EDUCAÇÃO SUPERIOR
ISSN 2237-1036

REVISTA DE DIREITO INTERNACIONAL
BRAZILIAN JOURNAL OF INTERNATIONAL LAW

The normative framework of extraterritorial jurisdiction in international law: from the lotus paradigm to transnational climate accountability

O Arcabouço Normativo da Jurisdição Extraterritorial no Direito Internacional: Do Paradigma Lotus à Responsabilização Climática Transnacional

Marcel Vitor de Magalhães e Guerra

VOLUME 23 • N. 1 • 2026
DIREITO INTERNACIONAL
EM TRANSFORMAÇÃO

Sumário

doi: 10.5102/rdi.v23i1.10578

The normative framework of extraterritorial jurisdiction in international law: from the lotus paradigm to transnational climate accountability*

O Arcabouço Normativo da Jurisdição Extraterritorial no Direito Internacional: Do Paradigma Lotus à Responsabilização Climática Transnacional

Marcel Vitor de Magalhães e Guerra**

Abstract

This article proposes a coherent jurisdictional framework for transnational corporate climate liability through the integration of public and private international law. It identifies a persistent institutional failure: the separation of prescriptive legitimacy (public international law) from adjudicatory operability (private international law) generates substantive regulatory rights without accessible courts—exemplified most acutely in the EU Corporate Sustainability Due Diligence Directive (CSDDD), which establishes compensation entitlements whilst remaining jurisdictionally silent on many third-country claims. Methodologically, the article combines critical legal dogmatics with functional comparison of US and EU jurisdictional frameworks, drawing on primary sources (treaties, legislation, and case law) and specialist literature. Substantively, it contends that (i) extraterritorial jurisdiction has evolved from the Lotus paradigm toward a genuine-connection/legitimate-interest standard; (ii) the US constitutional model exemplifies institutional "gatekeeping" that may externalize access-to-justice costs, whilst the EU model demonstrates substantive regulatory ambition unaccompanied by procedural avenues; and (iii) a workable integrated standard remains available. The article operationalizes "genuine connection" through a normative judicial filter of four cumulative criteria—foreseeability, material contribution, effective control, and remedial necessity. The analysis reflects legislative and judicial developments through mid-2025, notably the CSDDD, the ECtHR's *KlimaSeniorinnen* judgment, and recent developments in the Lliuya v. RWE AG proceedings before the Higher Regional Court of Hamm (OLG Hamm, 2025). It characterizes the CSDDD's jurisdictional silence as a structural design failure—predictable under public/private compartmentalization—rather than a mere legislative oversight.

Keywords: extraterritorial jurisdiction; transnational climate accountability; genuine connection; forum necessitatis; corporate sustainability due diligence; access to justice.

* Received on:30/03/2026
Approved on:30/06/2026

** Public Defender and internationally trained legal scholar specialising in Public and Private International Law, with a focus on climate justice and structural litigation. Doctoral degree awarded in 2025 with highest grade by the Universidade do Estado do Rio de Janeiro (UERJ), featuring a research residency at the Max Planck Institute for Comparative Public Law and International Law in Heidelberg, Germany. Currently assigned to the Human Rights Nucleus (NDHDPES), developing innovative legal frameworks at the intersection of transnational jurisdiction and Vulnerability Theory. Author of the forthcoming monograph International Jurisdiction and Climate Effectiveness (Editora Conjecturas, 2026), the published product of the doctoral thesis.
E-mail : marcelvguerra36@gmail.com

Resumo

Este artigo propõe um marco jurisdicional coerente para a responsabilização corporativa transnacional por danos climáticos mediante a integração do direito internacional público e do direito internacional privado. Diagnostica uma falha institucional recorrente: a separação entre legitimidade prescritiva (direito público) e operabilidade adjudicatória (direito privado) com expressão particularmente nítida na Diretiva Europeia sobre Dever de Diligência em Matéria de Sustentabilidade (CSDDD), que reconhece pretensões indenizatórias, mas permanece silenciosa quanto à competência jurisdicional em litígios envolvendo réus e danos em países terceiros. Metodologicamente, o artigo combina dogmática jurídica crítica com comparação funcional entre os modelos jurisdicionais dos Estados Unidos e da União Europeia, valendo-se de fontes primárias (tratados, legislação e jurisprudência) e da literatura especializada. Sustenta (i) que a jurisdição extraterritorial evoluiu do paradigma *Lotus* para um quadro estruturado por conexão genuína e interesse legítimo; (ii) que o modelo norte-americano ilustra uma forma de *gatekeeping* que pode externalizar custos de acesso à justiça, enquanto o modelo europeu evidencia ambição substantiva sem equivalentes processuais; e (iii) que existe um padrão integrado operacionalizável. O artigo operacionaliza a "conexão genuína" por meio de um filtro judicial normativo composto por quatro critérios — previsibilidade, contribuição material, controle efetivo e necessidade remediadora. Esses critérios possuem natureza eminentemente prescritiva, funcionando não apenas como balizas teóricas, mas como requisitos normativos concretos a serem aplicados pelos tribunais na justificação do exercício da jurisdição extraterritorial. A análise reflete desenvolvimentos legislativos e jurisprudenciais até meados de 2025, notadamente a CSDDD, a decisão *KlimaSeniorinnen* da CEDH e o caso *Lliuya v. RWE AG*. Por fim, o artigo sustenta que o silêncio jurisdicional da CSDDD não constitui mera omissão legislativa, mas sim uma falha estrutural de desenho normativo — previsível em razão da compartimentalização entre o Direito Internacional Público e o Direito Internacional Privado.

Palavras-chave: jurisdição extraterritorial; responsabilização climática transnacional; conexão genuína; *forum necessitatis*; diligência devida corporativa; acesso à justiça.

1 Introduction

The governance of transnational climate harm reveals a fundamental structural tension in international law: the existing jurisdictional framework—predicated on sovereign equality, territorial boundaries, and the separation of public from private law—proves inadequate to address climate damage's diffuse, cumulative, and global character. As of 2023, over 2,300 climate-related cases had been filed globally, with accelerating corporate litigation demonstrating an urgent need for a coherent jurisdictional doctrine.[1]

This article identifies the solution in functional convergence: public international law provides the legitimacy criteria (genuine connection and legitimate interest), whilst private international law supplies the adjudicatory mechanisms through which those criteria can be operationalized. This article treats functional convergence as an emerging descriptive phenomenon with significant normative implications, rather than as a fully consolidated doctrine. It reflects an observable alignment between public and private international law, whilst also providing a framework for its critical evaluation. The current separation of these fields is both descriptively inaccurate and normatively untenable. Most significantly, the Corporate Sustainability Due Diligence Directive (CSDDD) exemplifies this failure: it grants affected parties a potential substantive right to compensation without, however, identifying a tribunal in which they can claim it.

This article advances three principal claims.

First, a functional convergence between public and private international law is necessary: effective climate accountability requires the integration of public law legitimacy tests with private law procedural mechanisms, since their separation produces rights without a forum. Second, the climate accountability gap is replicated across different jurisdictions: whenever regulatory obligations are conceived based on public law without corresponding operationalization in private law, substantive rights lack a competent forum. Third, a viable framework exists: the genuine connection standard can

[1] SETZER, Joana; HIGHAM, Catherine. *Global trends in climate change litigation*: 2023 snapshot. London: Grantham Research Institute, 2023; UNITED NATIONS ENVIRONMENT PROGRAMME. *Global climate litigation report*: 2025 status review. Nairobi: UNEP, 2025.

be operationalized through four normative standards—foreseeability, material contribution, effective control, and remedial necessity.

The analysis employs doctrinal legal study combined with functional comparison. The United States and the European Union are selected as principal comparators because they embody structurally opposed regulatory logics — constitutional restraint versus regulatory expansion — and together illuminate the full spectrum of institutional options available to those confronting transnational harm. Other relevant legal systems, such as emerging Global South jurisdictions or the Chinese transnational commercial courts, were excluded from this specific functional comparison because they do not yet exhibit the same consolidated, polar-opposite approaches to the tension between extraterritorial corporate accountability and domestic procedural closure. The inquiry is confined to civil jurisdiction and private international law; questions of criminal liability and inter-state responsibility lie outside its scope. It is precisely the tension between jurisdictional reach and remedial effectiveness that renders this comparison analytically productive.

The methodological choice of critical legal dogmatics reflects a dual objective: systematic reconstruction of existing legal norms (the dogmatic dimension) and normative evaluation of their adequacy against substantive commitments—specifically, access to justice and climate protection (the critical dimension). Functional comparison, rather than taxonomic analysis, is employed because jurisdictional doctrines in the US and EU serve structurally analogous functions (constraining extraterritorial reach whilst enabling transnational claims), notwithstanding radically different institutional.[2]

The article proceeds as follows: Section 2 traces the Lotus paradigm's evolution toward the genuine connection standard; Section 3 examines private international law frameworks in the US and EU, identifying the CSDDD's jurisdictional lacuna; Section 4 synthesizes both jurisdictional traditions; Section 5 develops an operational framework; and Section 6 concludes with three principal research priorities.

The incremental contribution here consists in integrating the legitimacy criteria developed in public international law (genuine connection and legitimate interest) with the adjudicatory mechanisms of private international law, operationalizing that integration through four cumulative judicial criteria designed for transnational climate accountability.

1.1 Operational definitions

For analytical clarity, the following terms are used consistently throughout. «Prescriptive jurisdiction» denotes the authority to prescribe norms with extraterritorial reach, which contemporary international law conditions on normative justification — either a legitimate interest or a genuine connection between the regulating state and the regulated person, conduct, or effects. «Adjudicative jurisdiction» denotes the procedural mechanisms of private international law through which those legitimacy criteria are operationalized in court, and «enforcement jurisdiction» the capacity to render judgments effective, which this work treats as requiring institutional safeguards and, where necessary, multilateral architecture.

«Accountability» encompasses both civil liability and regulatory responsibility — the dual pathways through which climate-related obligations may be addressed and redressed. "Genuine connection» is understood as a multidimensional threshold of legitimacy, rather than a unitary factual link, operationalized here through four normative criteria — foreseeability, material contribution, effective control, and remedial necessity — each contributing to the decision-making process regarding jurisdictional competence. And «functional convergence» as the integration of public-law legitimacy criteria with private-law adjudicatory mechanisms, without which substantive rights risk remaining rights without an available forum.

2 Extraterritorial jurisdiction in public and customary international law

Having identified this central challenge, we now examine the normative foundations of extraterritorial jurisdiction in public and customary international law.

2.1 The lotus paradigm and its limitations

The normative analysis of extraterritorial civil jurisdiction must begin with the S.S. *Lotus* case (PCIJ, 1927), not merely because subsequent ICJ decisions remain

2 On functional comparison in international legal methodology, see MILLS, Alex. *The confluence of public and private international law.* Cambridge: Cambridge University Press, 2009. p. 15–22.

limited, but because this decision established a conceptual framework that continues to structure academic discourse and state practice across nearly a century.

The core holding was straightforward: states possessed the authority to legislate extraterritorially unless international law expressly prohibited such conduct. This standard inverted the burden of proof, granting states expansive discretion and positioning sovereignty as the paramount value. Under this framework, international law functioned as a system of express prohibitions rather than one of positive authorizations.[3]

This approach was coherent within its historical context, yet it exhibits fundamental limitations. The permission for states to legislate in the absence of express prohibition provides no safeguard against regulatory overreach, jurisdictional conflicts, or the instrumentalization of domestic law for foreign policy objectives. The framework proves inadequate for addressing the diffuse harms characteristic of climate damage, wherein multiple actors contribute to injury distributed across territories and across time.[4]

Importantly, the recognition of expanded jurisdictional reach does not imply abandonment of traditional constraints on state power. Rather, the requirement of a «genuine connection»—as developed in this article—operates as a limiting principle, ensuring that assertions of jurisdiction remain anchored in foreseeability, material links, and legitimate regulatory interests. This constraint prevents jurisdictional expansion from becoming equivalent to jurisdictional excess. Contemporary governance challenges demand a normative framework predicated on positive legitimacy rather than merely the absence of express prohibition.

2.2 The modern framework: genuine connection and legitimate interest

The modern paradigm represents not the abandonment of *Lotus* but rather its reinterpretation in light of three significant developments: crystallization of sovereign equality and non-intervention as binding customary principles[5]; emergence of community-oriented values subsequent to 1945; and proliferation of transnational regulatory challenges—with climate protection preeminent among them—that expose the inadequacy of purely territorial frameworks.

Contemporary international law requires that extraterritorial prescriptive jurisdiction be grounded in normative justification derived from international law itself: specifically, either a legitimate interest or a genuine connection between the regulating state and the person, conduct, or effects subject to regulation. First articulated by the ICJ in *Nottebohm* (1955) within the nationality context, this requirement has progressively evolved into a general safeguard against the political instrumentalization of national laws in foreign relations.[6] Rather than functioning as a rule of nationality directly applicable to jurisdictional questions, it operates as a meta-criterion of legitimacy applicable across multiple legal domains.

Operationally, the genuine connection standard functions through two complementary inquiries: First, does a sufficient nexus obtain between the defendant and the regulating state? – assessed through territorial effects, physical presence, targeting of nationals, or other connecting factors recognized under customary international law. Second, can the exercise of jurisdiction be rationalized as advancing a legitimate collective interest transcending the regulating state's unilateral political preferences? In climate litigation, this inquiry examines whether the regulatory measure furthers shared normative commitments (including the Paris Agreement, UNFCCC objectives, and broader climate protection norms).

Customary international law recognizes several supplementary bases for extraterritorial jurisdiction beyond

[3] PERMANENT COURT OF INTERNATIONAL JUSTICE. S.S. Lotus (France v. Turkey). *PCIJ Reports*, Series A, No. 10, 7 Sept. 1927. On the centrality of sovereignty in the Lotus paradigm, see RYNGAERT, Cedric. *Jurisdiction in international law*. 2nd ed. Oxford: Oxford University Press, 2015. p. 19–25.

[4] MILLS, Alex. *The confluence of public and private international law*. Cambridge: Cambridge University Press, 2009; MILANOVIC, Marko. *Extraterritorial application of human rights treaties*. Oxford: Oxford University Press, 2011.

[5] On the parallel debate concerning the relativization of State immunity where peremptory norms and access to justice are at stake, see SILVEIRA, Vinícius Assis da; SANTANA, Luiz Felipe Costa; MOSCHEN, Valesca Raizer Borges. Imunidade de jurisdição dos Estados: o caminho para a relativização. *Revista de Direito Internacional*, Brasília, v. 18, n. 1, p. 120–136, 2021. DOI: 10.5102/rdi.v18i1.7258. Available at: https://www.publicacoes.uniceub.br/rdi/article/view/7258. Accessed on: Jul. 2, 2026.

[6] INTERNATIONAL COURT OF JUSTICE. Nottebohm case (Liechtenstein v. Guatemala). *ICJ Reports*, 1955. On the transposition of the genuine connection as a meta-criterion of legitimacy, see MILLS, Alex. Rethinking jurisdiction in international law. *British Yearbook of International Law*, v. 84, n. 1, p. 187–239, 2014.

the territorial principle: active nationality; passive personality; the protective principle; and, increasingly, the effects doctrine – predicated on the principle that jurisdiction may arise when conduct produces (or is designed to produce) effects within the territory. Developed within US antitrust jurisprudence and formally recognized in the Fourth Restatement of US Foreign Relations Law (2018), the effects doctrine received formal endorsement from the CJEU in *Intel* (2017) as an alternative to the implementation doctrine.[7]

Significant limitation: In competition law, effects remain typically identifiable and ascertainable with relative precision. In climate litigation, by contrast, greenhouse gas emissions generate cumulative, diffuse, and globally distributed effects. Were effects alone to suffice as a jurisdictional basis, every state would claim concurrent jurisdiction over every emitting entity—a result that fragments rather than facilitates governance.

In climate litigation contexts, effects-based jurisdiction must be constrained by criteria of substantiality, foreseeability, and measurable attributable contribution—as determined through attribution science—lest the doctrine devolve into de facto universal concurrent jurisdiction.

The ICJ's decision in *Questions Relating to the Obligation to Prosecute or Extradite* (*Belgium v. Senegal*, 2012) established an important doctrinal principle: the recognition of *erga omnes partes* obligations as a basis for procedural standing. The Court held that Belgium possessed standing to invoke Senegal's violation of the Convention against Torture because the obligation was owed to all state parties collectively, not solely to the directly injured state. This principle—that obligations owed to the international community generate procedural standing independent of direct injury—may support an analogy for climate litigation: if climate protection obligations under the Paris Agreement similarly qualify as *erga omnes partes* obligations, then any state party may invoke non-compliance as a jurisdictional basis for asserting legitimate interest.[8]

The judicial developments in the Lliuya v. RWE AG illustrate this calibration. The court accepted that RWE's 0.47% contribution to global historical CO_2 emissions could in principle support a proportional share of the costs of protective measures—Lliuya having framed RWE's share at that 0.47% figure—although the court ultimately dismissed the action because the probability of concrete harm to his property was too low. The decision's significance lies less in any fixed threshold than in its confirmation that proportional-contribution reasoning, supported by attribution science, can furnish a cognizable basis for cross-border climate claims without collapsing into universal jurisdiction.[9]

The genuine connection standard thus operates as a conceptual bridge: it constrains state discretion while orienting the development of jurisdictional doctrine in climate matters, connecting public-law legitimacy to private-law operability. This article builds incrementally on existing scholarship addressing the legitimacy and effectiveness of regional adjudicatory systems, transnational access to justice for victims of corporate activities, climate litigation as a jurisdictional strategy.[10] The

[7] AMERICAN LAW INSTITUTE. *Restatement (Fourth) of the Foreign Relations Law of the United States*. Philadelphia: ALI, 2018; COURT OF JUSTICE OF THE EUROPEAN UNION. *Intel Corporation Inc. v European Commission*. Case C-413/14 P, 6 Sept. 2017.

[8] INTERNATIONAL COURT OF JUSTICE. Questions relating to the obligation to prosecute or extradite (Belgium v. Senegal). *ICJ Reports*, 2012. paras. 68–70.

[9] OBERLANDESGERICHT HAMM. Lliuya v. RWE AG. *OLG Hamm (Higher Regional Court of Hamm), 5.* Zivilsenat, Case No. I-5 U 15/17, 2025 (underlying proceedings: LG Essen, Case No. 2 O 285/15, judgment of 15 December 2016). For critical secondary literature analyzing the case, see: RICCIARDI, Pablo Pellon. Lliuya v. RWE: a leap forward for private climate litigation? *Climate Law*, 2025; and SCHIRMER, Jan-Erik. Climate Liability after Lliuya v RWE: Causation and Duty Demystified. *Journal of European Tort Law*, v. 16, n. 3, p. 265–295, 2025. DOI: 10.1515/jetl-2025-0015. Available at: https://www.degruyterbrill.com/document/doi/10.1515/jetl-2025-0015/html?srsltid=AfmBOoqcdSfwItc-1kSGRIxa5ui3B4dmncWZibghXWtxJ6eS19pyyHIg. Accessed on: Jul. 2, 2026.

[10] On the legitimacy and effectiveness of regional adjudicatory systems, see FERREIRA, Felipe Grizotto; CABRAL, Guilherme Perez; LAURENTIIS, Lucas Catib de. O exercício da jurisdição interamericana de direitos humanos: legitimidade, problemas e possíveis soluções. *Revista de Direito Internacional*, Brasília, v. 16, n. 2, p. 243–268, 2019. DOI: 10.5102/rdi.v16i2.5985. Available at: https://www.uhumanas.uniceub.br/rdi/article/view/5985. Accessed on: Jul. 2, 2026. On universal jurisdiction grounded in the interests of humanity beyond nationality and territoriality, see SILVA LOUREIRO, Claudia Regina de Oliveira Magalhães da. Jurisdição universal: caixa de pandora ou um caminho para a realização dos interesses da humanidade? *Revista de Direito Internacional*, Brasília, v. 19, n. 2, p. 213–243, 2022. DOI: 10.5102/rdi.v19i2.8400. Available at: https://www.uhumanas.uniceub.br/rdi/article/view/8400. Accessed on: Jul. 2, 2026. On responsible business conduct across domestic, international and transnational legal orders, see ZIERO, Gabriel Webber. O conceito de conduta empresarial responsável à luz dos ordenamentos jurídicos brasileiro, internacional e transnacional. *Revista de Direito Internacional*, Brasília, v. 13, n. 3, p. 81–94, 2016. DOI: 10.5102/rdi/bjil.v13i3.4151. Available at: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=1488245&__cf_chl_f_tk=MRkQRD

incremental contribution here consists in integrating the legitimacy criteria developed in public international law (genuine connection and legitimate interest) with the adjudicatory mechanisms of private international law, operationalizing that integration through four cumulative judicial criteria designed for transnational climate accountability.

3 Extraterritorial jurisdiction in private international law

3.1 Lex-forism and the structural impunity gap

Private international law (PIL) has long presented itself as a neutral technique for coordinating plural legal orders—a posture this article terms «lex-forism.» Under lex-forism, adjudicatory rules are treated as matters of domestic choice, producing widely divergent jurisdictional regimes without a unifying hierarchy or customary constraint. This formal autonomy permits states to allocate competence in ways that, while internally coherent, produce systemic barriers to remedy in transnational cases. The result is a structural impunity gap: when no forum will accept jurisdiction over a transnational claim, substantive rights—however well designed—become illusory.

The Chevron litigation in the Ecuadorian Amazon[11] starkly illustrates this pathology. Ecuadorian plaintiffs obtained a multi-billion-dollar judgment for environmental contamination, yet enforcement proved enormously difficult across jurisdictions, demonstrating how judgments may be negated by procedural fragmentation rather than substantive merit. The Chevron saga thus exposes how lex-forism can convert accountability into a pyrrhic victory for victims of transnational harm.

The result is not jurisdictional neutrality but structural denial of access to justice.[12]

3.2 Internationalization and the public-private interface

Contemporary PIL is no longer a purely neutral technique for allocating jurisdiction; it increasingly internalizes public-law concerns such as fundamental rights and community interests, as Muir Watt has demonstrated. This erosion of the public/private divide reinforces the article's central claim: legitimacy constraints developed in public international law require procedural operationalization in adjudicatory practice. Party autonomy, while central to modern PIL, offers limited protection in climate litigation: victims cannot bargain for jurisdictional access before harm occurs, and powerful corporations can impose asymmetric forum selection clauses.[13]

This evolution is not limited to private international law. Brazilian scholarship has similarly identified a broader movement toward the relativization of traditional jurisdictional barriers when they operate as obstacles to the protection of fundamental rights and access to justice. In examining the interaction between state immunity, jus cogens norms, and judicial protection, Silveira, Santana and Moschen demonstrate that contemporary transnational disputes increasingly require a balance between sovereign prerogatives and the effective vindication of internationally protected interests. Although developed in a different doctrinal context, this insight supports the article's central premise that jurisdictional rules cannot be assessed exclusively through formal territorial or sovereign criteria, but must also be evaluated in light of their practical consequences for access to remedies.[14]

3.3 Access to justice as a jurisdictional principle

Access to justice has evolved from a procedural guarantee into an autonomous enabling right with multiple treaty expressions directly relevant to environmental litigation. Principle 10 of the 1992 Rio Declaration es-

0Zg54B85Ip9DXuBz_0E54iFbbTzXLQ5QD55SU-1783014625-1.0.1.1-ykzGc85fFTtGyU5uUo__ItA7r8wbZtlXUJ8u5Eksky8. Accessed on: Jul. 2, 2026.

11 ECUADOR. Provincial Court of Justice of Sucumbíos. *Aguinda v. ChevronTexaco Corp*. Case No. 2003-0002, 14 Feb. 2011.

12 BRASIL. Superior Tribunal de Justiça. *Special appeal No. 2.139.860/SP*. 3rd Panel, Rapporteur Justice Marco Aurélio Bellizze, decided on Nov. 14, 2023.

13 WATT, Horatia Muir. Private international law beyond the schism: from politics to technique back to politics. *Transnational Legal Theory*, v. 2, n. 3, p. 347–428, 2011.

14 SILVEIRA, Vinícius Assis da; SANTANA, Luiz Felipe Costa; MOSCHEN, Valesca Raizer Borges. Imunidade de jurisdição dos Estados: o caminho para a relativização. *Revista de Direito Internacional*, Brasília, v. 18, n. 1, p. 120–136, 2021. DOI: 10.5102/rdi.v18i1.7258. Available at: https://www.publicacoes.uniceub.br/rdi/article/view/7258. Accessed on: Jul. 2, 2026.

tablished the foundational triad: access to information, public participation, and access to judicial remedies in environmental matters. The Aarhus Convention (1998) operationalized this triad for UNECE member states, creating enforceable standards, including standing for NGOs, and establishing a compliance mechanism. For Latin America and the Caribbean, the Escazú Agreement (2018) extended equivalent guarantees with particular attention to environmental defenders and vulnerable populations, constituting the first regional treaty linking environmental procedural rights to Global South conditions.[15]

Critically, the procedural architecture of modern regulatory regimes—particularly those combining administrative enforcement with private civil liability—operates through parallel rather than consecutive mechanisms. Claimants need not await administrative agency determination before initiating judicial proceedings; civil actions may proceed simultaneously with regulatory investigations, and in many regimes, claimants are expressly empowered to vindicate statutory violations independently of agency action. This design presupposes meaningful judicial access: without it, the parallelism of enforcement channels becomes illusory, and victims depend entirely on agency choice to pursue regulatory remedies. For effective operationalization of regimes such as the CSDDD, the availability of civil jurisdiction becomes structurally integral to the enforcement design, not supplementary. The jurisdictional architecture must therefore be crafted to ensure that victims possess meaningful capacity to initiate civil claims where administrative enforcement remains contingent or incomplete.

A legal system granting compensation rights for climate harm (as the CSDDD does) but providing no procedural pathway for their exercise satisfies standing requirements while systematically frustrating the capacity to exercise rights. Jurisdictional rules are therefore rights-determinative in transnational litigation. The Inter-American Court of Human Rights has reinforced this through *jus cogens* reasoning, and in Brazilian private international law, this trajectory finds expression in the ASADIP TransJus Principles.[16]

Carvalho Ramos and Roland frame transnational corporate harm primarily as a problem of access to justice, mapping institutional pathways such as the extraterritorial extension of national jurisdiction (and its limits) and the prospective adoption of a binding treaty on business and human rights. This article treats that access-oriented diagnosis as a necessary starting point but contends that climate accountability disputes also require adjudicative operationalization: courts need a workable decision procedure for when extraterritorial civil jurisdiction is normatively justified rather than merely available. Where that scholarship helps justify the doorway to transnational adjudication, the present article specifies the threshold, translating the genuine connection requirement—through the cumulative criteria developed in Section 5.2—into a normative test tailored to diffuse climate causality and multi-actor contribution.[17]

3.4 **The United States:** constitutional retraction

US jurisdictional doctrine illustrates the consequences of constitutional grounding without adequate accommodation of transnational access-to-justice

[15] UNITED NATIONS. *Rio Declaration on Environment and Development*. 1992. Principle 10; UNITED NATIONS ECONOMIC COMMISSION FOR EUROPE. *Convention on access to information, public participation in decision-making and access to justice in environmental matters (Aarhus Convention)*. Aarhus, 25 June 1998; REGIONAL AGREEMENT ON ACCESS TO INFORMATION, PUBLIC PARTICIPATION AND JUSTICE IN ENVIRONMENTAL MATTERS IN LATIN AMERICA AND THE CARIBBEAN (Escazú Agreement). Escazú, Mar. 4, 2018.

[16] INTER-AMERICAN COURT OF HUMAN RIGHTS. Juridical condition and rights of undocumented migrants. *Advisory opinion OC-18/03*, 17 Sept. 2003; ASADIP. *Principles on transnational access to justice (TransJus)*. Buenos Aires: ASADIP, 2016.

[17] CARVALHO RAMOS, André de; ROLAND, Manoela Carneiro. Da jurisdição de necessidade ao tratado vinculante: a saga do acesso transnacional à justiça das vítimas de atividades de empresas transnacionais. *Revista de Direito Internacional*, Brasília, v. 19, n. 2, p. 57–66, 2022. DOI: 10.5102/rdi.v19i2.8749. Available at: https://www.rdi.uniceub.br/rdi/article/view/8749. Accessed on: Jul. 2, 2026. On climate litigation as a jurisdictional strategy to compel corporate and governmental accountability, see CARVALHO, Délton Winter de; BARBOSA, Kelly de Souza. Litigância climática como estratégia jurisdicional ao aquecimento global antropogênico e mudanças climáticas. *Revista de Direito Internacional*, Brasília, v. 16, n. 2, p. 54–72, 2019. DOI: 10.5102/rdi.v16i2.5949. Available at: https://www.publicacoes.uniceub.br/rdi/article/view/5949. Accessed on: Jul. 2, 2026. On the use of international climate treaties in domestic proceedings to establish enforceable duties, see MOREIRA, Danielle de Andrade; GARRIDO, Carolina de Figueiredo; NEVES, Maria Eduarda Segovia Barbosa. Litigância climática e licenciamento ambiental: consideração da variável climática à luz dos tratados internacionais sobre o clima. *Revista de Direito Internacional*, Brasília, v. 19, n. 1, p. 61–79, 2022. DOI: 10.5102/rdi.v19i1.7937. Available at: https://www.rdi.uniceub.br/rdi/article/view/7937. Accessed on: Jul. 2, 2026.

demands. *International Shoe Co. v. Washington* (1945) established the minimum-contacts due-process framework; *Goodyear Dunlop Tires v. Brown* (2011) and *Daimler AG v. Bauman* (2014) subsequently narrowed general jurisdiction by requiring defendants to be «essentially at home» in the forum. These decisions have materially restricted available US fora for transnational plaintiffs seeking to hold multinational corporations accountable.[18]

The Alien Tort Statute (ATS) trajectory compounds this restriction. After *Sosa v. Alvarez-Machain* (2004) preserved a narrow class of causes of action, subsequent decisions systematically closed ATS access: *Kiobel* (2013) required cases to touch and concern US territory; *Jesner* (2018) excluded foreign corporations; and *Nestlé USA v. Doe* (2021) consolidated the domestic nexus requirement. The resulting framework leaves virtually no viable ATS pathway for non-US plaintiffs seeking civil redress for extraterritorial climate conduct.[19]

In sum: constitutional retraction transfers to foreign plaintiffs the structural costs of the global impunity gap.

3.5 The European Union: CSDDD and the jurisdictional gap

The EU presents the inverse problem: robust substantive ambition combined with procedural reticence—producing rights without remedial pathways.

The European jurisdictional framework for civil and commercial matters is structured primarily by Brussels I Recast (Regulation (EU) No. 1215/2012). Article 4(1) establishes that persons domiciled in a Member State must be sued in that state's courts. For third-country defendants not domiciled in any Member State, jurisdiction falls to national private international law of the accessed forum (Article 6(1)) – meaning access to an EU court depends entirely on whether national law provides a jurisdictional basis.[20]

The foregoing theoretical framework becomes visible in practice through emblematic litigation. *Milieudefensie et al. v. Royal Dutch Shell* (District Court of The Hague, 2021) affirmed jurisdiction over Royal Dutch Shell and extended competence to its Nigerian subsidiary through the closely-connected-claims doctrine, ordering the corporate group to reduce CO_2 emissions 45% by 2030. The appellate court's reversal on substantive grounds (Nov. 2024) left the jurisdictional holding entirely undisturbed, demonstrating the potential of existing mechanisms for ambitious climate accountability—whilst confirming that jurisdictional availability and substantive liability remain analytically distinct.[21]

The structural gap: During CSDDD drafting, four jurisdictional proposals emerged: (i) GEDIP's proposed *forum connexitatis*; (ii) the Commission's jurisdiction-by-connection rule; (iii) the JURI Committee's *forum necessitatis* provision (requiring legal or practical impossibility of alternative forum plus sufficient connection); and (iv) academic proposals for harmonized competence. All were rejected in the final CSDDD text.[22]

Beyond jurisdictional silence, the CSDDD introduces civil liability norms characterized as *lois de police* or overriding mandatory rules—principles applicable even where a dispute would otherwise be governed by third-country law. This extraterritorial character intensifies the doctrinal problem: the directive not only extends regulatory reach beyond EU borders but simultaneously displaces the law applicable to defendant conduct in third-country contexts, raising fundamental questions of legitimacy under public international law limits on unilateral regulatory assertion. The qualification of CSDDD norms as mandatory renders the genuine connection requirement discussed in this article even more essential: operationalizing «genuine connection» must

18 SUPREME COURT OF THE UNITED STATES. *International Shoe Co. v. Washington*. 326 U.S. 310 (1945); SUPREME COURT OF THE UNITED STATES. Goodyear Dunlop Tires Operations, S.A. v. Brown. 564 U.S. 915 (2011); SUPREME COURT OF THE UNITED STATES. *Daimler AG v. Bauman*. 571 U.S. 117 (2014).

19 SUPREME COURT OF THE UNITED STATES. *Sosa v. Alvarez-Machain*. 542 U.S. 692 (2004); SUPREME COURT OF THE UNITED STATES. *Kiobel v. Royal Dutch Petroleum Co.* 569 U.S. 108 (2013); SUPREME COURT OF THE UNITED STATES. *Jesner v. Arab Bank, PLC*. 584 U.S. 241 (2018); SUPREME COURT OF THE UNITED STATES. *Nestlé USA, Inc. v. Doe*. 593 U.S. 628 (2021).

20 EUROPEAN UNION. Regulation (EU) No. 1215/2012 of the European Parliament and of the Council of 12 December 2012 on jurisdiction and the recognition and enforcement of judgments in civil and commercial matters (recast). *Official Journal of the European Union*, n. 351, p. 1–32, 20 Dec. 2012. arts. 4(1) and 6(1).

21 DISTRICT COURT OF THE HAGUE. *Milieudefensie et al. v. Royal Dutch Shell plc*. Case No. C/09/571932 / HA ZA 19-379, 26 May 2021; COURT OF APPEAL OF THE HAGUE. Milieudefensie et al. v. Royal Dutch Shell plc. *Case No. 200.302.680*, 12 Nov. 2024.

22 MICHAELS, Ralf; SOMMERFELD, Antonia. EU-Lieferketten-Richtlinie und internationale Zuständigkeit. *In:* BAR, Christian von *et al.* (eds.). *Gedächtnisschrift für Peter Mankowski*. Tübingen: Mohr Siebeck, 2024. p. 775–791; EUROPEAN GROUP ON PRIVATE INTERNATIONAL LAW. *Comments on the proposal for a directive on corporate sustainability due diligence*. Brussels: GEDIP, 2022.

serve as a legitimacy criterion not only for jurisdictional assertion but also for the extraterritorial application of EU mandatory rules in transnational disputes, lest such application generate friction with international law principles of sovereign equality and non-intervention.

The consequence is clear: a garment worker in Bangladesh, a plantation worker in Indonesia, or a mining community in Zambia harmed by a non-EU company's CSDDD non-compliance has a compensation right but no identified court to enforce it—unless the responsible company happens to have an EU-domiciled parent. Enforcement becomes contingent upon corporate structure rather than legal entitlement.[23]

Importantly, the CSDDD does establish dual mechanisms for enforcement: administrative orders and pecuniary sanctions issued by supervisory authorities operate in parallel with a private civil liability regime (Article 29), capable of generating damages awards. The administrative channel may produce systemic compliance across corporate groups through regulatory intervention; however, administrative enforcement cannot substitute for adjudication of individual victim claims seeking reparation. The jurisdictional lacuna thus proves particularly acute because it severs the procedural path through which individual claimants—especially those in third countries lacking effective domestic institutions—can access judicial remedy, even where substantive liability is established.

Regulatory extraterritoriality generates asymmetric risks: whilst EU authorities can impose compliance obligations across global value chains, victims in developing states lack parallel access to EU courts when those standards are violated. Corporate disengagement from higher-risk markets—a documented response to expanding due diligence requirements—reduces local employment and compensation alternatives, thereby intensifying practical access deficits in the defendant's home jurisdiction. The framework thus generates «compliance without reparation» for extraterritorial constituencies.

The ECtHR's *Naït-Liman v. Switzerland* (2018) found no obligation for civil redress in extraterritorial tort cases, but encouraged states to develop such practices voluntarily.[24]

The ECtHR's subsequent Grand Chamber judgment in *Verein KlimaSeniorinnen Schweiz and Others v. Switzerland* (April 2024) significantly advanced the normative framework. The Court found that Switzerland's failure to adopt effective climate mitigation measures breached its positive obligations under Article 8 ECHR. Three aspects are directly relevant: first, the Court recognized that associations can have standing to represent groups affected by climate change, expanding *locus standi* beyond individual direct victims; second, it affirmed substantive positive obligations of states to implement effective climate policies, drawing on the Paris Agreement under the living instrument doctrine; third, and most significant for jurisdictional purposes, the judgment established that inadequate state climate action constitutes a violation of Convention rights creating a normative foundation for access to judicial remedies for climate harm as a matter of human rights law. While *KlimaSeniorinnen* concerns vertical state obligations rather than horizontal corporate liability, its recognition that climate protection engages fundamental rights reinforces the argument that jurisdictional design must ensure effective access to remedies—a principle the CSDDD's jurisdictional silence conspicuously fails to observe.[25]

Addressing the jurisdictional gap requires precise legislative intervention. Two complementary amendments to the EU regulatory framework become essential: (i) modification of Brussels I Recast to establish a permissive jurisdictional base for third-country defendants where a genuine connection exists between the defendant, the forum state, and the dispute—operationalized through the criteria developed in Section 5.2 below (foreseeability, material contribution, effective control, remedial necessity) with safeguards of subsidiarity and defendant protection; and (ii) clarification and extension of Article 7 Rome II to encompass violations of transnational due diligence obligations with extraterritorial effects, thereby ensuring that choice-of-law rules facilitate rather than obstruct adjudication of CSDDD-based claims. Such amendments would translate regulatory ambition into accessible procedural re-

[23] RADJA, Racha; AKIN, Seniha Irem. Strengthening the efficacy of the CSDDD through private international law. *European Review of Private Law*, v. 32, n. 5, p. 875–896, 2024.

[24] EUROPEAN COURT OF HUMAN RIGHTS. *Naït-Liman v. Switzerland*. Application No. 51357/07, Grand Chamber, 15 Mar. 2018.

[25] EUROPEAN COURT OF HUMAN RIGHTS. *Verein KlimaSeniorinnen Schweiz and others v. Switzerland*. Application No. 53600/20, Grand Chamber, 9 Apr. 2024. See also HÖSLI, Andreas; REHMANN, Meret. Verein KlimaSeniorinnen Schweiz and others v. Switzerland: the European Court of Human Rights' answer to climate change. *Climate Law*, v. 14, n. 3–4, p. 263–284, 2024.

medies whilst maintaining principled constraint against jurisdictional excess.

The section retains focus on civil jurisdiction and illustrates how private international law's procedural architecture must implement public-law legitimacy constraints.

Building on this foundation, the next section examines how two major jurisdictional systems—the United States and the European Union—have addressed the tension between defendant protection and access to justice, and how their divergent approaches suggest pathways toward integrated solutions.

4 **Comparative synthesis:** US retraction and EU expansion as structural complements

This synthesis reveals a structural complementarity that neither legal system's autonomous logic would generate. The US constitutional framework provides a genuine constraint against jurisdictional excess—the minimum contacts requirement and the Daimler "essentially at home" standard ensure that jurisdiction may not be exercised without substantial connection. However, this safeguard functions as a closed barrier: it protects defendants whilst remaining indifferent to whether that closure denies plaintiffs—lacking alternative forums—access to justice. The EU framework, conversely, opens the substantive gate—the CSDDD, Shell litigation, and Brussels Effect[26] collectively extend regulatory reach beyond EU borders—yet fails to construct the procedural mechanism through which affected communities can access competent courts.

The apparent asymmetry between the United States and the European Union reflects structural differences between litigation-driven and regulation-driven systems, rather than a methodological inconsistency. This distinction is analytically critical: the US approach restricts jurisdiction through constitutional doctrine and Supreme Court gatekeeping (Daimler, Kiobel), thereby controlling access to courts whilst leaving substantive corporate accountability to fragmented state and federal regulation. The EU approach, conversely, expands jurisdictional reach through regulatory directives (the CSDDD), thereby establishing substantive obligations whilst deferring jurisdictional operationalization to national private international law. This strategic divergence creates the jurisdictional vacuum the article identifies: substantive regulation without procedural accessibility.

The doctrine of *forum non conveniens*, which in common law jurisdictions serves as a procedural safety valve permitting courts to decline jurisdiction in favour of a more suitable forum, operates asymmetrically in climate litigation contexts. The UK Supreme Court's Vedanta decision demonstrated awareness of this asymmetry: the practical availability of legal representation and financial resources in the alternative forum must shape the convenience analysis. No corresponding doctrine, however, constrains EU courts' passive refusal to assert jurisdiction over non-EU defendants under Brussels I Recast Article 6(1), a passive refusal that generates the identical access-to-justice deficit whilst remaining concealed from procedural scrutiny.

This asymmetry also manifests in relations between powerful and weak states. TWAIL scholars[27] have documented how the Brussels Effect projects EU regulatory standards onto Global South jurisdictions through market access mechanisms, whilst simultaneously denying citizens of those jurisdictions access to EU courts to vindicate those same standards when violated. The genuine connection standard articulated here directly addresses this structural asymmetry: it requires equivalent justificatory burdens regardless of party nationality or state economic power.

An illustrative example clarifies this principle: where a Bangladeshi worker seeks compensation against a non-EU corporate defendant otherwise bound by EU due diligence obligations, jurisdictional availability ought not depend upon corporate structure or the fortuitous presence of an EU parent company; instead, courts should apply principled genuine-connection scrutiny, calibrated to access-to-justice imperatives.

Three principal prescriptions emerge: (i) Constitutional safeguards against jurisdictional excess must be counterbalanced by procedural mechanisms gua-

[26] On the extraterritorial projection of EU regulatory standards, see BRADFORD, Anu. *The Brussels effect:* how the European Union rules the world. Oxford: Oxford University Press, 2020.

[27] See, e.g., ANGHIE, Antony. *Imperialism, sovereignty and the making of international law*. Cambridge: Cambridge University Press, 2005; CHIMNI, B. S. Third World approaches to international law: a manifesto. *International Community Law Review*, v. 8, n. 1, p. 3–27, 2006.

ranteeing access to remedies; (ii) *Forum necessitatis* and connexity doctrines should be embedded as structured, subsidiary gateways to forestall situations in which substantive rights exist without accessible forums; (iii) The genuine connection justificatory burden must be applied symmetrically across divergent state configurations and party characteristics.[28]

These prescriptions, grounded in the comparative analysis of US and EU approaches, now require normative synthesis. The next section articulates a comprehensive framework integrating public and private international law, and operationalizes the genuine connection standard with sufficient specificity for judicial application.

5 Normative synthesis

5.1 From compartmentalization to convergence

The traditional dichotomy between public and private international law is simultaneously empirically inaccurate and normatively unsustainable. Corporate conduct simultaneously implicates prescriptive jurisdiction, adjudicatory jurisdiction, and choice of law—dimensions that cannot be coherently analyzed in isolation from one another. The functional convergence thesis holds that public and private international law remain fundamentally intertwined: public international law establishes legitimacy constraints (genuine connection and legitimate interest), whilst private international law furnishes the adjudicatory mechanisms through which those constraints are operationalized.

This convergence also has a constitutional dimension. Carvalho situates climate adjudication within a climate constitutionalism grounded in the three-dimensionality of climate-change law—international, national, and transnational regimes—supplying a transnational normative architecture for adjudication beyond the territorial state. The present article inherits that architecture as the scaffolding that renders extraterritorial climate accountability intelligible across legal systems, yet reorients it toward adjudicative jurisdiction and forum design: the functional convergence thesis operates as the procedural corollary of the transnational dimension, converting normative architecture into an applicable decision procedure.[29]

This separation is fundamentally epistemological – rooted in how international law scholars and practitioners have traditionally conceptualized their discipline. Public international law concerns itself with state-to-state relationships and *erga omnes* obligations; private international law concerns itself with cross-border disputes between private parties. Yet this epistemological divide obscures the reality that questions of jurisdictional legitimacy and procedural access fundamentally implicate both domains simultaneously. Climate accountability requires overcoming this conceptual fragmentation.

The CSDDD, whose jurisdictional gap has been examined in detail above (Section 3.5), illustrates why functional convergence is not merely desirable but structurally necessary: absent procedural integration, even the most ambitious substantive regulatory frameworks remain asymmetrically available—enforceable by EU authorities against corporations, yet inaccessible to the very third-country claimants whose protection motivates the regulation. For Global South victims, this asymmetry cannot be overcome through domestic reform; it requires the jurisdictional operationalization that functional convergence provides.

5.2 The genuine connection standard

The genuine connection standard emerges as the most coherent unifying principle for extraterritorial climate jurisdiction. Grounded in *Barcelona Traction* (ICJ, 1970) and the recognition of *erga omnes* obligations, the standard rests on the proposition that where global climate protection constitutes an international legal interest, invoking that interest as a jurisdictional foundation

[28] SUPREME COURT OF THE UNITED KINGDOM. *Lungowe and others v. Vedanta Resources Plc and Konkola Copper Mines Plc.* [2019] UKSC 20. On the asymmetric operation of *forum non conveniens* in transnational tort litigation, see ARISTOVA, Ekaterina. The future of tort litigation against transnational corporations in the English courts: is forum [non] conveniens back? *Business and Human Rights Journal*, v. 6, n. 3, p. 399–422, 2021.

[29] CARVALHO, Délton Winter de. Constitucionalismo climático como fundamento transnacional aos litígios climáticos. *Revista de Direito Internacional*, Brasília, v. 19, n. 1, p. 192–205, 2022. DOI: 10.5102/rdi.v19i1.7883. Available at: https://www.publicacoes.uniceub.br/rdi/article/view/7883. Accessed on: Jul. 2, 2026.

GUERRA, Marcel Vitor de Magalhães e. The normative framework of extraterritorial jurisdiction in international law: from the lotus paradigm to transnational climate accountability. Revista de Direito Internacional, Brasília, v. 23, n. 1, p. 50-68, 2026.

represents a validated communal concern rather than unilateral state preference.[30]

In this article, «genuine connection» is understood as a multidimensional legal standard—composed of identifiable and cumulative criteria addressing distinct dimensions of jurisdictional legitimacy, including foreseeability, material contribution, effective control, and remedial necessity. It functions as a justificatory framework through which courts may assess whether the exercise of extraterritorial adjudicatory authority is normatively warranted in circumstances where territorial connections alone provide an incomplete account of the dispute. Procedural standing and jurisdiction remain analytically distinct questions.

This multidimensionality justifies the standard's capacity to integrate diverse considerations: factual causation (attribution science), corporate governance (organizational responsibility), and access-to-justice policy (remedial necessity). In this respect, *genuine connection* serves as a bridge between the legitimacy requirements developed in public international law and the procedural mechanisms of private international law.

To address concerns of asymmetric power effects, the standard must be applied uniformly across all state configurations, demanding a substantive nexus rather than permitting reliance on mere normative aspiration. Equitable application requires that the standard constrain jurisdictional claims of powerful states with equivalent rigor as those of weaker ones.

In practical terms, a court applying this framework should sequentially assess whether: (i) the harm alleged was reasonably foreseeable at the time of the defendant's conduct; (ii) the defendant made a material and quantifiable contribution to that harm; (iii) there exists a sufficient degree of organizational control or governance over relevant conduct; and (iv) the forum possesses a legitimate regulatory interest and the claimant lacks access to an adequately functioning alternative court. This cumulative approach ensures both systematic application and procedural discipline.

i. Foreseeability: the defendant's material contribution to climate harm manifesting in the claimant's jurisdiction was objectively foreseeable at the time of relevant conduct, assessed according to contemporary attribution science methodologies.
ii. Material contribution: the defendant's emissions or facilitating conduct constituted a meaningful and quantifiable contribution to the aggregate harm—an inquiry illustrated by the *Lliuya v. RWE AG* proceedings (OLG Hamm, 2025), where the plaintiff framed RWE's share at 0.47% of global cumulative emissions and the court engaged the proportional-contribution principle while dismissing the claim for lack of concrete danger.[31]

Importantly, whilst climate harm is characterized by diffuse and cumulative causation, legal attribution need not require exclusive causality. Rather, a combination of material contribution—as measured through attribution science—and reasonable foreseeability may suffice to establish a legally relevant nexus for adjudication purposes. This framework permits judicial assessment of climate causation on evidentiary standards appropriate to the complexity of the underlying environmental harm, without demanding the impossible standard of singular causal responsibility. Whilst causality may be established for downstream emissions (scope 3), civil liability doctrine may prove inadequate to internalize costs attributable to diffuse chains of conduct and harm far removed from the original defendant's direct control. Where material contribution depends on attributing to the defendant responsibility for emissions or impacts caused by numerous downstream actors, evidentiary burden intensifies, and relational adjudication becomes impracticable.

iii. Effective control: the defendant exercised substantive control over relevant corporate decisions and supply-chain operations, thereby precluding liability attribution to formally separate subsidiaries lacking meaningful autonomy.

[30] INTERNATIONAL COURT OF JUSTICE. Barcelona Traction, Light and Power Company, Limited (Belgium v. Spain). *ICJ Reports*, 1970.

[31] OBERLANDESGERICHT HAMM. Lliuya v. RWE AG. *OLG Hamm (Higher Regional Court of Hamm), 5.* Zivilsenat, Case No. I-5 U 15/17, 2025 (underlying proceedings: LG Essen, Case No. 2 O 285/15, judgment of 15 December 2016); HEEDE, Richard. Tracing anthropogenic carbon dioxide and methane emissions to fossil fuel and cement producers, 1854–2010. *Climatic Change*, v. 122, p. 229–241, 2014.

Material contribution may be assessed not only through historical percentage of emissions but also through institutional capacity to influence value chains—a concept termed «leverage» in corporate accountability literature. An entity may bear meaningful responsibility even where direct emissions represent a modest fraction of global totals, provided it exercises organizational governance capable of preventing or reducing supply-chain risks. This framework, grounded in organizational responsibility doctrine, bridges the mechanical application of quantitative thresholds and the relational dimensions of corporate governance, enabling courts to evaluate contribution through dual lenses: both measurable historical impacts and forward-looking institutional capacity to govern conduct generating climate harm.

iv. Remedial necessity: no adequately functioning forum is reasonably accessible to the claimant, assessed by reference both to formal legal availability (access to courts) and practical availability (including availability of qualified legal representation, litigation funding mechanisms, and realistic prospects of effective enforcement).

These four criteria align with existing evidentiary methodologies in tort law, corporate law, and human rights litigation—ensuring the standard remains judicially administrable whilst remaining responsive to the distinctive features of climate harm.

Comparative law literature increasingly documents varied national approaches to jurisdictional allocation in transnational corporate responsibility disputes. Comprehensive surveys synthesizing national private international law frameworks[32] identify both structural commonalities (the tension between defendant protection and access to justice) and technical innovations (*forum connexitatis*, *forum necessitatis*, and jurisdictional presumptions based on supply-chain presence). These comparative analyses provide methodological grounding for the framework proposed here: the genuine connection standard does not represent an isolated doctrinal innovation but rather a rational synthesis of techniques and principles already operative in multiple jurisdictions. This convergence suggests that solutions forged through functional analysis (rather than isolated jurisdictional choices) offer promise for coordinated international instruments capable of addressing the jurisdictional gap whilst respecting legitimate diversity in national legal traditions.

Attribution science provides empirical grounding for operationalizing these criteria. A systematic assessment of scientific evidence across 73 climate lawsuits demonstrated that the evidence submitted in litigation lags considerably behind the state of the art in climate science, and that greater exploitation of existing attribution methodologies could substantially strengthen causation claims.[33]

Two principal methodological approaches are available: *event attribution*, which assesses the probabilistic link between anthropogenic forcing and discrete harmful events by comparing observed event probabilities with counterfactual scenarios absent human influence;[34] and *source attribution*, which traces emissions to specific corporate actors.[35] Event attribution science may shift understanding of what weather is foreseeable, thereby expanding the scope of the duty of care owed by both governmental and private actors.[36]

Courts need not demand deterministic certainty; rather, they should evaluate the overall weight of probabilistic evidence, treating scientific uncertainty as managed through rigorous statistical methods rather than as an absolute veto on causation. Construction of admissible evidence requires integration of global climate models with local vulnerability assessments, generating a coherent causal narrative from emission source through regional hazards to specific claimant harm. This multi-scalar approach reduces the risk that scientific evidentiary standards become prohibitively stringent while maintaining principled constraint against unfounded causal claims, thereby operationalizing 'foreseeability'

32 See NUYTS, Arnaud. *Study on residual jurisdiction*. Brussels: European Commission, 2007.

33 STUART-SMITH, Rupert *et al.* Filling the evidentiary gap in climate litigation. *Nature Climate Change*, v. 11, p. 651–655, 2021. DOI: 10.1038/s41558-021-01086-7. Available at: https://www.nature.com/articles/s41558-021-01086-7. Accessed on: Jul. 2, 2026.

34 OTTO, F.E.L. Attribution of Extreme Events to Climate Change. *Annual Review of Environment and Resources*, v. 48, p. 813–828, 2023.

35 HEEDE, Richard. Tracing anthropogenic carbon dioxide and methane emissions to fossil fuel and cement producers, 1854–2010. *Climatic Change*, v. 122, p. 229–241, 2014.

36 MARJANAC, Sabin; PATTON, Lucy. Extreme weather event attribution science and climate change litigation: an essential step in the causal chain? *Journal of Energy and Natural Resources Law*, v. 36, n. 3, p. 265–298, 2018.

with scientific rigor and 'material contribution' through quantifiable attribution pathways.

5.3 Access to justice as a progressive jurisdictional obligation

The recognition of access to justice as a cardinal principle of international law—and within the Inter-American legal system, as a peremptory norm—carries significant implications for the allocation of adjudicatory competence in transnational climate litigation. Access-to-justice guarantees under Principle 10 of the Rio Declaration, the Aarhus and Escazú Conventions, and the case law of the Inter-American Court of Human Rights—reinforced by broader instruments such as Article 13 of the CRPD—together with emerging customary principles, support the proposition that states bear an obligation to ensure affected communities obtain effective remedies for transnational harm.

The Vedanta litigation illustrates practical application: the UK Supreme Court's requirement that *forum conveniens* analysis incorporate consideration of the practical availability of legal representation and litigation funding in alternative forums signals a gradual integration of substantive access concerns into jurisdictional allocation doctrine.[37]

Forum necessitatis and *forum connexitatis*, whilst not yet established as binding positive international law, represent the most effective legislative mechanisms for translating this normative imperative into operational doctrines governing climate litigation. Any legislative adoption of these doctrines must incorporate four critical safeguards:

i. Strict subsidiarity—invoked only where access to a competent alternative forum is unavailable as a matter of law or practical reality;
ii. Reasonable connection—between the dispute and the forum state;
iii. Adequate protection—of defendants' procedural rights;
iv. Multilateral enforcement mechanisms.

Scientific uncertainty in climate causation requires principled judicial management. Climate attribution science incorporates statistical confidence intervals and explicit acknowledgment of sources of uncertainty—including limitations of climate models and observational datasets. Rather than treating scientific uncertainty as an absolute barrier to liability, courts should evaluate evidence by «weight of the overall probative record,» recognizing statistical uncertainty as appropriately managed through rigorous methodological standards rather than as grounds for refusing to adjudicate. This approach prevents scientific uncertainty from becoming a vehicle for systematic impunity whilst avoiding the equally problematic demand for deterministic certainty impossible to satisfy in complex environmental causation. The framework thus permits courts to assess climate causation on evidentiary standards proportionate to the complexity of the underlying science. Operationalizing these evidentiary standards requires, however, an institutional precondition: courts willing and competent to receive and evaluate such evidence. Remedying this institutional gap requires legislative intervention at EU level—specifically, the incorporation of *forum necessitatis* and connexity principles into Brussels I Recast—and establishes a replicable model for jurisdictions throughout the Global South that are developing transnational due diligence frameworks.[38]

6 Conclusion

First, the Lotus paradigm of expansive prescriptive discretion has been superseded by a normative framework structured around the requirements of genuine connection and legitimate interest. These standards function as substantive constraints on state behavior, operating effectively even in the absence of centralized enforcement mechanisms.

Second, the public/private dichotomy in international law carries concrete institutional costs now visible in the CSDDD's architecture. Achieving meaningful

[37] SUPREME COURT OF THE UNITED KINGDOM. *Lungowe and others v. Vedanta Resources Plc and Konkola Copper Mines Plc*. [2019] UKSC 20. paras. 88–89; VAN HO, Tara. Vedanta Resources Plc and Another v. Lungowe and Others. *American Journal of International Law*, v. 114, p. 110–116, 2020.

[38] RADJA, Racha; AKIN, Seniha Irem. Strengthening the efficacy of the CSDDD through private international law. *European Review of Private Law*, v. 32, n. 5, p. 875–896, 2024. The authors argue that public enforcement by national authorities may complement private actions; however, supervisory authorities lack competence to grant individual compensation, and their decisions do not provide the same procedural guarantees as judicial proceedings.

climate accountability requires that future regulatory instruments be designed with jurisdictional operationalization as a constitutive element—not an afterthought delegated to national private international law.

Third, access to justice transcends procedural technicality. Article 13 of the CRPD and emerging customary law establish that states bear responsibility for ensuring affected communities obtain meaningful remedies for transnational harm. Jurisdictional refusal by the state bearing the closest connection to the corporate defendant cannot be recharacterized as a neutral administrative allocation.

Fourth, the operational framework articulated here—the genuine connection standard operationalized through the cumulative criteria of foreseeability, material contribution, effective control, and remedial necessity, conditioned by safeguards of subsidiarity, reasonable connection, defendant protection, and multilateral enforcement—remains judicially administrable. It avoids the twin pathologies of unlimited universal jurisdiction whilst simultaneously precluding systematic structural impunity.

For courts, the framework admits of immediate application. Courts conducting jurisdictional assessment in climate and environmental litigation should verify satisfaction of all four criteria cumulatively, ensuring neither jurisdictional overreach nor *forum-shopping*, whilst protecting access to justice in circumstances where no practical alternative forum exists.

For legislatures, the lesson extends beyond the CSDDD: every regulatory instrument imposing transnational corporate obligations must specify the jurisdictional mechanisms through which those obligations become enforceable. Brussels I Recast and analogous regional instruments require amendment to incorporate *forum necessitatis* and *forum connexitatis* as structured gateway doctrines, ensuring that future frameworks avoid the institutional design failure that characterizes the CSDDD's jurisdictional silence.

For Global South states, the genuine connection standard affords meaningful mitigation of asymmetric power dynamics. Applied with consistent rigor, it requires powerful states to demonstrate jurisdictional justification as exacting as that demanded of weaker states. This represents not a derogation of sovereignty, but rather its clarification—the vindication of genuine equality before international law.

Three distinct research agendas emerge: (i) judicial operationalization of the four criteria in climate cases, particularly the calibration of materiality thresholds; (ii) legislative consolidation through amendment of Brussels I Recast and adoption of equivalent provisions by Global South jurisdictions; and (iii) strengthening of multilateral judgment recognition mechanisms. Ultimately, the effectiveness of transnational climate accountability depends not on the expansion of abstract normative commitments, but on the availability of procedural pathways capable of translating those commitments into enforceable judicial outcomes. Without such mechanisms, climate responsibility risks remaining formally recognized yet institutionally unrealized. The framework articulated here—this structural interaction of public and private international law, the genuine connection standard as the coherent unifying principle, and *forum necessitatis* as the structural remedy—provides a pathway forward. Courts, legislatures, and states now possess both the conceptual architecture and the institutional instruments required. The question that remains is not one of capacity, but of political and judicial will.

References

AMERICAN LAW INSTITUTE. *Restatement (Fourth) of the Foreign Relations Law of the United States*. Philadelphia: ALI, 2018.

ANGHIE, Antony. *Imperialism, sovereignty and the making of international law*. Cambridge: Cambridge University Press, 2005.

ARISTOVA, Ekaterina. The future of tort litigation against transnational corporations in the English courts: is forum [non] conveniens back? *Business and Human Rights Journal*, v. 6, n. 3, p. 399–422, 2021.

ASADIP. *Principles on transnational access to justice (TransJus)*. Buenos Aires: ASADIP, 2016.

BRADFORD, Anu. *The Brussels effect:* how the European Union rules the world. Oxford: Oxford University Press, 2020.

BRASIL. Superior Tribunal de Justiça. *Special appeal No. 2.139.860/SP*. 3rd Panel, Rapporteur Justice Marco Aurélio Bellizze, decided on Nov. 14, 2023.

CARVALHO RAMOS, André de; ROLAND, Manoela Carneiro. Da jurisdição de necessidade ao tratado vinculante: a saga do acesso transnacional à justiça das vítimas de atividades de empresas transnacionais. *Revista de Direito Internacional*, Brasília, v. 19, n. 2, p. 57–66, 2022. DOI: 10.5102/rdi.v19i2.8749. Available at: https://www.rdi.uniceub.br/rdi/article/view/8749. Accessed on: Jul. 2, 2026.

CARVALHO, Délton Winter de. Constitucionalismo climático como fundamento transnacional aos litígios climáticos. *Revista de Direito Internacional*, Brasília, v. 19, n. 1, p. 192–205, 2022. DOI: 10.5102/rdi.v19i1.7883. Available at: https://www.publicacoes.uniceub.br/rdi/article/view/7883. Accessed on: Jul. 2, 2026.

CARVALHO, Délton Winter de; BARBOSA, Kelly de Souza. Litigância climática como estratégia jurisdicional ao aquecimento global antropogênico e mudanças climáticas. *Revista de Direito Internacional*, Brasília, v. 16, n. 2, p. 54–72, 2019. DOI: 10.5102/rdi.v16i2.5949. Available at: https://www.publicacoes.uniceub.br/rdi/article/view/5949. Accessed on: Jul. 2, 2026.

CHIMNI, B. S. Third World approaches to international law: a manifesto. *International Community Law Review*, v. 8, n. 1, p. 3–27, 2006.

COURT OF APPEAL OF THE HAGUE. *Milieudefensie et al. v. Royal Dutch Shell plc*. Case No. 200.302.680, 12 Nov. 2024.

COURT OF JUSTICE OF THE EUROPEAN UNION. *Intel Corporation Inc. v. European Commission*. Case C-413/14 P, 6 Sept. 2017.

DISTRICT COURT OF THE HAGUE. *Milieudefensie et al. v. Royal Dutch Shell plc*. Case No. C/09/571932 / HA ZA 19-379, 26 May 2021.

ECUADOR. Provincial Court of Justice of Sucumbíos. *Aguinda v. ChevronTexaco Corp*. Case No. 2003-0002, 14 Feb. 2011.

EUROPEAN COURT OF HUMAN RIGHTS. *Naït-Liman v. Switzerland*. Application No. 51357/07, Grand Chamber, 15 Mar. 2018.

EUROPEAN COURT OF HUMAN RIGHTS. *Verein KlimaSeniorinnen Schweiz and others v. Switzerland*. Application No. 53600/20, Grand Chamber, 9 Apr. 2024.

EUROPEAN GROUP ON PRIVATE INTERNATIONAL LAW. *Comments on the proposal for a directive on corporate sustainability due diligence*. Brussels: GEDIP, 2022.

EUROPEAN UNION. Regulation (EC) No. 864/2007 of the European Parliament and of the Council of 11 July 2007 on the law applicable to non-contractual obligations (Rome II). *Official Journal of the European Union*, n. 199, p. 40–49, 31 July 2007.

EUROPEAN UNION. Regulation (EU) No. 1215/2012 of the European Parliament and of the Council of 12 December 2012 on jurisdiction and the recognition and enforcement of judgments in civil and commercial matters (recast). *Official Journal of the European Union*, n. 351, p. 1–32, 20 Dec. 2012.

FERREIRA, Felipe Grizotto; CABRAL, Guilherme Perez; LAURENTIIS, Lucas Catib de. O exercício da jurisdição interamericana de direitos humanos: legitimidade, problemas e possíveis soluções. *Revista de Direito Internacional*, Brasília, v. 16, n. 2, p. 243–268, 2019. DOI: 10.5102/rdi.v16i2.5985. Available at: https://www.uhumanas.uniceub.br/rdi/article/view/5985. Accessed on: Jul. 2, 2026.

HEEDE, Richard. Tracing anthropogenic carbon dioxide and methane emissions to fossil fuel and cement producers, 1854–2010. *Climatic Change*, v. 122, p. 229–241, 2014.

HÖSLI, Andreas; REHMANN, Meret. Verein KlimaSeniorinnen Schweiz and others v. Switzerland: the European Court of Human Rights' answer to climate change. *Climate Law*, v. 14, n. 3–4, p. 263–284, 2024.

INTER-AMERICAN COURT OF HUMAN RIGHTS. Juridical condition and rights of undocumented migrants. *Advisory opinion OC-18/03*, 17 Sept. 2003.

INTERNATIONAL COURT OF JUSTICE. Barcelona Traction, Light and Power Company, Limited (Belgium v. Spain). *ICJ Reports*, 1970.

INTERNATIONAL COURT OF JUSTICE. Nottebohm case (Liechtenstein v. Guatemala). *ICJ Reports*, 1955.

INTERNATIONAL COURT OF JUSTICE. Questions relating to the obligation to prosecute or extradite (Belgium v. Senegal). *ICJ Reports*, 2012.

MARJANAC, Sabin; PATTON, Lucy. Extreme weather event attribution science and climate change litigation: an essential step in the causal chain? *Journal of Energy and Natural Resources Law*, v. 36, n. 3, p. 265–298, 2018.

MICHAELS, Ralf; SOMMERFELD, Antonia. EU-Lieferketten-Richtlinie und internationale Zuständigkeit.

In: BAR, Christian von *et al.* (eds.). *Gedächtnisschrift für Peter Mankowski*. Tübingen: Mohr Siebeck, 2024. p. 775–791.

MILANOVIC, Marko. *Extraterritorial application of human rights treaties*. Oxford: Oxford University Press, 2011.

MILLS, Alex. Rethinking jurisdiction in international law. *British Yearbook of International Law*, v. 84, n. 1, p. 187–239, 2014.

MILLS, Alex. *The confluence of public and private international law*. Cambridge: Cambridge University Press, 2009.

MOREIRA, Danielle de Andrade; GARRIDO, Carolina de Figueiredo; NEVES, Maria Eduarda Segovia Barbosa. Litigância climática e licenciamento ambiental: consideração da variável climática à luz dos tratados internacionais sobre o clima. *Revista de Direito Internacional*, Brasília, v. 19, n. 1, p. 61–79, 2022. DOI: 10.5102/rdi.v19i1.7937. Available at: https://www.rdi.uniceub.br/rdi/article/view/7937. Accessed on: Jul. 2, 2026.

NUYTS, Arnaud. *Study on residual jurisdiction*. Brussels: European Commission, 2007.

OBERLANDESGERICHT HAMM. Lliuya v. RWE AG. *OLG Hamm (Higher Regional Court of Hamm), 5*. Zivilsenat, Case No. I-5 U 15/17, 2025 (underlying proceedings: LG Essen, Case No. 2 O 285/15, judgment of 15 December 2016).

PARLIAMENT AND COUNCIL OF THE EUROPEAN UNION. Directive (EU) 2024/1760 of the European Parliament and of the Council of 13 June 2024 on Corporate Sustainability Due Diligence and amending Directive (EU) 2019/1937 and Regulation (EU) 2023/2859 (CSDDD). *Official Journal of the European Union*, 2024.

PERMANENT COURT OF INTERNATIONAL JUSTICE. S.S. Lotus (France v. Turkey). *PCIJ Reports*, Series A, No. 10, 7 Sept. 1927.

RADJA, Racha; AKIN, Seniha Irem. Strengthening the efficacy of the CSDDD through private international law. *European Review of Private Law*, v. 32, n. 5, p. 875–896, 2024.

REGIONAL AGREEMENT ON ACCESS TO INFORMATION, PUBLIC PARTICIPATION AND JUSTICE IN ENVIRONMENTAL MATTERS IN LATIN AMERICA AND THE CARIBBEAN (Escazú Agreement). Escazú, 4 Mar. 2018.

RICCIARDI, Pablo Pellon. Lliuya v. RWE: a leap forward for private climate litigation? *Climate Law*, 2025.

RYNGAERT, Cedric. *Jurisdiction in international law*. 2nd ed. Oxford: Oxford University Press, 2015.

SCHIRMER, Jan-Erik. Climate Liability after Lliuya v RWE: Causation and Duty Demystified. *Journal of European Tort Law*, v. 16, n. 3, p. 265–295, 2025. DOI: 10.1515/jetl-2025-0015. Available at: https://www.degruyterbrill.com/document/doi/10.1515/jetl-2025-0015/html?srsltid=AfmBOoqcdSfwItc-1kSGRIxa5ui3B4dmncWZibghXWtxJ6eS19pyyHIg. Accessed on: Jul. 2, 2026.

SETZER, Joana; HIGHAM, Catherine. *Global trends in climate change litigation*: 2023 snapshot. London: Grantham Research Institute, 2023.

SILVA LOUREIRO, Claudia Regina de Oliveira Magalhães da. Jurisdição universal: caixa de pandora ou um caminho para a realização dos interesses da humanidade? *Revista de Direito Internacional*, Brasília, v. 19, n. 2, p. 213–243, 2022. DOI: 10.5102/rdi.v19i2.8400. Available at: https://www.uhumanas.uniceub.br/rdi/article/view/8400. Accessed on: Jul. 2, 2026.

SILVEIRA, Vinícius Assis da; SANTANA, Luiz Felipe Costa; MOSCHEN, Valesca Raizer Borges. Imunidade de jurisdição dos Estados: o caminho para a relativização. *Revista de Direito Internacional*, Brasília, v. 18, n. 1, p. 120–136, 2021. DOI: 10.5102/rdi.v18i1.7258. Available at: https://www.publicacoes.uniceub.br/rdi/article/view/7258. Accessed on: Jul. 2, 2026.

STUART-SMITH, Rupert *et al.* Filling the evidentiary gap in climate litigation. *Nature Climate Change*, v. 11, p. 651–655, 2021. DOI: 10.1038/s41558-021-01086-7. Available at: https://www.nature.com/articles/s41558-021-01086-7. Accessed on: Jul. 2, 2026.

SUPREME COURT OF THE UNITED KINGDOM. *Lungowe and others v. Vedanta Resources Plc and Konkola Copper Mines Plc.* [2019] UKSC 20.

SUPREME COURT OF THE UNITED STATES. *Daimler AG v. Bauman*. 571 U.S. 117 (2014).

SUPREME COURT OF THE UNITED STATES. Goodyear Dunlop Tires Operations, S.A. v. Brown. 564 U.S. 915 (2011).

SUPREME COURT OF THE UNITED STATES. International Shoe Co. v. Washington. 326 U.S. 310 (1945).

SUPREME COURT OF THE UNITED STATES. Jesner v. Arab Bank, PLC. 584 U.S. 241 (2018).

SUPREME COURT OF THE UNITED STATES. Kiobel v. Royal Dutch Petroleum Co. 569 U.S. 108 (2013).

SUPREME COURT OF THE UNITED STATES. Nestlé USA, Inc. v. Doe. 593 U.S. 628 (2021).

SUPREME COURT OF THE UNITED STATES. Sosa v. Alvarez-Machain. 542 U.S. 692 (2004).

UNITED NATIONS ECONOMIC COMMISSION FOR EUROPE. *Convention on access to information, public participation in decision-making and access to justice in environmental matters (Aarhus Convention)*. Aarhus, 25 June 1998.

UNITED NATIONS ENVIRONMENT PROGRAMME. *Global climate litigation report*: 2025 status review. Nairobi: UNEP, 2025.

UNITED NATIONS FRAMEWORK CONVENTION ON CLIMATE CHANGE. *Paris Agreement*. 12 Dec. 2015, UNTS 3156.

UNITED NATIONS. *Convention on the Rights of Persons with Disabilities*. New York, 13 Dec. 2006, UNTS 2515.

VAN HO, Tara. Vedanta Resources Plc and Another v. Lungowe and Others. *American Journal of International Law*, v. 114, p. 110–116, 2020.

WATT, Horatia Muir. Private international law beyond the schism: from politics to technique back to politics. *Transnational Legal Theory*, v. 2, n. 3, p. 347–428, 2011.

ZIERO, Gabriel Webber. O conceito de conduta empresarial responsável à luz dos ordenamentos jurídicos brasileiro, internacional e transnacional. *Revista de Direito Internacional*, Brasília, v. 13, n. 3, p. 81–94, 2016. DOI: 10.5102/rdi/bjil.v13i3.4151. Available at: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=1488245&__cf_chl_f_tk=MRkQRD0Zg54B85Ip9DXuBz_0E54iFbbTzXLQ5QD55SU-1783014625-1.0.1.1-ykzGc85fFTtGyU5uUo__ItA7r8wbZtlXUJ8u5Eksky8. Accessed on: Jul. 2, 2026.

Para publicar na Revista de Direito Internacional, acesse o endereço eletrônico www.rdi.uniceub.br ou www.brazilianjournal.org.
Observe as normas de publicação, para facilitar e agilizar o trabalho de edição.