broker-dealers to go bankrupt, which in turn triggered the SIPC's obligation to compensate the broker-dealers' customers for their losses.⁵⁹ The Court held that the link between the defendants' actions and SIPC's economic loss was too remote because the SIPC was not directly injured by Holmes' conduct.⁶⁰ Rather, the broker-dealers were directly injured, and the SIPC's injury was merely a secondary consequence of the broker-dealers' injuries.⁶¹

In *Anza v. Ideal Steel Supply Corp.*, the plaintiffs alleged that their competitor had defrauded the state tax authority and then used the resulting tax savings to lower its prices, causing the plaintiffs to lose business due to unfair competition.⁶² Here, the Court held that there was no showing of proximate cause because the plaintiffs had failed to establish two things: first, a direct connection between the alleged fraud and the defendants' decision to lower their prices, and second, a connection between the defendants' lower prices and the plaintiffs' loss of business.⁶³ The Court also noted that it was the state tax authority, and not the plaintiffs, that had been directly defrauded and therefore injured.⁶⁴ Similarly, in *Hemi Group, LLC v. City of New York*, the Court dismissed New York City's RICO suit against online cigarette retailers for want of proximate cause, reasoning that the retailers had primarily injured New York State by evading their statutory obligation to report sales; the alleged injury to the city—based on its inability to access accurate sales reports from the state—was only secondary.⁶⁵

In *Holmes*, the Supreme Court described three rationales for the proximate cause requirement. First, by barring plaintiffs with indirect injuries from bringing claims, the requirement ensures that courts will not have to perform the tricky, speculative work of deciding the extent to which a plaintiff's injury occurred as a result of the RICO violation as opposed to other, independent factors.⁶⁶ Second, it is not necessary to allow plaintiffs with indirect injuries to bring their claims in order to "vindicate the law";

59. *Holmes*, 503 U.S. at 261.

60. *Id.* at 271.

61. *Id.*

62. 547 U.S. 451, 451 (2006).

63. *Id.* at 458–59 (noting that “[the plaintiff’s] lost sales could have resulted from factors other than [the defendants’] alleged acts of fraud”).

64. *Id.* at 452.

65. *Hemi Grp. v. City of N.Y.*, 559 U.S. 1, 9 (2010).

66. *Holmes*, 503 U.S. at 269.

directly injured parties will generally do so.⁶⁷ Third, allowing indirectly-injured plaintiffs to recover alongside directly-injured plaintiffs would force courts to “apportion[] damages among plaintiffs removed at different levels of injury . . . to obviate the risk of multiple recoveries.”⁶⁸

Courts often invoke these rationales to guide their own proximate cause analyses.⁶⁹ For example, in *Club One Casino, Inc. v. Perry*, a casino alleged that its profits and market share had suffered due to unfair competition from an unlicensed gambling facility.⁷⁰ Pointing to the first rationale from *Holmes*, the Ninth Circuit reasoned that in order to assess the casino’s RICO claims, a court would have to perform a “speculative and complicated” analysis, teasing out the extent to which the defendant’s activity—as opposed to other market factors such as “the local economy” and “shifting consumer preferences”—could be blamed for the injury.⁷¹ The fact that hearing the claim would necessitate this kind of unwieldy calculation indicated that the plaintiff’s injury was “too attenuated” from the defendant’s activity.⁷² Referencing the second rationale, the Ninth Circuit considered that the state had been more directly injured than the plaintiff by the defendant’s failure to comply with licensing requirements, making the state the appropriate party to vindicate the law.⁷³ With regard to the third rationale, the court noted that the “risk of multiple recoveries appear[ed] low,” but that a finding of high risk was “not a prerequisite for concluding that proximate cause is lacking.”⁷⁴ The court therefore affirmed the dismissal of the plaintiff’s complaint for want of proximate cause.⁷⁵

It remains to be seen how courts may assess proximate cause with respect to climate-related civil RICO injuries like those in *Municipalities of Puerto Rico* and *Kennedy*. In these cases, the plaintiffs alleged that the defendant’s activities had contributed to climate change, and that climate change in turn had contributed to the extreme weather events that gave rise to the plaintiffs’ injuries.⁷⁶ This analysis is complex because no single emitter

67. *Id.*

68. *Id.*

69. *See, e.g., Club One Casino, Inc. v. Perry*, 837 F. App’x 459, 460–61 (9th Cir. 2020) (quoting *Holmes*, 503 U.S. at 269–70); *Walters v. McMahan*, 684 F.3d 435, 444 (4th Cir. 2012).

70. 837 F. App’x at 461.

71. *Id.*

72. *Id.*

73. *Id.*

74. *Id.*

75. *Id.*

76. In February 2025, before the municipalities’ claims were dismissed on other grounds, a magistrate judge recommended the presiding district judge in the case to hold that the plaintiffs had pled facts sufficient to survive a motion to dismiss their Section 1962(c) claim because they had “pled that they directly suffered the consequences of Plaintiffs’ intentional misrepresentations.” Magistrate Judge’s

or group of emitters is the sole cause of climate change,⁷⁷ and because climate change is not the only driver of extreme weather events.⁷⁸ Plaintiffs suing over climate change-related injuries would almost certainly rely on attribution science, which seeks to quantify human activities' effects on the climate and environment.⁷⁹ Attribution science has long been central to climate change litigation, as it can help to quantify a corporation's or industry's climate change impacts.⁸⁰ The evolving field could help RICO plaintiffs to quantify greenhouse gas (GHG)-intensive companies' contributions to climate change.

Looking to the first rationale from *Holmes* for the proximate cause requirement, a court could find that the analysis required to attribute the defendant's activities to a certain portion of the plaintiff's injuries is too "speculative" and complicated to be workable in the climate change context.⁸¹ However, attribution science itself deals directly with this issue: Attribution studies seek to determine the role that many variables, including climate variables such as temperature and humidity, play in causing an outcome.⁸² The plaintiffs in *Municipalities of Puerto Rico* rely heavily on attribution science. Their complaint includes more than 50 pages of explanation regarding the defendants' GHG footprints and climate science, highlighting research that has connected incremental increases in global average temperatures to increases in the intensities of storms.⁸³ Perhaps

Omnibus Report and Recommendation at 48, *Mun. P.R. v. Exxon Mobil Corp.*, No. 3:22-cv-01550 (P.R. Feb. 20, 2025). The magistrate judge wrote that proximate cause did not require the plaintiffs themselves to have relied on these misrepresentations. *Id.* However, the magistrate judge did not directly address the defendants' argument that the proximate cause requirement is not met because "there are too many steps in the causal chain" between the defendants' activities and the plaintiffs' injuries. *Id.* at 46.

77. See Hannah Ritchie et al., *Breakdown of Carbon Dioxide, Methane and Nitrous Oxide Emissions by Sector*, OUR WORLD IN DATA (Jan. 2024), <https://ourworldindata.org/emissions-by-sector> (illustrating various global sectors' contributions to overall, anthropogenic GHG emissions).

78. Michael Burger et al., *The Law and Science of Climate Change Attribution*, 45 COLUM. J. ENV'T L. 57, 67, 90 (2020).

79. *Id.* at 66.

80. *Id.* at 62–63.

81. Chief Justice Roberts' dissent in *Massachusetts v. EPA* provides an example of this sort of reasoning, though his discussion pertains to typical standing requirements rather than RICO injury causation. 549 U.S. 497, 544–45 (2007) (Roberts, C.J., dissenting) ("Petitioners are never able to trace their alleged injuries back through this complex web to the fractional amount of global emissions that might have been limited with EPA standards. In light of the bit-part domestic new motor vehicle GHG emissions have played in what petitioners describe as a 150-year old phenomenon, and the myriad additional factors bearing on petitioners' alleged injury—the loss of Massachusetts coastal land—the connection is far too speculative to establish causation.").

82. Burger et al., *supra* note 78, at 74.

83. Amended Complaint for Damages, *supra* note 9, at 32–76. The *Kennedy* plaintiffs take a different tack: Rather than alleging a causal connection between the defendants' activities and specific weather events, the homeowners asserted that the defendants' conduct has raised the *overall risk* of

courts in similar climate change cases will decide that attribution science provides a reasoned basis for determining the impact of the defendants' activities, and therefore that the first *Holmes* rationale does not justify barring plaintiffs' claims.

At first blush, the second rationale from *Holmes* seems unlikely to justify barring plaintiffs from bringing civil RICO claims over certain climate-related injuries, such as those stemming from extreme weather events, because those events often directly cause property damage. However, this rationale could provide grounds for barring a potential RICO plaintiff whose injury is contingent upon a third party's property damage. To illustrate this point, contrast a municipality whose energy infrastructure has been damaged by hurricane winds and floods (a property injury) against a business that has lost productive working hours (an economic injury) due to power outages after the hurricane. While the municipality's property injury was caused directly by the hurricane, the business' economic injury was contingent upon the damage to the municipality's property. A court might also consider the general, global impacts of climate change to be the primary harm and an individual plaintiff's injuries to be contingent upon and secondary to those global impacts. However, this approach would seem to cut against the second *Holmes* rationale, as it would prevent any party from vindicating the law.

The third *Holmes* rationale concerns potential problems with apportioning damages should multiple plaintiffs seek to recover for indirect injuries. Therefore, it should only bar plaintiffs with indirect injuries, such as the hypothetical business that lost productive working hours due to a power outage.

IV. INJURIES TO FOR-PROFIT GROUPS

Due to the global nature of climate change and the reliance of many sectors on both raw materials and ecosystem services,⁸⁴ heavy-emitting companies' harms to the climate and ecosystems can manifest as injuries to businesses in various ways. In many cases, these harms could be framed as competitive injuries that arise due to deceptive or otherwise competition-stifling activities.⁸⁵ However, not all firms harmed by companies' activities

extreme weather events, and that those higher risks have driven insurance companies to raise premiums. Class Action Complaint, *supra* note 11, at 81.

84. KAPPEN ET AL., THE STAGGERING VALUE OF FORESTS—AND HOW TO SAVE THEM, BOS. CONSULTING GRP. 1, 9–10 (2020); TASKFORCE ON NATURE-RELATED FIN. DISCLOSURES, GUIDANCE ON THE IDENTIFICATION AND ASSESSMENT OF NATURE-RELATED ISSUES: THE LEAP APPROACH 9–13, 66 (Version 1.1, Oct. 2023).

85. The Lanham Act allows a false advertising plaintiff to “establish an injury by creating a chain of inference showing how defendant’s false advertising could harm plaintiff’s business.” *Chaverri v.*

directly compete with them: Non-competitor businesses may sustain harm due to the physical impacts of climate change, ecosystem destruction, and biodiversity loss. Moreover, in order to be cognizable under RICO, a party's injury must be concrete and quantifiable.⁸⁶ As discussed in Part IV.B., this requirement can bar a plaintiff that has suffered lost sales but is unable to quantify the volume of the loss.⁸⁷

This Part discusses federal courts' treatment of four types of injuries that businesses may sustain due to anthropogenic climate change, ecosystem destruction, and biodiversity loss: loss of goodwill and reputational damage, loss of sales, increased operational costs, and loss of contract or business relationships. The Part also discusses different approaches to evaluating each type of injury and explores how hypothetical plaintiffs may fare under these different approaches.

A. Lost Goodwill and Reputational Damage

Goodwill is “the probability that old customers will return and that the business ‘will continue in the future as in the past.’”⁸⁸ When seeking remedies for injuries to goodwill, civil RICO plaintiffs often allege that they have lost customer goodwill or that their reputations have been injured because they sourced products from the defendants, and the defendants had made false claims about these products, which in turn caused the plaintiffs to unintentionally mislead their own end consumers about the products.⁸⁹ For

Platinum LED Lights, LLC, No. CV-21-01700-PHX-SPL, 2022 WL 2275664, at *6 (D. Ariz. June 22, 2022) (quoting *TrafficSchool.com, Inc. v. Edriver Inc.*, 653 F.3d 820, 825 (9th Cir. 2011)). RICO, however, does not allow plaintiffs to rely on the “inferences of competitive injury.” *Id.* at *9.

86. *Steele v. Hosp. Corp. Am.*, 36 F.3d 69, 70 (9th Cir. 1994) (requiring “proof of concrete financial loss”); *Denney v. Deutsche Bank AG*, 443 F.3d 253, 266 (2d Cir. 2006) (“A RICO plaintiff ‘only has standing if, and can only recover to the extent that, he has been injured in his business or property by the conduct constituting the [RICO] violation[,]’ and only when his or her ‘actual loss becomes clear and definite.’”) (quoting *First Nationwide Bank v. Gelt Funding Corp.*, 27 F.3d 763, 768–69 (2d Cir. 1994)); *Price v. Pinnacle Brands, Inc.*, 138 F.3d 602, 607 (5th Cir. 1998) (“Injury to mere expectancy interests or to an ‘intangible property interest’ is not sufficient to confer RICO standing.”).

87. *See infra* Part IV.B.

88. *In re Volkswagen “Clean Diesel” Mktg., Sales Pracs., & Prods. Liab. Litig.*, No. 3:16-CV-02086-CRB, 2019 WL 6749534, at *4 (N.D. Cal. Dec. 6, 2019) (quoting *Rise Basketball Skill Dev., LLC v. K Mart Corp.*, No. 16-CV-04895-WHO, 2017 WL 2775030, at *5 (N.D. Cal. June 27, 2017)), *aff’d*, 842 F. App'x 112 (9th Cir. 2021).

89. *E.g.*, *In re Volkswagen “Clean Diesel” Mktg., Sales Pracs., & Prods. Liab. Litig.*, No. MDL 2672 CRB (JSC), 2017 WL 4890594, at *6 (N.D. Cal. Oct. 30, 2017) (considering car dealers' allegations that Volkswagen's “clean diesels” emission fraud had harmed dealers' reputations); *Knit With v. Knitting Fever, Inc.*, No. CIV.A. 08-4221, 2012 WL 2938992, at *10 (E.D. Pa. July 19, 2012) (considering knitting yarn shop's allegations that yarn supplier falsely claimed products contained certain percentage of cashmere, causing yarn shop to unintentionally mislabel products it sold to consumers and thus sustain

example, a furniture company that sources products from a lumber supplier in reliance on the supplier's claims about ethics and sustainability may sustain goodwill injuries if it comes to light that the supplier's products—and, therefore, the furniture company's products—are associated with illegal deforestation.

Under the rule that a RICO injury must be concrete and quantifiable, courts are unlikely to consider bare allegations of lost goodwill to be cognizable injuries unless they are accompanied by “proof of concrete financial loss.”⁹⁰ However, an injury to goodwill or reputation may be cognizable under RICO if it “result[s] in concrete economic, contractual, or business losses.”⁹¹ In *Cement-Lock v. Gas Technology Institute*, members of an enterprise that set out to commercialize a cement additive were able to successfully support their claim of reputational harm. The plaintiffs alleged that the defendants' theft of funds from the enterprise had caused reputational damage, which in turn caused the plaintiffs to lose out on “profits [the enterprise] could otherwise have obtained through royalties and license agreements.”⁹²

A civil RICO plaintiff seeking redress for an injury to goodwill or reputation—such as the furniture manufacturer in the example above—must connect its injury to more quantifiable effects, such as losses of grants or contracts that it would have secured if not for the injury.⁹³ Parts IV.B. and IV.D. discuss challenges that the proximate cause requirement creates for plaintiffs whose injuries are based on lost sales and contracts.

B. Lost Sales

An injury premised on the loss of sales neatly fits the basic requirements for a business-or-property injury under RICO, as it is more easily quantifiable than reputational damage or loss of goodwill. If the hypothetical furniture manufacturer in Part IV.A had lost sales due to consumers' objections over

reputational damage), *aff'd sub nom.* *The Knit With v. Knitting Fever, Inc.*, 625 F. App'x 27 (3d Cir. 2015).

90. *In re Volkswagen*, 2019 WL 6749534, at *4; *Knit With*, 2012 WL 2938992, at *10 (“Claimed losses to goodwill and reputation are not only speculative, but are simply not the types of injuries compensable under RICO.”).

91. *Cement-Lock v. Gas Tech. Inst.*, No. 05-C-0018, 2005 WL 2420374, at *13 (N.D. Ill. Sept. 30, 2005).

92. *Id.* at *14.

93. In one case, the Southern District of New York appeared to find that a soybean supplier's reputational injury was cognizable where the supplier alleged that damage to its reputation had caused it to lose contracts with suppliers and had forced it to reduce its production rate and fire employees. *Dandong Old N.E. Agric. & Animal Husbandry Co. v. Hu*, No.15 CIV. 10015 (KPF), 2017 WL 3328239, at *3 (S.D.N.Y. Aug. 3, 2017) (dismissing plaintiff's civil RICO claim on other grounds).

unethically sourced wood products, it would have a cognizable business-or-property injury.

The main obstacle to successful claims premised on lost sales injuries arises during the proximate cause analysis. In the wake of *Holmes*, *Hemi*, and *Anza* (the three Supreme Court decisions that set out a framework for evaluating proximate cause in the RICO context), courts are generally unsympathetic to conclusory allegations that a defendant's conduct caused a plaintiff's lost sales without specific details alleging *how* the defendant's conduct influenced the loss.⁹⁴ Thus, plaintiffs alleging lost sales need to carefully explain how the defendants' conduct caused their injuries.⁹⁵ If a defendant's conduct was not the only factor that caused a plaintiff's injury, the plaintiff should provide a rational basis for attributing a certain portion of its harm to the defendant's conduct.⁹⁶ The hypothetical furniture company would need to consider these wrinkles in building a civil RICO case. Perhaps the company could support its claims by showing sudden decreases in sales coupled with surveys demonstrating that consumers decided not to purchase the company's furniture due to environmental concerns.

C. Increased Costs

Businesses may also be injured when their expenses or operational costs increase due to a defendant's conduct. Some businesses may experience these types of injuries due to heavy emitters' activities. For example, a produce distributor may incur increased costs due to climate change if it is forced to shift its supply chains to new regions and to find new suppliers. A hospital's operational costs may increase as it struggles to address human

94. *See, e.g.*, *Chaverri v. Platinum LED Lights LLC*, No. CV-21-01700-PHX-SPL, 2022 WL 2275664, at *9 (D. Ariz. June 22, 2022) (“[Plaintiff] is claiming an injurious loss of sales caused by [Defendants] allegedly defrauding third-party consumers, but Defendants have given no concrete factual basis for this Court to draw a reasonable inference that there is a direct relation between these two claims. Defendants do not address whether their alleged economic injury might have been caused by other factors”); *Fortunet, Inc. v. Gametech Ariz. Corp.*, No. 206-CV-00393-PMP-PAL, 2008 WL 5083812, at *21 (D. Nev. Nov. 26, 2008) (noting that even if plaintiff could establish causal connection between defendant's conduct and injury, plaintiff provided no evidence about how many sales were lost due to the conduct).

95. *Holmes v. Sec. Inv. Prot. Corp.*, 503 U.S. 258, 268–69 (1992); *Anza*, 547 U.S. at 460–61; *Hemi Group, LLC v. City of New York*, 559 U.S. 1, 9 (2010).

96. *Holmes*, 503 U.S. at 269 (discussing difficulty “ascertain[ing] the amount of a plaintiff's damages attributable to the violation, as distinct from other, independent, factors”); *Club One Casino*, 837 F. App'x 459, 460–61 (9th Cir. 2020) (dismissing plaintiff's injury as too attenuated from defendant's conduct partly due to difficulty of parsing effects of defendant's conduct versus other factors contributing to injury).

health issues associated with climate change.⁹⁷ However, such injuries tend to be relatively indirect and are therefore likely to run up against the proximate cause requirement.

Knit With v. Knitting Fever demonstrates some causality issues that may arise for civil RICO plaintiffs whose injuries are premised on increased costs. In *Knit With*, a yarn shop alleged that a supplier's fraudulent marketing of its products had caused the plaintiff to incur several thousands of dollars in costs in order to restock its shelves.⁹⁸ In a decision affirmed by the Third Circuit, the district court held that these injuries were not caused by the defendants' conduct for two reasons. First, the plaintiff did not explain why the need to purchase new yarns arose from the defendants' conduct rather than a routine need to restock its inventory.⁹⁹ Second, the plaintiff had terminated its relationship with the defendant years before ordering the replacement yarns, and thus "would have had to find another supplier regardless of whether any racketeering scheme existed."¹⁰⁰ Moreover, because the plaintiff had ultimately sold the replacement yarns at a profit, the district court held the purchase of these yarns was not an injury at all.¹⁰¹

A hypothetical civil RICO plaintiff with a similar injury, such as the produce distributor introduced above, may be able to distinguish its injury from the *Knit With* plaintiff's. As that case demonstrates, in order to have an injury at all, such a plaintiff would likely need to show that it was not able to recoup its losses by selling an alternative product. Additionally, the plaintiff would likely need to show increased costs beyond the normal cost of restocking its product, which it would have had to do regardless of whether the defendant's conduct had occurred. If increasing temperatures or drought conditions due to climate change made it impossible for the produce distributor to source a product from a particular region, perhaps the distributor could show that it was forced to spend money shifting its supply chain to another region.

Courts have also rejected for want of proximate cause hospitals' and healthcare companies' claims that defendants' activities have increased their expenses. For example, in one case against a drug manufacturer that had illegally promoted one of its products for non-approved uses, the Seventh

97. See SANDRA AGUILAR-GOMEZ ET AL., NAT'L BUREAU ECON. RSCH., KILLER CONGESTION: TEMPERATURE, HEALTHCARE UTILIZATION & PATIENT OUTCOMES 1, 27 (2025) (discussing potential need for hospitals to increase investments in labor and capital, including surge management tools, in response to surges of patients during climate change-induced heatwaves).

98. *Knit With v. Knitting Fever, Inc.*, No. CIV.A. 08-4221, 2012 WL 2938992, at *9 (E.D. Pa. July 19, 2012).

99. *Id.*

100. *Id.*

101. *Id.*

Circuit held that welfare-benefit plans that had paid for some of these off-label uses did not have cognizable RICO injuries.¹⁰² The court considered the chain of events that caused the payors' expenses: Patients bore the initial costs of filling prescriptions, and payors like the plaintiffs only became involved afterward to cover leftover expenses.¹⁰³ Thus, the Seventh Circuit reasoned, the payors were not "the initial losers from the promotional scheme."¹⁰⁴ Appearing to refer to the third proximate cause rationale from *Holmes*, the court also wrote that even if the payors were the *principally* injured parties, teasing out the payors' health costs from the patients' costs would be too complicated.¹⁰⁵

The Third Circuit held similarly in a case brought by a group of union health and welfare funds against several tobacco companies and affiliates.¹⁰⁶ The health funds had sought to recover their expenditures on treatments for participants with smoking-related illnesses.¹⁰⁷ Looking to *Holmes*, the Third Circuit held that the defendants' wrongful conduct—their suppression of information regarding the health risks of smoking—had not proximately caused the plaintiffs' injuries.¹⁰⁸ The court wrote that the individuals with smoking-related illnesses, rather than the health funds, were directly injured by the wrongful conduct.¹⁰⁹ Moreover, in order to assess the health funds' damages, a court would have needed to parse "the extent to which [the funds'] increased costs for smoking-related illnesses resulted from the tobacco companies' conspiracy to suppress health and safety information, as opposed to smokers' other health problems, smokers' independent . . . decisions to smoke, smokers' ignoring of health and safety warnings, etc."¹¹⁰

In re National Prescription Opiate Litigation provides one example of an increased-costs injury that satisfied judicial proximate cause requirements. The plaintiff in the case, a hospital, alleged that a group of opioid manufacturers and affiliates had disseminated misinformation about the risks and benefits of opioid painkillers, fueling the opioid crisis and thereby increasing the hospital's operational costs in several ways, including by forcing the hospital to spend more on routine procedures that had become

102. *Sidney Hillman Health Ctr. of Rochester v. Abbott Lab's*, 873 F.3d 574, 576 (7th Cir. 2017).

103. *Id.*

104. *Id.*

105. *Id.*

106. *Steamfitters Loc. Union No. 420 Welfare Fund v. Philip Morris, Inc.*, 171 F.3d 912, 918 (3d Cir. 1999).

107. *Id.*

108. *Id.* at 932–33.

109. *Id.*

110. *Id.* at 933.

more complicated due to patients' opioid use.¹¹¹ A district court held that the causal link between the hospital's injuries and the opioid manufacturers' conduct was direct enough to meet the proximate cause requirement.

In a magazine article, a lawyer for the hospital discussed his team's process for quantifying the hospital's damages: The team relied on forensic modeling to isolate the patients who had legal prescriptions for the defendants' products and to separate the hospital's routine expenses on these patients from the expenses generated by opioid-related health issues.¹¹² By isolating expenses related to patients who had prescriptions for the defendants' products and by teasing out which increased expenses arose due to opioid-related health complications, this model seems to have helped to address the first *Holmes* rationale—the risk that assessing attenuated injuries will force a court to perform a “speculative and complicated” analysis to attribute a certain percentage of the injury to the defendant's conduct.¹¹³

Nonetheless, given the challenge of establishing proximate cause, a hospital launching a civil RICO claim over increased operational costs due to the impacts of climate change would likely face an uphill battle. Perhaps such plaintiff could take an approach similar to the hospital's in *In re National Prescription Opiate Litigation* by using modeling to establish a dollar amount for its increased operational costs due to health complications associated with extreme heat. Or perhaps the hypothetical hospital would be able to demonstrate increased costs associated with hiring additional staff or developing procedures to deal with patient surges during heatwaves. In either case, the hypothetical hospital would face the additional hurdle of connecting the defendants' activities with a certain amount of global average warming, and with increasing the likelihood of extreme weather events like heatwaves by a certain amount.

D. Lost Relationships and Contracts

Another form of business or economic injury is the loss of a contract or an economically fruitful relationship. Such injuries may occur as a result of heavy-emitting companies' activities. For example, a construction company could lose out on a contract due to a lower bid from a company whose use of building products associated with deforestation allows it to undercut others' prices; or the produce distributor introduced in Part IV.C could lose out on a

111. *In re Nat'l Prescription Opiate Litig.*, 452 F. Supp. 3d 745, 763 (N.D. Ohio 2020).

112. Don Barrett, *Hospital Opioids Case Moves Forward in MDL*, ATT'Y L. MAG. (Apr. 23, 2020), <https://attorneyatlawmagazine.com/legal/legal-news/hospital-opioids-case-moves-forward-in-mdl>. This approach resembles climate change attribution science insofar as it aims to sort out the extent to which the hospital's injuries were caused by the plaintiff's specific products.

113. *Holmes v. Sec. Inv. Prot. Corp.*, 503 U.S. 258, 269–70 (1992).

contract as it scrambles to find new suppliers. The Second Circuit has directly held that an unawarded contract may be a business injury.¹¹⁴ However, plaintiffs with lost-contract injuries need to establish a direct, causal connection to the defendant's conduct to satisfy the proximate cause requirement.

Proximate cause may be relatively easy to establish where the plaintiff and defendant have bid against each other or otherwise directly competed for a contract. In *Commercial Cleaning Services, L.L.C. v. Colin Service Systems, Inc.*, a class of janitorial service providers alleged that their competitor had hired undocumented workers, allowing it to lower its costs and therefore underbid the plaintiffs, who lost contracts and customers as a result.¹¹⁵ The Second Circuit held that the plaintiffs had established proximate cause between their injuries and the defendants' conduct. The court noted that the plaintiffs and defendant were directly competing against each other, so opportunities that had not gone to the defendant would necessarily have gone to the plaintiffs.¹¹⁶ The court also emphasized that unlike the plaintiffs' injuries in *Holmes*, the janitorial service companies' injuries were not "derivative of injury to others."¹¹⁷ In other words, these were not secondary injuries, contingent on the primary injury of a third party. The hypothetical construction company's directly competitive relationship with the defendant company resembles the relationship between the plaintiffs and defendant competing for contracts in *Commercial Cleaning Services*. If this hypothetical plaintiff could show that it was next in line to win the contract, and that the defendant received the contract due to its lower bid, then it would likely have a cognizable RICO injury.

The proximate cause requirement may be more difficult to meet when plaintiffs and defendants are not directly in competition with each other. The requirement may not be satisfied if the plaintiffs cannot establish that the

114. *Terminate Control Corp. v. Horowitz*, 28 F.3d 1335, 1343 (2d Cir. 1994) (holding that while the plaintiff did not have a property right in the unawarded contracts, recovery of damages for lost-contract injuries "is not premised upon any conception of a property right in" such contracts).

115. *Com. Cleaning Servs., L.L.C. v. Colin Serv. Sys., Inc.*, 271 F.3d 374, 378 (2d Cir. 2001). The Seventh Circuit took a similar approach in *BCS Services v. Heartwood 88*, where the plaintiffs had lost bids on property tax liens, rather than contracts, due to the defendants' wrongful conduct. 637 F.3d 750, 756–57 (7th Cir. 2011) (emphasizing that plaintiffs were the only parties injured by defendants' conduct).

116. *Com. Cleaning Servs.*, 271 F.3d at 381–82. Similarly, in *Corcel Corp. v. Ferguson Enterprises*, the Eleventh Circuit held that the proximate cause requirement was satisfied because the plaintiff was next in line for the contract that the defendant had procured through fraudulent activity. 551 F. App'x 571 (11th Cir. 2014). The Supreme Court used similar reasoning in *Bridge*, although the parties in that case had bid against each other on tax liens rather than contracts. *Bridge v. Phx. Bond & Indem. Co.*, 553 U.S. 539, 642–44 (2008).

117. *Com. Cleaning Servs.*, 271 F.3d at 385.

allegedly lost contracts were “imminent, or even reasonably certain to be entered.”¹¹⁸ It may also be unmet if the plaintiffs cannot set out facts “plausibly identifying” the defendant’s activities as the “direct cause” of the lost relationships or opportunities.¹¹⁹ The produce distributor might struggle to pass the proximate cause test because this hypothetical plaintiff’s injury would derive from the injury to its former suppliers: The suppliers’ livelihoods were directly destroyed by the defendants’ activities, and that destruction resulted in the secondary injury to the distributor.

V. INJURIES TO INDIVIDUALS AND MEMBERSHIP ORGANIZATIONS

A coastal home lost to sea level rise. Money spent purchasing airline tickets for flights that were falsely advertised as carbon neutral. An ecotourism job lost because a once-pristine ecosystem is now degraded. A diverse range of injuries may befall individuals due to heavy-emitting sectors’ impacts on climate, ecosystems, and species. This Part explores four categories of relevant injuries: damage to real property, financial losses, lost opportunities to enter commercial relationships, and lost jobs. For each type of injury, this Part provides example cases using hypothetical plaintiffs and tests these plaintiffs’ injuries against case law.

In some cases, membership organizations may have standing to bring cases on behalf of groups of injured individuals. There are three requirements for this form of “associational” standing: (1) the organization’s members must have standing to sue individually, (2) the interests that the organization seeks to protect through the lawsuit must be relevant to its purpose, and (3) there must not be a need for the individual members to participate in the lawsuit in order for a court to hear the organization’s claim or assess its request for relief.¹²⁰ This third requirement may prevent membership organizations from suing on behalf of their members for certain injuries that would require an analysis of causation or damages on an individual level. As a blanket rule, the third requirement bars membership organizations from seeking monetary damages on behalf of their individual members.¹²¹

118. *E.g.*, *Prime Partners IPA of Temecula, Inc. v. Chaudhuri*, No. 5:11-CV-01860-ODW, 2012 WL 1669726, at *2, 9 (C.D. Cal. May 14, 2012).

119. *Id.*

120. *Hunt v. Wash. State Apple Advert. Comm’n*, 432 U.S. 333, 343 (1977).

121. *Comm. to Protect Our Agric. Water v. Occidental Oil & Gas Corp.*, 235 F. Supp. 3d 1132, 1169 (E.D. Cal. 2017) (“No federal court has held that an association has standing to seek monetary relief on behalf of its members . . .”) (citing *United Union of Roofers, Waterproofers, & Allied Trades No. 40 v. Insurance Corp. Am.*, 919 F.2d 1398, 1400 (9th Cir. 1990); *Air Transport Ass’n Am. v. Reno*, 80 F.3d 477, 484–85 (D.C. Cir. 1996)).

However, organizations may seek injunctive relief that would redress all members' injuries without the need for individualized consideration.¹²²

A. Damage to Real Property

Individual plaintiffs may suffer harm when the effects of climate change—like extreme weather events and sea level rise—physically damage their properties. Physical damage to real property demonstrable through a diminishment in property value falls squarely within the range of harms that may constitute injuries to “business or property.” However, federal circuits disagree about whether a plaintiff who has lost the use and enjoyment of their property has suffered a RICO property injury or a personal injury. In *Safe Streets Alliance v. Hickenlooper*, the Tenth Circuit held that both the diminishment of the plaintiffs' land value and the plaintiffs' lost use and enjoyment of their land due to emissions of “foul odors” from a neighboring marijuana farm were cognizable RICO injuries.¹²³ In contrast, the Ninth Circuit held in *Oscar v. University Students Co-operative Association* that lost use and enjoyment is “not a tangible injury to property” and therefore does not satisfy RICO's business-or-property requirement.¹²⁴ However, in light of the Supreme Court's recent holding in *Medical Marijuana*,¹²⁵ secondary economic consequences of a plaintiff's loss of the use and enjoyment of their property may create grounds for recovery under RICO.

Even if a plaintiff's property damage is considered a business-or-property injury, the plaintiff may struggle to satisfy the proximate cause requirement. As discussed in Part II.A., it is unclear whether courts will view the chain of causation between major GHG emitters' activities and damage due to the ‘symptoms’ of climate change as sufficiently direct to give rise to liability. Though attribution science has become robust,¹²⁶ it is more difficult to attribute individual, extreme events such as storms or wildfires to climate change than it is to attribute *average* changes like average surface temperatures or sea level rise.¹²⁷ Thus, a plaintiff whose property has been damaged due to sea level rise may satisfy the proximate cause requirement

122. *Nat'l Org. for Women, Inc. v. Scheidler*, 897 F. Supp. 1047, 1069–70 (N.D. Ill. 1995), *rev'd on other grounds* 547 U.S. 9 (2006) (holding that the women's organization had associational standing in civil RICO suit because it sought injunction rather than monetary damages for members).

123. 859 F.3d 865, 885–88 (10th Cir. 2017).

124. *Oscar v. Univ. Students Co-op. Ass'n*, 965 F.2d 783, 787 (9th Cir. 1992). The Ninth Circuit appeared to agree that reduced property values would give rise to a cognizable RICO injury, however. *Id.* at 786.

125. *Med. Marijuana, Inc. v. Horn*, 145 S. Ct. 931, 936 (2025).

126. *Burger et al.*, *supra* note 78, at 65.

127. *Id.* at 90. Extreme precipitation events, for example, are “characterized by large variability and difficult to model.” *Id.* at 107.

more easily than a plaintiff whose property has been damaged in a hurricane.¹²⁸

A membership organization would not have associational standing to sue over individual members' real property damages. These members' injuries would need to be quantified on an individual basis, which would necessitate their individual participation in the case. As discussed above, the need for individual members' participation to analyze claims or damages precludes associational standing.¹²⁹

B. Financial Loss

Individual injuries may also be purely financial. For instance, an individual may suffer an injury when they purchase a seafood product in reliance on a manufacturer's false representation that it was sustainably caught. The Supreme Court has stated in the context of antitrust law that "[a] person whose property is diminished by a payment of money wrongfully induced is injured in his property."¹³⁰ Lower courts have followed this statement in civil RICO cases, holding that financial injury to an individual is a cognizable injury to property.¹³¹ Thus, consumer injuries that arise when individuals purchase products in reliance on misrepresentations or omissions may fall within the scope of RICO.

In one case, the Ninth Circuit held that individuals who had paid out-of-pocket expenses for a prescription drug which, unbeknownst to them, increased their risk of developing bladder cancer satisfied the proximate cause requirement.¹³² The court noted that the defendants had not even disputed that the injury was a business-or-property injury.¹³³ The Ninth Circuit found that the proximate cause requirement was met because the plaintiffs were the parties most directly injured by the defendants' actions.¹³⁴ The court observed that other federal circuits have analyzed proximate cause

128. The complaint in *Municipalities of Puerto Rico* takes an "intensification" approach to showing causation, arguing not that the defendants' activities caused the relevant hurricanes single-handedly, but rather that the defendants' activities increased the hurricanes' intensity and destructiveness. Amended Complaint for Damages, *supra* note 9, at 77 ("The extremely warm water around Puerto Rico caused by climate change, as accelerated by the Defendants' products and conduct, intensified Maria by 65%.").

129. 432 U.S. 333, 343 (1977).

130. *Chattanooga Foundry & Pipe Works v. City of Atlanta*, 203 U.S. 390, 396 (1906).

131. *E.g.*, *Smith v. FirstEnergy Corp.*, 518 F. Supp. 3d 1118, 1125 (S.D. Ohio 2021) (holding that ratepayer surcharges to bail out nuclear power plants could constitute injury to property).

132. *Painters & Allied Trades Dist. Council 82 Health Care Fund v. Takeda Pharms. Co.*, 943 F.3d 1243, 1247 (9th Cir. 2019).

133. *Id.* at 1248.

134. *Id.* at 1250–51.

differently in cases involving consumer injuries due to misrepresentations regarding prescription drugs.¹³⁵ For example, the Second Circuit has held that patients' injuries are too attenuated from the defendants' conduct to satisfy proximate cause because doctors may rely on other sources of information besides the manufacturers' marketing plans in making prescription decisions.¹³⁶

At first glance, an injury to a seafood consumer appears less complex than an injury to a prescription drug consumer because a seafood consumer's decision to purchase a product is not contingent upon receiving a prescription from a doctor. Instead, the choice may be contingent upon a retailer's decision to stock the offending product, in which case a court might hold that the injury to the consumer was too far attenuated from the manufacturers' conduct. Wielding RICO, however, a consumer might be able seek redress from the retailer *and* the manufacturer if both had participated in the pattern of racketeering activity. If both the retailer and manufacturer could be sued as "persons" contributing to the racketeering enterprise, the retailer's decision to stock the manufacturer's product could likely be a part of the wrongful conduct subject to the lawsuit, rather than an intervening action that destroys proximate cause.

While individuals may have cognizable RICO injuries based on financial losses, a membership organization would be unlikely to have associational standing to represent members with purely financial damages because a court would need to individually assess each member's damages to consider the claim.¹³⁷

C. Loss of Opportunity to Form Commercial Relationships

Another form of injury that may befall individual plaintiffs due to climate change, ecosystem destruction, and biodiversity loss is the loss of opportunity to form commercial relationships and transact business with distinct entities or individuals. The Ninth Circuit recognized in *National Organization for Women v. Scheidler* that such a loss of opportunity may constitute a business injury to an individual. In *National Organization for Women*, a nonprofit representing a group of patients who had sought abortions and healthcare centers that performed abortions sued a group of anti-abortion organizations and activists under RICO.¹³⁸ The plaintiffs

135. *Id.* at 1253.

136. *Id.* at 1254.

137. *Hunt v. Wash. St. Apple Advert. Comm'n*, 432 U.S. 333, 344 (1977).

138. *Nat'l Org. for Women, Inc. v. Schiedler*, 897 F. Supp. 1047, 1055 (N.D. Ill. 1995), *rev'd on other grounds*, 547 U.S. 9 (2006).

claimed that the defendants' activities—which included extortion and threats of violence—had damaged the healthcare plaintiffs' business and interfered with the patients' ability to have abortions.¹³⁹ The Supreme Court held that the healthcare clinics had sustained business-or-property injuries partly because the defendants had “use[d] force to induce clinic staff and patients to stop working and obtain medical services elsewhere.”¹⁴⁰ Guided by this Supreme Court holding, the Ninth Circuit decided on remand that the women's organization had standing because its members had been deprived of opportunities to “avail themselves of a commercial relationship; the ability to transact business with the clinics.”¹⁴¹

It is unclear how broadly the Ninth Circuit (or, potentially, a court in another federal circuit) might define the kind of “commercial relationship” that can become the subject of a RICO injury. Under a broad definition, perhaps the inability of consumers to purchase products from vineyards or fisheries damaged by climate change could be considered the loss of opportunities to form commercial relationships. However, these consumers would be unlikely to meet the proximate cause requirement because their injuries would be premised on injuries to the vineyards or fisheries. In other words, these businesses' more direct injuries from the defendants' conduct would give rise to the consumers' secondary injuries.

The Ninth Circuit also addressed the issue of associational standing for a loss-of-opportunity-to-transact injury in *National Organization for Women*. The defendants argued that the women's organization could not have associational standing because its individual members would need to participate in the suit to show their damages.¹⁴² In response, the court pointed out that the organization was seeking an injunction only, so there would be no need to establish pecuniary losses for each individual plaintiff.¹⁴³ Although some members would likely still need to testify about their injuries, that did not destroy the organization's associational standing.¹⁴⁴

D. Lost Employment

Individuals may also lose employment due to the harmful impacts of heavy-emitting companies. For example, a job arranging ecotourism visits to a once-pristine locale might be lost due to the degradation of the area by deforestation and fires. A seasonal farm job that involves outdoor labor might

139. *Id.* at 1066–67.

140. *Nat'l Org. for Women, Inc. v. Scheidler*, 510 U.S. 249, 256 (1994).

141. *Nat'l Org. for Women*, 897 F. Supp. at 1069.

142. *Id.*

143. *Id.*

144. *Id.* at 1070.

be lost as rising temperatures make it too dangerous to perform strenuous work outdoors during the summer.¹⁴⁵

Some federal courts have directly held that loss of employment can be a RICO business injury. In *Diaz v. Gates*, the Ninth Circuit held that a plaintiff who had been wrongfully imprisoned by the Los Angeles Police Department and thus had been prevented from “fulfill[ing] his employment contract or pursu[ing] valuable employment opportunities” had sustained a business injury.¹⁴⁶ Both the Ninth and Second Circuits also take a broad view of the types of employment that satisfy the business injury requirement.¹⁴⁷

Before 2025, some courts held otherwise, reasoning that lost employment injuries were “inseparable from . . . personal injury claims.”¹⁴⁸ The Supreme Court rejected this underlying logic in *Medical Marijuana*, a case brought by a commercial truck driver who used a pain relief product that was falsely advertised as THC-free.¹⁴⁹ The driver lost his job after testing positive for THC and sued the distributor under RICO. The Supreme Court held that the driver had a cognizable RICO injury: Although the loss of his job could be said to stem from an injury to the plaintiff’s body, “[t]he phrase ‘injured in his business or property does not preclude recovery for all economic harms that result from personal injuries.’”¹⁵⁰ Though the Court rejected an underlying reason for considering employment injuries non-cognizable under RICO, it did not directly touch on question of whether an employment injury is a business injury.¹⁵¹ Thus, it is unclear whether lower courts that previously rejected employment injuries as bases for civil RICO lawsuits will change course in light of *Medical Marijuana*.

As with any RICO injury, a plaintiff alleging loss of employment as an injury would need to show a direct causal relationship between that loss and the defendants’ conduct. The proximate cause requirement would likely be easier to meet for the first hypothetical plaintiff above (who has lost an

145. See U.S. ENV’T PROT. AGENCY, CLIMATE CHANGE IN THE UNITED STATES: BENEFITS OF GLOBAL ACTION 28–29 (2015) (projecting over 1.8 billion lost labor hours by 2100 due to extreme heat in business-as-usual GHG emissions scenario).

146. *Diaz v. Gates*, 420 F.3d 897, 900 (9th Cir. 2005) (“Diaz . . . has alleged both the property interest and the financial loss. The harms he alleges amount to intentional interference with contract and interference with prospective business relations, both of which are established torts under California law.”).

147. *Id.* at 905 (“A person does not have to wear a suit and tie to be engaged in ‘business.’”); *Horn v. Med. Marijuana, Inc.*, 80 F.4th 130, 136 (2d Cir. 2023) (quoting *id.*).

148. *Spadaro v. City of Miramar*, 855 F. Supp. 2d 1317, 1353 (S.D. Fla. 2012) (quoting *Townsend v. City of Miami*, Case No. 03–21072–CIV–JORDAN (S.D. Fla. Nov. 7, 2007)).

149. *Med. Marijuana, Inc. v. Horn*, 145 S. Ct. 931, 936–37 (2025).

150. *Id.* at 946.

151. *Id.* at 938 (“[W]e do not decide whether the Second Circuit correctly interpreted ‘business’ to encompass ‘employment’ for purposes of § 1964(c). This interpretation may or may not be right.”).

ecotourism job because it is no longer desirable to visit a certain area) than for the second (who has lost an agricultural job because extreme heat has made it infeasible to perform physical labor outdoors). While the first plaintiff would have to connect the defendants' activities with harm to the tourism destination, the second would likely face the trickier task of attributing extreme heat events or overall higher temperatures to the defendants' share of global GHG emissions. Associational standing over a loss-of-employment injury would likely depend on whether the plaintiffs were seeking monetary damages for jobs already lost or an injunction to prevent an imminent threat of lost employment.

VI. CONCLUSION

Companies that contribute to climate change and drive nature and biodiversity loss inflict widespread harms on businesses and individuals. These harms manifest both locally and globally and may often take the form of business-or-property injuries. RICO's civil enforcement provisions may provide a pathway for some of these businesses and individuals to seek damages from the companies that have caused their injuries. However, it is uncertain how courts will analyze standing for claims that arise from these harms, given the proximate cause requirement discussed in Part III. The pending *Kennedy* case may serve as an important testing ground for this new application of the statute and may open new doors for plaintiffs seeking redress for injuries induced by corporate climate and environmental malfeasance.

One development in RICO jurisprudence that would help plaintiffs to seek redress for the kinds of injuries discussed throughout this Article would be the recognition of intensification as a kind of causation. RICO creates a right of action for plaintiffs who have sustained business-or-property injuries "by reason of" the defendants' racketeering activity.¹⁵² Courts have generally interpreted this language to impose causation requirements, preventing plaintiffs from recovering for injuries when the defendants' conduct may only have been a negligible cause, or when there are so many potential causes that it would be impossible for a court to decide how much the defendants' conduct contributed to the injury. The plaintiffs in *Municipalities of Puerto Rico* provided a reasoned basis for assessing the oil and gas industry's responsibility for the plaintiff's damages: calculations of the industry's contributions to climate change and of the extent to which climate change intensified Hurricane Maria, causing the plaintiffs' injuries.¹⁵³ By

152. 18 U.S.C. § 1964(c) (2018).

153. Amended Complaint for Damages, *supra* note 9, at 26, 77.

recognizing intensification as a basis for apportioning responsibility, courts would help to ensure that plaintiffs who have foreseeable injuries due to defendants' greenhouse gas emissions could seek relief.