

0 Introduction

0.1 The PhD's research question in a nutshell: Reinforcing climate action with due diligence?

Can the judicial system protect the climate by notably basing itself on general preexisting and overarching norms, such as *due diligence*?¹

Global warming appeared in recent times as one of the most complex global challenges humanity has ever faced. Not only are its impacts on the environment and human interests so harmful, but finding ways to mitigate climate change poses significant challenges. The UN Secretary-General Guterres, who regularly highlighted the massive problem of climate change since the beginning of his mandate, stated in 2022 that:

“We are on a fast track to climate disaster. Major cities under water. Unprecedented heatwaves. Terrifying storms. Widespread water shortages. The extinction of a million species of plants and animals. This is not fiction or exaggeration. It is what science tells us will result from our current energy policies. [...] Climate scientists warn that we are already perilously close to tipping points that could lead to cascading and irreversible climate impacts. But, high-emitting Governments and corporations are not just turning a blind eye, they are adding fuel to the flames. They are choking our planet, based on their vested interests and historic investments in fossil fuels, when cheaper, renewable solutions provide green jobs, energy security and greater price stability.”²

Judicial institutions seem to offer a remedy. In 2015, a Dutch court ordered the Netherlands to reduce its greenhouse gas (GHG) emissions by a greater amount than was planned³, in line with scientific indications regarding the

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- 1 Cox R, *Revolution Justified: Why Only the Law Can Save Us Now*, trans Elizabeth HD Manton (The Planet Prosperity Foundation 2012); Rochfeld J, *Justice pour le climat ! Les nouvelles formes de mobilisation citoyenne* (Odile Jacob 2019).
 - 2 United Nations, “Secretary-General Warns of Climate Emergency, Calling Intergovernmental Panel’s Report ‘a File of Shame’, While Saying Leaders ‘Are Lying’, Fuelling Flames”, *Meetings Coverage and Press Releases*, SG/SM/21228, 4 April 2022.
 - 3 District Court of The Hague, *Urgenda v Netherlands*, C/09/456689 / HA ZA 13-1396, 2015.

risks related to global warming, and the concept of “fair share” elements, i.e., how much one individual actor (generally a State) needs to contribute to climate action, especially mitigation⁴. This is the *Urgenda* case, which marked the beginning of multiple other similar “systemic mitigation” or “framework cases”⁵. In 2019, the Supreme Court ultimately confirmed the *Urgenda* judgement⁶.

Subsequently, in 2021, another Dutch lower court expanded on these principles in a case against Shell’s parent company by ordering emission reductions affecting the entire corporate group’s economic activities worldwide⁷. This case also took a “systemic” or “framework” approach, albeit in a different manner, since the defendant was a multinational corporate group⁸.

Interestingly, both judgements rely on so-called “due diligence” norms. The Courts of first instance in The Hague relied on the “duty of care”⁹ or “standard of care” (“*zorgplicht*”), a general but vague legal notion similar to the concept of “due diligence” in terms of functions and features. Like due diligence, it requires taking appropriate measures in light of the severity of the risk, in order to prevent harm. The Dutch duty of care stems from Article 6:162 of the Dutch Civil Code, a provision which sets out tort liability in the event of harm, but which does not mention the *duty* or

4 The principle of common but differentiated responsibilities is closely linked to the concept of fair share. In fact, as the IPCC stated, “it is only in relation to such a ‘fair share’ that the adequacy of a state’s contribution can be assessed in the context of a global collective action problem” (see IPCC, AR6 (2021-23) WG III, Chapter 14, p 1468). The Climate Action Tracker, an initiative led by climate scientists, including from the IPCC, regularly discloses “fair share” assessments concerning a certain number of countries.

5 See Maxwell L, S Mead and D van Berkel, “Standards for adjudicating the next generation of *Urgenda*-style climate cases”, *Journal of Human Rights and the Environment*, March 2022; See as well, Setzer J and Higham C, *Global Trends in Climate Change Litigation: 2023 Snapshot* (Grantham Research Institute and Centre for Climate Change Economics and Policy, LSE 2023) p 22.

6 Supreme Court of the Netherlands, *Urgenda*, 19/00135, 20 December 2019.

7 District Court of The Hague, *Milieudefensie v Shell*, C/09/571932 / HA ZA 19-379, 26 May 2021.

8 See Setzer J and Higham C, *Global Trends in Climate Change Litigation: 2022 Snapshot* (Grantham Research Institute and Centre for Climate Change Economics and Policy, LSE 2022) p 18.

9 District Court of The Hague, *Urgenda v Netherlands*, C/09/456689 / HA ZA 13-1396, 2015, § 4.83; District Court of The Hague, *Milieudefensie v Shell*, C/09/571932 / HA ZA 19-379, 26 May 2021, § 4.4.1.

standard of care (“*zorgplicht*”)¹⁰. Instead, the courts are using it. Hence, the choice of this specific term is somewhat discretionary, including a specific translation decision (i.e., it could have been due diligence rather than duty of care, for example). Note that, in international law, “due diligence” is used interchangeably with the “standard of care”¹¹. In any case, their *functions* are the same: they prescribe a certain careful and reasonable conduct aimed at avoiding negligence and ultimately the causation of harm.

However, in appeal and cassation of the *Urgenda* case, the Dutch Courts relied on Articles 2 and 8 of the European Convention of Human Rights (ECHR), especially the positive duty to protect the right to life and private and family life (Art. 2 and 8 ECHR), considering that the Netherlands’ GHG emissions contribute to endangering these rights. In any case, the Dutch Court of Appeal still mentioned the concept of the duty of care in these decisions (“*zorgplicht*”)¹², and the ECtHR also referred to the due diligence in some of its previous decisions¹³.

This thesis mainly uses the expression “due diligence” to refer to a general standard of conduct to prevent harm, due to its international and widespread recognition (see subsection 0.2 of this introduction). However, this dissertation will also identify norms with similar functions and criteria and label them as due diligence-type of norms. In this respect, the use of the functional comparative law approach is important because many legal concepts have different names, especially in other languages, but actually have a similar role¹⁴.

After the *Urgenda* case, litigants around the world launched multiple other similar “systemic” or “framework cases”. Some of them were “successful”, in the sense that they resulted in the recognition of the “responsibility”¹⁵

10 See Article 6:162 of the Dutch Civil Code.

11 See the definition of due diligence in subsection 0.2 of this introduction.

12 Court of Appeal of The Hague, *Netherlands v Urgenda Foundation*, Case No 200.178.245/01, 2018, § 41 and 73; See as well: Supreme Court of the Netherlands, *Urgenda*, 19/00135, 20 December 2019.

13 See, among others, ECtHR, *Fadeyeva v Russia*, no. 55723/00, 30 November 2005, § 128 – 129.

14 Zweigert K and Kötz H, *Einführung in die Rechtsvergleichung*, 3rd ed, Mohr, 1996; see English translation by Tony Weir, *An Introduction to Comparative Law*, 3rd ed, Oxford University Press, 1998; See as well, Michaels R, “The Functional Method of Comparative Law” in M Reinmann and R Zimmermann (eds), *Oxford Handbook of Comparative Law* (Oxford University Press 2006) p 340-380.

15 Why mention the term ‘responsibility’ in this context, when the successful outcomes of the case laws enforced primary obligations to reduce GHGs through injunctions, but did not provide compensation or other forms of reparations? While some may

or the unlawfulness of the State measures (see below – case law review in 0.4.1). While some courts explicitly relied on *general* due diligence norms, akin to the Dutch courts, others relied on *specific* legislation or regulation. This thesis postulates that these latter legislations or regulations ultimately aim to respond to *general* due diligence, assuming that *general* due diligence is an *overarching* duty related to the no-harm principle enshrined in the highest norms (customary international law, human rights law, constitutional law), ultimately meaning that compliance *must* be achieved for reasons of hierarchy of norms.

Said differently, this doctoral dissertation makes the following hypotheses regarding “climate due diligence” (CDD), i.e.:

1. Due diligence type of norms apply to climate change in international and comparative law, requiring public and private actors to appropriately mitigate global warming.
2. Further, in cases of failures, courts of law can enforce and redress CDD across legal systems by requiring certain measures to ensure that public or private actors do their share or by imposing precise injunctions, as in the Netherlands, thereby introducing some forms of judicial constraints and control on climate action.
3. The pre-existence of due diligence and its previous applicability to climate change may highlight past and ongoing failures to tackle climate change, and consequently, ground *historical* responsibility in legal terms and lead to corresponding secondary obligations¹⁶ (i.e., compensation for losses and damages, cessation of the harm, minimisation to the most feasible extent, declaration of responsibility etc). This legal demonstration may incidentally reinforce the relevance of the historical responsibility

argue that the use of the term responsibility is inadequate in this context, this thesis considers it appropriate because an injunction is already a form of judicial remedy to redress an unlawfulness. The ICJ concurs with this position in the context of its advisory opinion, as it considered that imposing a duty to perform the breached primary obligation is part of the panoply of available secondary obligations (ICJ, *Obligations of States in respect of Climate Change*, Advisory Opinion, 23 July 2025, § 446).

- 16 The term “secondary obligations” means here the obligations arising after the violation of a primary duty. See, for instance, under international law, among others: ILC, Draft articles on Responsibility of States for Internationally Wrongful Acts, with commentaries, 2001 (Text adopted by the International Law Commission at its fifty-third session, in 2001, and submitted to the General Assembly as a part of the Commission’s report covering the work of that session (A/56/10).

criterion of the fair share methodology, which is rooted in ethics, and the corresponding proposed burden sharing.

0.2 The potential relevance of due diligence for climate action

This subpart of the introduction aims to establish two things: the *likely* universal existence of due diligence and its functions.

To do so, this section starts with customary international law, which reflects somewhat *transnational* law, beyond interstate relations¹⁷. In fact, customary international law was not constructed *ex nihilo* but rather with inspirations from analogies with domestic tort law, as the *Trail Smelter* case¹⁸ and the ILC work¹⁹, among others, illustrate, and the legal doctrine more generally²⁰.

Hence, section 0.2.1 establishes the somewhat universality of due diligence since it is the basic duty related to the no-harm principle in customary international law, which itself developed from the due diligence principles of Roman and domestic law. These widespread origins strongly point to a form of ubiquity. Additionally, this section highlights the requirements and properties of due diligence under international law, which requires using best efforts to prevent risks that should be known, including by regulating private actors.

Section 0.2.2 addresses due diligence in the “business and human rights field” for the following reasons: it is an international concept bearing se-

17 For concurring opinion, see Shaffer G C and Coye C, “From International Law to Jessup’s Transnational Law, from Transnational Law to Transnational Legal Orders” (2017) in Peer Zumbansen (ed), *The Many Lives of Transnational Law: Critical Engagements with Jessup’s Bold Proposal* (Cambridge University Press 2020); See as well the foundational writing on “transnational law”: Jessup P, *Transnational Law* (Yale University Press, 1956).

18 *Trail Smelter*, III UN Reports of International Arbitral Awards, 1905 (1941), p 1965. Here, the Arbitral Tribunal actually decided this case by applying both the law of the USA and international law, due to relevant factual and legal similarities.

19 The ILC Draft Articles commentary regularly quotes domestic cases, see for instance: ILC, Draft articles on Prevention of Transboundary Harm from Hazardous Activities, Text adopted by the ILC at its fifty-third session in 2001 (A/56/10), Article 10 commentary § 4, footnote 919 (p 162).

20 Krieger H and Peters A, “Due Diligence and Structural Change in the International Legal Order” in Krieger H, Peters A and Kreuzer L (eds), *Due Diligence in the International Legal Order* (Oxford University Press 2020) p 389, DOI: 10.1093/oso/9780198869900.003.0021.

semantic similarities with due diligence under international public law, but applying to private businesses²¹. Thanks to its ongoing implementation in domestic “hard law”, it is becoming increasingly widespread.

Section 0.2.3 eventually sets out the intermediate conclusions on the relevance of due diligence for this PhD project.

0.2.1 State due diligence in customary international law

This section shows the universal origins of State due diligence, stemming from the no-harm principle in tort and Roman law (subsection 0.2.1.1). It further shows due diligence functions and features, aimed to prevent harm by requiring *procedural* and/or *substantive* measures (subsection 0.2.1.2). It moreover highlights the interrelationships between *general* due diligence and *specific* treaty obligations (subdivision 0.2.1.3).

0.2.1.1 Universal origins of State due diligence: no-harm principle

In 2010, after the publication of the ILC Draft Articles, the International Court of Justice (ICJ) explicitly recognised the interlinkages between the general principles of international law of due diligence, prevention, vigilance and the no-harm principle, by even stating that due diligence is at the origin of all these principles²², akin to “russian dolls”²³:

“The Court points out that the principle of prevention, as a customary rule, has its origins in the due diligence that is required of a State in its territory. It is “every State’s obligation not to allow knowingly its territory to be used for acts contrary to the rights of other States” (*Corfu Channel (United Kingdom v Albania)*, Merits, Judgment, I.C.J. Reports 1949, p.

21 Backer LC, “Regulating the Multinational Enterprise as Entity, as a Network of Links and as a Process of Production” (SSRN, 2018) <https://ssrn.com/abstract=3126866> accessed 20 October 2025; Shams A, “Tempering Great Expectations: The Legitimacy Constraints and the Conflict Litigation Function of International Courts in International Climate” (2023) 32 *RECIEL*.

22 ICJ, *Pulp Mills on the River Uruguay (Argentina v Uruguay)*, Judgment, I.C.J. Reports 2010, § 204.

23 Kerbrat Y and Maljean-Dubois S, “La contribution en demi-teinte de la CIJ au droit international de l’environnement dans les affaires Costa-Rica - Nicaragua” (2018) *Droit de l’environnement* n°4, LexisNexis p 1133–1154.

22). A State is thus obliged to *use all the means at its disposal* in order to avoid activities which take place in its territory, or in any area under its jurisdiction, causing significant damage to the environment of another State. This Court has established that this obligation “is now part of the corpus of international law relating to the environment” (*Legality of the Threat or Use of Nuclear Weapons*, Advisory Opinion, I.C.J. Reports 1996 (I), p. 242, para. 29).²⁴

Before this decision by the ICJ, numerous other international tribunals referenced the due diligence principle, including in the 1872 *Alabama*²⁵ and 1887 *Wipperman* cases²⁶, and Justice Moore of the Permanent Court of International Justice in the famous *Lotus* case in 1927²⁷. The recognised arbitrator Max Huber also hinted at a due diligence obligation in the 1928 *Island of Palmas* case of any State “to protect within the territory the rights of other states, in particular their right to integrity and inviolability in peace and war”²⁸.

The 2001 Draft Articles on Prevention of Transboundary Harm from Hazardous Activities²⁹, a codification endeavour of general international law undertaken by the International Law Commission (ILC), which re-

24 ICJ, *Pulp Mills on the River Uruguay (Argentina v Uruguay)*, Judgment, I.C.J. Reports 2010, § 101.

25 Tribunal of arbitration established by Article I of the Treaty of Washington by the of 8 May 1871, *Alabama claims of the United States of America against Great Britain*, 14 September 1872: “the British government failed to use due diligence in the performance of its neutral obligations; and especially that it omitted, notwithstanding the warnings and official representations made by the diplomatic agents of the United States during the construction of the said number “290,” to take in due time any effective measures of prevention”.

26 *Wipperman (United States of America v Venezuela)* (1887), reprinted in J. Bassett Moore, *History and Digest of the International Arbitrations to Which the United States Has Been a Party*, vol. 3 (1898–1906), at 3041: “no state is responsible for acts of private individuals in its territory ‘as long as reasonable diligence is used in attempting to prevent the occurrence or recurrence of such wrongs”.

27 Dissenting Opinion of Mr Moore, *S.S. Lotus (France v Turkey)*, 1927 Series A, No. 10, § 284: “It is well settled that a State is bound to use due diligence to prevent the commission within its dominions of criminal acts against another nation or its people (*United States v Arizona* [p89] (1887), 120 U. S. 479)”.

28 *Island of Palmas*, II UN Reports of International Arbitral Awards, 829 (1928), p 839.

29 Text adopted by the International Law Commission at its fifty-third session, in 2001, and submitted to the General Assembly as a part of the Commission’s report covering the work of that session (A/56/10). The report, which also contains commentaries on the draft articles, appears in the Yearbook of the International Law Commission, 2001, vol. II, Part Two.

ceived the official mandate by the UN General Assembly to develop and codify international law³⁰, also shows that due diligence is one of the most basic principles to ground liability in international law.

Semantically, the ILC interchangeably uses “duty of prevention”, “due diligence”, “due care” or “standard of care”:

“Discharge of the duty of prevention or due diligence is all the more required as knowledge regarding the operation of hazardous activities, materials used and the process of managing them and the risks involved is steadily growing. [...] What would be considered a reasonable standard of care or due diligence may change with time”.

The ILC Draft Articles also explain the origins of due diligence, which “is based on the fundamental principle *sic utere tuo ut alienum non laedas*”, a Roman law principle. This Latin expression suggests that it constituted a source of inspiration for international due diligence. Some authors, who carried out historical legal research on due diligence, concur with this point³¹. Moreover, according to other prominent authors of the legal literature, “[t]he concept of due diligence seems to have passed into international law through the writings of Grotius in the 17th century.”³²

Customary international law also developed from analogies with domestic tort law, which also already recognised the no-harm principle, and, by extension due diligence, as it is necessary to act with due care or due diligence to not harm (see, for instance, the *Trail Smelter* case³³, the ILC

30 According to the website of the ILC (<https://legal.un.org/ilc/>), “The International Law Commission was established by the General Assembly, in 1947, to undertake the mandate of the Assembly, under article 13 (1) (a) of the Charter of the United Nations to “initiate studies and make recommendations for the purpose of ... encouraging the progressive development of international law and its codification.”

31 British Institute for International and Comparative Law et al, “Study on due diligence requirements through the supply chain”, Final report, European Commission, January 2020, p 158.

32 Bonnitcha J and McCorquodale R, “The Concept of ‘Due Diligence’ in the UN Guiding Principles on Business and Human Rights” (2017) 28(3) *European Journal of International Law* p 903. See concurring opinion: Descamps O, “La responsabilité dans le Code civil” (2009) *Histoire de la Justice* No 19 p 298.

33 *Trail Smelter*, III UN Reports of International Arbitral Awards, 1905 (1941), p 1965.

work³⁴ or the legal literature contributions³⁵). As recognised authors of the literature have put it, due diligence “is law by necessity, not by choice”³⁶ besides being “the cornerstone of international environmental law”³⁷.

0.2.1.2 Functions and features of due diligence: a substantive obligation of means

As the above subsection clearly shows, the aim of due diligence is to protect the rights of others to fulfil the function of the no-harm principle.

What are those rights? International public law was first conceived as law governing the relations between States. Hence, public international due diligence protects the rights of States. However, incrementally, State rights expanded, ranging from sovereign territorial prerogatives to gradually include the interests of their national individuals, and more recently, human rights and environmental issues. For instance, in the 1949 *Corfu Channel* case, the ICJ widened this obligation to “elementary considerations of humanity”, being in this case the disclosure of the location of maritime mines to avoid their explosion when a ship is lawfully using the territorial waters³⁸. The arbitral award in the *Trail Smelter*³⁹ and *Lac Lanoux*⁴⁰ cases further applied this core obligation to environmental interests, being transboundary air pollution, and the management of water courses. Later on, the ICJ used these principles in its 1996 advisory opinion on the *Legality of the Threat or Use of Nuclear Weapons*, an issue with potential global cataclysmic consequences, including environmental⁴¹, and also in its 2007

34 The ILC Draft Articles commentary regularly quotes domestic cases, see for instance: ILC, Draft articles on Prevention of Transboundary Harm from Hazardous Activities, Text adopted by the ILC at its fifty-third session in 2001 (A/56/10), Article 10 commentary § 4, footnote 919 (p 162).

35 Krieger H and Peters A, “Due Diligence and Structural Change in the International Legal Order”, *op cit*.

36 Mayer B, “The Applicability of the Principle of Prevention to Climate Change: A Response to Zahar” (2015) 5 *Climate Law*.

37 See Sands P and Peel J, *Principles of International Environmental Law* (3rd edn, Cambridge University Press 2012) p 191.

38 ICJ, *Corfu Channel (United Kingdom v Albania)*, Merits, Judgment, I.C.J. Reports 1949, p 22.

39 *Trail Smelter*, III UN Reports of International Arbitral Awards, 1905 (1941), p 1965.

40 *Affaire du Lac Lanoux (Spain v France)*, 16 November 1957, UNRIIAA, vol. XII, p 281.

41 ICJ, *Legality of the Threat or Use of Nuclear Weapons*, Advisory Opinion, I.C.J. Reports 1996 (I), p 242, para. 29.

Bosnian Genocide case, addressing the international crime of genocide⁴². This thesis questions the applicability of due diligence to climate change under international law, as it was still not settled as the ILC noted in 2021⁴³ (see Part 1).

The ILC specified the requirements of due diligence with the criteria of reasonableness, foreseeability, appropriateness, and proportionality. It notably established that:

“due diligence is manifested in *reasonable* efforts by a State to inform itself of factual and legal components that relate *foreseeably* to a contemplated procedure and to take *appropriate* measures, in timely fashion, to address them. [...] (18) The required *degree of care* is *proportional* to the *degree of hazard* involved. The degree of harm itself should be foreseeable and the State must know or should have known that the given activity has the risk of significant harm. The higher the degree of inadmissible harm, the greater would be the *duty of care* required to prevent it.”⁴⁴

Moreover, the ILC considers that the aim of due diligence is a duty to prevent harm by encompassing both a *procedural* and a *substantive* dimension⁴⁵. These two dimensions aim to achieve the same result, being the

42 See ICJ, *Application of the Convention on the Prevention and Punishment of the Crime of Genocide (Bosnia and Herzegovina v Serbia and Montenegro)*, Judgment, I.C.J. Reports 2007, § 430.

43 ILC, Protection of the atmosphere, Draft guidelines on the protection of the atmosphere, A/76/10, Guideline 3, commentary § 8: “However, the existence of this obligation in customary international law is still somewhat unsettled for global atmospheric degradation.”

44 See also Draft articles on Prevention of Transboundary Harm from Hazardous Activities, Text adopted by the International Law Commission at its fifty-third session in 2001 (A/56/10), p 154.

45 *Ibid*, General Commentary, § 1 and § 10 (p 148). This dichotomy also exists with the positive due diligence obligations developed by the ECtHR, which differentiates between procedural and substantive obligations (see Akandji-Kombé J-F, *Positive Obligations under the European Convention on Human Rights: A Guide to the Implementation of the European Convention on Human Rights* (Human Rights Handbooks No 7, Council of Europe 2007); Tran H, “Les obligations de vigilance des États parties à la Convention européenne des droits de l’homme”, *Bruylant*, 2013). Some authors criticise this distinction for creating complexity and confusion (see Maljean-Dubois S, “Les obligations de diligence dans la pratique: la protection de l’environnement” in *Le standard de diligence et la responsabilité internationale*, Journée SFDI du Mans, 24 février 2017 (Pedone 2018) p 8 - 10).

identification of risks and corresponding substantive measures to prevent harm, besides their *implementation*.

In this vein, the ICJ underlined in its recent *Nicaragua - Costa Rica* case that discharging due diligence requires conducting an impact assessment to identify the risk of a violation⁴⁶. If a risk of significant transboundary harm is confirmed, the basic due diligence duty triggers the corollary obligation to consult the affected States, to shape the adequate measures to prevent, mitigate or compensate the harm⁴⁷.

Furthermore, the International Tribunal for the Law of the Sea (ITLOS) found that the *precautionary* principle is “an integral part of the general obligation of due diligence” in its *Seabed Mining Advisory Opinion*⁴⁸. In accordance with the ILC, the ITLOS specified that “due diligence” is a variable concept. It may change over time as measures considered sufficiently diligent at a certain moment may become not diligent enough in light, for instance, of new scientific or technological knowledge, or the risks involved in the activity.”⁴⁹ As the ILC specified it, the “obligation is of a continuing character”⁵⁰. This feature implies a significant *procedural* dimension.

The ILC also explicitly sets out that the due diligence obligation requires the regulation of private actors if they are a source of significant transboundary risk:

“To say that States must take the necessary measures does not mean that they must themselves get involved in operational issues relating to the activities to which article 1 applies. Where these activities are conducted by private persons or enterprises, the obligation of the State is limited to establishing the appropriate regulatory framework and applying it in accordance with these articles.”⁵¹

46 ICJ, *Certain Activities Carried Out by Nicaragua in the Border Area (Costa Rica v Nicaragua) and Construction of a Road in Costa Rica along the San Juan River (Nicaragua v Costa Rica)*, Judgment, I.C.J. Reports 2015, § 104.

47 *Ibid.*

48 ITLOS, *Responsibilities and Obligations of States Sponsoring Persons and Entities with Respect to Activities in the Area*, Advisory Opinion of 1 February 2011, ITLOS Reports 2011, § 131.

49 *Ibid.*, § 117.

50 ILC, *Draft articles on Prevention of Transboundary Harm from Hazardous Activities*, Text adopted by the ILC at its fifty-third session in 2001 (A/56/10), Article 3 Commentary, § 5 (p 154).

51 *Ibid.*, Article 5 Commentary, § 3 (p 156).

Although due diligence seems overburdening in light of its almost unlimited ambit, one must recall that it requires, in principle, only *best efforts* to prevent or minimise the concrete risks⁵². In other words, the substantive dimension of due diligence is an *obligation of means*, not an obligation of result⁵³. This type of expected conduct means that, without negligence or wrongdoing, no liability unfolds, even if the harm occurred. Additionally, the adequate, reasonable, and proportionate measures are assessed in an *in concreto* manner in light of specific circumstances of the case, the State's capacities to prevent harm, the available means etc⁵⁴. In case of even competing interests, due diligence leaves a certain margin of appreciation to balance them and to find reasonable measures designed to prevent or minimise harm⁵⁵. Hence, the due diligence obligation is linked to a State responsibility regime based on fault under international law, instead of a strict liability regime.⁵⁶

To conclude this subdivision, due diligence constitutes a default principle or the “basic duty” as the ILC states⁵⁷, which applies in cases in which no specific liability rules were determined by States, more precisely, in those cases in which a simple prohibition (rendering a conduct or product unlawful) or a more stringent liability regime than due diligence does not exist such as strict liability, or presumption of liability⁵⁸ (see the *Corfu Channel* case and the restatement of the due diligence rule in *Pulp Mills*).

52 *Ibid*, Article 3 Commentary, § 7. See as well, Shinya M, “Third Report on the Protection of the Atmosphere” (A/CN.4/692, UN International Law Commission, 25 February 2016); ICJ, *Bosnian Genocide* case, Judgment, I.C.J. Reports 2007, § 430; ICJ, *Pulp Mills*, Judgment, I.C.J. Reports 2010, § 187; Maljean-Dubois S, “The No-Harm Principle as the Foundation of International Climate Law” in *Debating Climate Law* (2021).

53 ILC, Chapter IV Protection of the atmosphere, draft guidelines on the protection of the atmosphere, A/76/10, 2021, Article 3 commentary, § 6.

54 ILC, Draft articles on Prevention of Transboundary Harm from Hazardous Activities, Text adopted by the ILC at its fifty-third session in 2001 (A/56/10), Article 3 commentary, § 17: See as well *Bosnian Genocide case*, Judgment, I.C.J. Reports 2007, § 430.

55 *Ibid*, see, among others, Articles 8 – 14 and respective commentaries.

56 It is noteworthy that a previous ILC attempt in 1996 to shape the due diligence rule in a strict liability regime failed.

57 ILC, Draft articles on Prevention of Transboundary Harm from Hazardous Activities, Article 7, Commentary, § 6 (p 158). See for a corresponding opinion: Krieger H and Peters A, “Due Diligence and Structural Change in the International Legal Order”, *op cit*, p 374 – 376.

58 Krieger H and Peters A, “Due Diligence and Structural Change in the International Legal Order”, *op cit*, p 374 – 390.

0.2.1.3 The interrelationships between general due diligence and specific treaty obligations

There are interrelationships between *general* and *specific* due diligence in numerous ways.

The ICJ asserted that a treaty obligation can set out a due diligence obligation if the treaty obligation requires similar conduct to the general international law principle (see *Pulp Mills*⁵⁹, or *United States Diplomatic and Consular Staff in Tehran (United States of America v Iran)*⁶⁰). In other words, *general* due diligence can reside in *specific* conventions, which shows the pervasiveness of due diligence within international law, beyond customary law.

In other cases, the ICJ stated that due diligence should be used as a standard, a yardstick or a framework of interpretation to assess whether one complies with a treaty obligation (see the *Bosnian Genocide case*⁶¹).

More generally, treaty obligations are regularly interpreted in a *harmonious* manner with the customary due diligence rule⁶². In fact, relevant rules of general international law shall be taken into account when interpreting treaty provisions, according to the general rule of interpretation enshrined in Article 31 (3) (c) of the Vienna Convention on the Law of Treaties⁶³. Hence, due diligence must generally be considered whenever the interpretation of a treaty provision and a harm to a state is involved, attributing to due diligence a prominent, dynamic and almost ubiquitous role in international law⁶⁴.

59 ICJ, *Pulp Mills on the River Uruguay (Argentina v Uruguay)*, Judgment, I.C.J. Reports 2010, § 197.

60 ICJ, *United States Diplomatic and Consular Staff in Tehran (United States of America v Iran)*, Judgment of 24 May 1980, ICJ Reports 1980, § 63. The legal literature considers that the ICJ applied due diligence in this case without naming it, due to the requirement of taking all appropriate measures (see Krieger H and Peters A, “Due Diligence and Structural Change in the International Legal Order”, *op cit*, p 365).

61 ICJ, *Bosnian Genocide case*, Judgment, I.C.J. Reports 2007, § 430.

62 Maljean-Dubois S, “Climate Change Litigation” (2019) *Max Planck Encyclopedia of Procedural Law* § 20 quoting *The South China Sea Arbitration, The Republic of Philippines v The People's Republic of China*, 2016, paras 941–48.

63 The ICJ has even done so before the Vienna Convention entered into force, see opinion in *Pulp Mills* (§ 65).

64 See Argentina's opinion in *Pulp Mills* concerning the dynamic effect of considering general international law, including due diligence (§ 55); see also the studies on due diligence in international law, among others: Heike Krieger, Anne Peters, and Leon-

In any case, due diligence has been recognised in international law for a very long time. Given its versatility, it may “close accountability gaps” when seeking to address unregulated issues such as climate change⁶⁵.

0.2.2 Businesses’ human rights due diligence (HRDD)

The business and human rights area deals with the responsibility of multinational private actors and the corresponding responsibility of States to protect human rights. This field also contains a transnational and polycentric problematic bearing similarities to the global climate change problem. Interestingly, the notion of *due diligence* also recently emerged as a very influential concept in this field, due to John Ruggie’s work from 2005 to 2011 as a UN Secretary-General’s Special Representative in this area, which resulted in the consensual endorsement of the UN Guiding Principles on Business and Human Rights (or the “UNGPs”⁶⁶).

Similarly to international law, this section shows the comparable origins of HRDD, stemming from the no-harm principle and Roman law (subsection 0.2.1.1), in addition to its functions and features, aimed to prevent harm by requiring *procedural* and *substantive* best efforts (subsection 0.2.1.2). The last subsection describes the dynamic implementation of the HRDD through judicial interventions, notably based on *general* due diligence, and *specific* legislative interventions (subdivision 0.2.2.3).

0.2.2.1 Origins of HRDD: the universal no-harm principle

Professor Ruggie started his mandate after the failure in 2003 of the international treaty project proposed by the UN Sub-Commission on the Pro-

hard Kreuzer (ed), *Due Diligence in the International Legal Order*, Oxford University Press, 2021.

65 See, for a concurring opinion: Krieger H and Peters A, “Due Diligence and Structural Change in the International Legal Order”, *op cit*, p 365 – 368, and 389. See the following concurring opinion: Bäumler J, *Das Schädigungsverbot im Völkerrecht: Eine Untersuchung anhand des Umwelt-, Welthandels- und Finanzvölkerrechts* (Max-Planck-Institut für ausländisches öffentliches Recht und Völkerrecht, Beiträge zum ausländischen öffentlichen Recht und Völkerrecht, 1st edn, Springer 2017).

66 Ruggie J (Special Representative of the Secretary-General of the United Nations), “Guiding Principles on Business and Human Rights: Implementing the United Nations ‘Protect, Respect and Remedy’ Framework”, HR/PUB/11/04, 2011.

motion and Protection of Human Rights, which aimed at establishing international human rights obligations *directly* on companies⁶⁷. His objective was to solve the dispute that emerged during the discussions around the 2003 treaty project between human rights defenders and companies, which aimed to impose new direct international obligations on companies⁶⁸. To find a compromise, Ruggie created a set of principles by relying on existing law, similarly to the ILC process of codifying and further developing international law⁶⁹. John Ruggie stated he did not create any new international law obligation⁷⁰ but that he merged two pre-existing elements: the duty to protect human rights and due diligence, to create “human rights due diligence” (HRDD).

This concept turned out to be very influential as it requires States to ensure human rights are protected, and companies to respect human rights by carrying out due diligence, including to prevent any liability risks stemming from domestic law (see the subdivision below 0.2.2.2.2). This combination also enables interpreting domestic law (due diligence principle) in light of the UNGPs, to provide an extraterritorial reach, through human rights.

Although it is widely acknowledged that human rights *aim to be* universally applicable (see, for instance, the “Universal Declaration of Human Rights” and the International Covenants on human rights protection, or Article 55 and 56 of the Charter of the United Nations which establishes “universal respect for, and observance of, human rights” and the ICJ opinion in *Barcelona Traction*⁷¹ which found human rights give rise to “obligations *erga omnes*”)⁷², it was not self-explanatory for due diligence.

67 Norms on the Responsibilities of Transnational Corporations and Other Business Enterprises with Regard to Human Rights, U.N. Doc. E/CN.4/Sub.2/2003/12/Rev.2, 2003; Approved August 13, 2003, by U.N. Sub-Commission on the Promotion and Protection of Human Rights resolution 2003/16, U.N. Doc. E/CN.4/Sub.2/2003/L.11 at 52, 2003.

68 Ruggie J, “Interim report of the Special Representative of the Secretary-General on the issue of human rights and transnational corporations and other business enterprises”, E/CN.4/2006/97, 22 February 2006, p 15; De Schutter Olivier, “Towards a New Treaty on Business and Human Rights”, *Business and Human Rights Journal*, 13 November 2015 p 43.

69 *Ibid*, p 15.

70 *Ibid*, p 1.

71 ICJ, *Barcelona Traction, Light and Power Company, Limited*, Judgment, I.C.J. Reports 1970, § 33.

72 I will not come back to the universality of human rights in this thesis, I will rather try to make clear in this introduction that due diligence has a universal character. For an article discussing the universality of human rights, see for instance Weiss N,

Nevertheless, as the section above on international public law showed, due diligence might be even more universal than human rights. In fact, similarly to international customary law, Ruggie also understood the concept as closely related to the no-harm principle:

“24. To respect rights essentially means not to infringe on the rights of others - put simply, to do no harm. [...]

25. Yet how do companies know they respect human rights? Do they have systems in place enabling them to support the claim with any degree of confidence? Most do not. What is required is due diligence - a process whereby companies not only ensure compliance with national laws but also manage the risk of human rights harm with a view to avoiding it.”

The “Study on due diligence requirements through the supply chain” commissioned by the European Commission confirmed this interrelationship between the no-harm principle and due diligence by moreover recalling their universal character:

“John Ruggie referred to due diligence as the principle of “do no harm”, which is a common principle in all legal systems, common law or civil, across the EU and indeed the world.”⁷³

The subsection 0.2.1.1 above also already pointed to a likely universal recognition of due diligence in comparative domestic law. Furthermore, the authors of the study for the European Commission even carried out some historical legal research on the origins of due diligence and found that it stems from Roman law:

“The concept of due diligence as a standard of care originated from Roman law, where it was used as an objective standard of expected conduct both in contract law and in the law of tort. In particular, a wrongdoer would be held liable for acts of negligence if he or she had failed to comply with the standard of conduct which would have been exercised in the circumstances by the diligent *paterfamilias* (i.e. prudent father of family/head of the household), which would then become known in common

“Die Entwicklung der Menschenrechtsidee, heutige Ausformung der Menschenrechte und Fragen ihrer universellen Geltung”, in Hasse J, Müller E and Schneider P (eds), *Menschenrechte – Bilanz und Perspektiven*, 2002, p 39-69.

73 See the study carried out for the European Commission: Smit L et al, “Study on Due Diligence Requirements through the Supply Chain – Final Report”, *BIICL, Civic Consulting, LSE, European Commission (Directorate-General for Justice and Consumers)*, January 2020 p 158.

law as the ordinary reasonable person standard. Although terminologies vary, this principle that a person should exercise a certain standard of care in order not to harm another is still commonly recognized in legal systems across EU Member States.⁷⁴

In fact, the Latin expression “*bonus pater familias*” (i.e. prudent father of the family) stems from Roman times. As some legal authors researched it, “in the 6th century AD, Justinian argued that an individual may be liable for harm where ‘what should have been foreseen by a diligent man was not foreseen.’”⁷⁵ It is indeed established that the Roman *Lex Aquila* already recognised some forms of negligence, but in a casuistic manner⁷⁶. In that sense, the principles of due diligence and negligence are nothing new.

Applicable domestic provisions also stress the need to avoid harm in various ways, i.e., through domestic constitutions, fundamental rights, or tort law. For example, Article 4 of the French Declaration of Human and Civic Rights of 26 August 1789, which establishes the basic right of liberty, still puts limitations on it. The first one is the no-harm principle: nobody has the right to abuse one’s liberty to infringe on others. Moreover, it was specifically designed by the will of the lawmaker:

“Liberty consists in being able to do anything that does not harm others: thus, the exercise of the natural rights of every man has no bounds other than those that ensure to the other members of society the enjoyment of these same rights. These bounds may be determined only by Law.”⁷⁷

In other words, exercising due diligence and considering the will of the lawmaker are the two main restrictions of liberty. Almost the same provision can be found in Article 2 of the German Constitution, or “Basic Law”:

“Article 2 [Personal freedoms] (1) Every person shall have the right to free development of his personality insofar as he does not violate the

74 *Ibid.*

75 Bonnitca J and McCorquodale R, “The Concept of ‘Due Diligence’ in the UN Guiding Principles on Business and Human Rights” (2017) 28(3) *European Journal of International Law* p 902 referring to Justinian, *The Digest of Roman Law: Theft, Rapine, Damage and Insult*, translated by Colin Kolbert (1979), p 91.

76 Descamps O, “La responsabilité dans le Code civil” (2009) *Histoire de la Justice* No 19 p 299.

77 See the English translation of the French Declaration of Human and Civic Rights of 26 August 1789 on the Constitutional Council’s website: https://www.conseil-constitutionnel.fr/sites/default/files/as/root/bank_mm/anglais/cst2.pdf, last accessed 28 October 2025.

rights of others or offend against the constitutional order or the moral law. (2) Every person shall have the right to life and physical integrity. Freedom of the person shall be inviolable. These rights may be interfered with only pursuant to a law.”

And, to not harm and infringe the liberty of others, it is necessary to act with due care or due diligence. The US Second Restatement of Torts explicitly expresses the interlinkage between both basic principles⁷⁸. These examples further illustrate in a *prima facie* manner the widespread or even universal existence of the no-harm principle and its related due diligence duty, thereby complementing the claims in this regard made in subpart 0.1.

0.2.2.2 Functions and properties of corporate due diligence (HRDD): an obligation of conduct

Given that human rights violations represent “harms” and that due diligence is *a priori* universal, like human rights, the logical conclusion is that every person (whether public or private) should or even shall respect human rights by carrying out due diligence. The interpretive guide of the UNGPs states in this regard: “The responsibility to respect human rights applies in all contexts. It is a uniform standard, reflecting its roots in the universal expectation that enterprises should not harm the dignity of people as they go about their business.”⁷⁹

And even if the UNGPs do not impose any new obligations and use the term “should” to express their expectations applicable to corporate actors (see Principles 11 and 17, in particular), which has led many commentators to merely appreciate the non-binding nature, the UNGPs still recall in their commentary that companies can nonetheless be held liable under provisions of domestic law⁸⁰. In fact, the *general* due diligence principle in tort law (i.e., the duty of care) indeed served as a basis to find companies *potentially* responsible for different types of harms overseas already in the

78 Restatement (Second) of Torts, section 302, comment (a).

79 Ruggie J (Special Representative of the Secretary-General of the United Nations), *The Corporate Responsibility to Respect Human Rights: An Interpretive Guide*, HR/PUB/12/02, United Nations, 2012.

80 UNGPs, Commentary of Principle 17, p 19.

year 2000 in the *Lubbe v Cape* case in the UK⁸¹. Hence, it is even more justified that companies should carry out HRDD.

Due diligence also lays out the corresponding expected standard of conduct, defining the manner how they should behave. It is clearly ‘[t]he opposite of negligence’⁸². Ruggie used a traditional legal definition of due diligence⁸³ to refine and adapt it to business and human rights issues, notably in Principle 17:

“17. In order to identify, prevent, mitigate and account for how they address their adverse human rights impacts, business enterprises should carry out human rights due diligence. The process should include assessing actual and potential human rights impacts, integrating and acting upon the findings, tracking responses, and communicating how impacts are addressed. Human rights due diligence:

(a) Should cover adverse human rights impacts that the business enterprise may cause or contribute to through its own activities, or which may be directly linked to its operations, products or services by its business relationships;

(b) Will vary in complexity with the size of the business enterprise, the risk of severe human rights impacts, and the nature and context of its operations;

(c) Should be ongoing, recognizing that the human rights risks may change over time as the business enterprise’s operations and operating context evolve.”

Therefore, HRDD has many similarities with due diligence in international law. Indeed, numerous terms are used interchangeably (such as the no-

81 UK House of Lords, *Lubbe and Ors v Cape Plc* [2000] UKHL, 20 July 2000, § 20.

82 Bonnitcha J and McCorquodale R, “The Concept of ‘Due Diligence’ in the UN Guiding Principles on Business and Human Rights” (2017) 28(3) *European Journal of International Law* p 903 referring to Whittuck, Whittuck, *Institutes of Roman Law by Gaius*, with a Translation and Commentary, translated by Edward Poste (4th edn, 1905), at 429. See, similarly, *Tesco Supermarkets Ltd v Natrass*, [1972] AC 153, 199, per Lord Diplock.”

83 Ruggie J (Special Representative of the Secretary-General of the United Nations), *The Corporate Responsibility to Respect Human Rights: An Interpretive Guide*, HR/PUB/12/02, United Nations, 2012, p 6: “Due diligence has been defined as “such a measure of prudence, activity, or assiduity, as is properly to be expected from, and ordinarily exercised by, a reasonable and prudent [person] under the particular circumstances; not measured by any absolute standard, but depending on the relative facts of the special case”. [footnote 4: Black’s Law Dictionary, 6th ed. (St. Paul, Minnesota, West, 1990)].”

harm principle, standard of care), and several criteria appear over and over (risks identification, prevention, reasonableness, foreseeability, etc.).

0.2.2.3 The binding force of HRDD through case laws and specific legislations

France was the first country to implement HRDD into its domestic legal system in 2017⁸⁴, followed notably by Germany in 2021⁸⁵, and the European Union in 2024 with the Corporate Sustainability Due Diligence Directive (CSDD)⁸⁶. Furthermore, a business and human rights treaty has been under discussion since 2014⁸⁷.

Beyond these *specific* legislative developments, Ruggie's UNGPs also further influenced case law developments in different jurisdictions with respect to the *general* tort duty of care, which eventually led to the recognition of the partial responsibility of parent companies for harms caused by affiliated companies overseas. For example, in 2019, the UK Supreme Court admitted that parent companies can bear duties of care with respect to harms caused by their subsidiaries abroad⁸⁸. These developments show that courts accept the extraterritorial reach of the *general* due diligence obligations stemming from tort law, in light of the need to protect human rights and the environment abroad.

Additionally, although regulating private actors, particularly businesses, was already recognised as an obligation in certain areas, as noted above⁸⁹,

84 LOI n° 2017-399 du 27 mars 2017 relative au devoir de vigilance des sociétés mères et des entreprises donneuses d'ordre.

85 Gesetz über die unternehmerischen Sorgfaltspflichten in Lieferketten, vom 16. Juli 2021.

86 Directive (EU) 2024/1760 of the European Parliament and of the Council of 13 June 2024 on corporate sustainability due diligence.

87 See the work of the "Open-ended intergovernmental working group on transnational corporations and other business enterprises with respect to human rights" under the mandate given by the decision of: Human Rights Council, "26/9 Elaboration of an international legally binding instrument on transnational corporations and other business enterprises with respect to human rights", 26th Session, A/HRC/RES/26/9, 14 July 2014 https://ap.ohchr.org/documents/dpage_e.aspx?si=A/HRC/RES/26/9, last accessed 27 October 2025.

88 UK Supreme Court, *Lungowe v Vedanta*, [2019] UKSC 20, 10 April 2019.

89 ILC, Draft articles on Prevention of Transboundary Harm from Hazardous Activities, Text adopted by the ILC at its fifty-third session in 2001 (A/56/10), Article 5 Commentary, § 3 (p 156).

some human rights treaty bodies eventually recognised the duty to regulate the extraterritorial or rather transnational activities of corporate actors⁹⁰. This was somehow a surprising development since the UNGPs commentary specified that “States are not generally required under international human rights law to regulate the extraterritorial activities of businesses domiciled in their territory and/or jurisdiction”⁹¹.

The basis for this development lies in State due diligence itself, as transnational corporate activities have regularly negatively affected human rights, triggering the need to clarify State human rights duties in this respect⁹². In other words, by releasing a General Comment on this issue, the CESCR undertook its own *procedural* due diligence by addressing a serious and regular or even systemic human rights risk. Additionally, the CESCR stressed that this extraterritorial human rights duty is aimed at protecting other States and their respective individuals, in conformity with the due diligence principles of customary international law and the *erga omnes* character of human rights⁹³. While extraterritorial regulations must not harm the sovereignty of third states⁹⁴, a “best efforts” obligation provides enough flexibility to meet the purpose of avoiding violations of third states’ interests, as it makes it possible to reconcile universal concerns (human rights and environmental protection) with other state and business interests⁹⁵.

This General Comment shows the mutually reinforcing effect of due diligence as it is applicable to both State and corporate actors. Initially

90 Committee on the Economic, Social and Cultural Rights, General Comment No. 24 (2017) on State obligations in the context of business activities, § 16 and 27 especially. See as well Human Rights Committee, General Comment n°36 on Article 6, the right to life, CCPR/C/GC/36, 3 September 2019, Para 22. Human Rights Committee, General Comment n°36, CCPR/C/GC/36, 3 September 2019, § 7 and 21; Five UN human rights treaty bodies issue a joint statement on human rights and climate change (Committee on the Elimination of Discrimination Against Women, Committee on Economic, Social and Cultural Rights, Committee on the Protection of the Rights of All Migrant Workers and Members of their Families, Committee on the Rights of the Child, Committee on the Rights of Persons with Disabilities), Joint Statement on “Human Rights and Climate Change”, *op cit*, 16 September 2019, § 3 and 5

91 UNGPs, Commentary of Principle 2.

92 CESCR, General Comment n°24 on State obligations under the International Covenant on Economic, Social and Cultural Rights in the context of business activities, E/C.12/GC/24, 10 August 2017, § 1, 3 and 27 especially.

93 *Ibid*, § 27.

94 *Ibid*, § 26.

95 *Ibid*, § 33.

stemming from Roman law (or even before), its analogical consideration enabled its integration into other legal systems and contexts, including in the business and human rights area, ultimately making it possible to close difficult accountability gaps between jurisdictions. This fruitful expansion is due to the ingenious design strategy of the UNGPs, whose method was based on the combination of pre-existing and widely recognised legal notions such as due diligence and human rights⁹⁶. Subsequently, the Human Rights Committee (HRC) and other human rights treaty bodies laid out a similar State requirement⁹⁷.

0.2.3 Main hypothesis: due diligence, a pervasive concept requiring climate action?

After having rapidly outlined the hypotheses of this PhD in subpart 0.1 of the introduction, subpart 0.2 established the manifest pervasive existence of a *preexisting* global due diligence norm and concept, thanks to broadly accepted international law and business and human rights law.

In fact, due diligence stems from the no-harm principle, the core objective of any liability system, including domestic tort law and, formerly, Roman law. This very basic function, in addition to its widespread recognition, suggests that due diligence shapes the law globally. It seems furthermore difficult to dispute that the no-harm principle, and conversely, due diligence, are universal, as they are the most crucial principles to sustain security, social order and peace, not only in the context of business behaviour or private persons but also State actors⁹⁸.

The ubiquitous existence of due diligence is so important for this thesis for the simple reason that climate change is a global and polycentric issue requiring action by every person, whether public or private. Since due diligence applies to anybody in potentially any legal system, it therefore

96 Bonnitca J and McCorquodale R, “The Concept of ‘Due Diligence’ in the UN Guiding Principles on Business and Human Rights” (2017) 28(3) *European Journal of International Law* p 900.

97 Human Rights Committee, General Comment n°36, CCPR/C/GC/36, 3 September 2019, § 7 and 21; Five UN human rights treaty bodies, Joint Statement on “Human Rights and Climate Change”, *op cit*, 16 September 2019, § 3 and 5.

98 Descamps O, “La responsabilité dans le Code civil” (2009) *Histoire de la Justice* No 19 p 299; Mayer B, “The Applicability of the Principle of Prevention to Climate Change: A Response to Zahar” (2015) 5 *Climate Law* p 14: „The principle of prevention is law by necessity, not by choice”.

offers a potential corresponding legal basis to impose climate obligations on anybody.

In fact, the ILC stated in 2021 that customary due diligence *may* apply to climate change: States “have the obligation to protect the atmosphere by exercising due diligence in taking appropriate measures, in accordance with applicable rules of international law, to prevent, reduce or control atmospheric pollution and atmospheric degradation”⁹⁹. Note that the ILC understands under atmospheric degradation encompasses global warming¹⁰⁰. However, the ILC recognised that “the existence of this obligation in customary international law is still somewhat unsettled for global atmospheric degradation.”¹⁰¹ The same problem exist(ed) in other domestic and regional legal systems which recognise some form of State due diligence, without clarifying its applicability to climate change.

In addition, some cases and judgements, including in *Milieudefensie v Shell*, or *Notre Affaire à Tous v Total*, relying on tort law or specific laws implementing HRDD, also suggest the applicability of corporate due diligence to climate change. The Corporate Sustainability Due Diligence Directive (CSDDD) on the EU level clarified climate due diligence obligations in specific legislation. While these indications seem to point to a potential applicability of due diligence to climate change, there are remaining uncertainties that Part 1 aims to address.

Additionally, there are numerous uncertainties concerning due diligence obligations in the climate realm, whether for private or public actors. Parts 2 and 3 of this thesis aim to shed light on, respectively, the extent of its enforceability and the potential existence of secondary obligations due to past and/or ongoing breaches of due diligence.

0.3 Specifying the PhD's research questions in light of the multidisciplinary scientific elements

0.3.1 The persisting non-alignment with the Paris Agreement's target

In 2015, the community of States adopted the Paris Agreement (PA) at “COP 21” (Conference of the Parties), the 21st convening of the State

99 ILC, Protection of the atmosphere, Draft guidelines on the protection of the atmosphere, A/76/10, Guideline 3.

100 *Ibid*, Guideline 1 (c), including the commentary § 9; Guideline 2, including the commentary § 5.

101 *Ibid*, Guideline 3, commentary § 8.

parties to the United Nations Framework Convention on Climate Change (UNFCCC).

The Paris Agreement entails one core element: the long-term temperature target enshrined in Article 2 (1) (a), which aims at:

“Holding the increase in the global average temperature to well below 2°C above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5°C above pre-industrial levels, recognizing that this would significantly reduce the risks and impacts of climate change.”

This objective concretises the “ultimate objective” of the UNFCCC, which itself aims at preventing “dangerous anthropogenic interference with the climate system”¹⁰².

However, neither the world nor individual countries have managed to set out policies which are credible enough to achieve the Paris Agreement’s objective, according to the latest analysis of the IPCC Working Group III (WG III) on climate mitigation:

“Without a strengthening of policies beyond those that are implemented by the end of 2020, GHG emissions are projected to rise beyond 2025, leading to a median global warming of 3.2 [2.2 to 3.5] °C by 2100.”¹⁰³

This forecast shows that the world is *not* preventing dangerous global warming, which threatens the global and local environments, and more generally life on Earth, as the Courts found in *Urgenda*, *KlimaSeniorinnen* and others. In other words, this thesis postulates that this situation may mask persistent ongoing collective and individual breaches of CDD¹⁰⁴. Courts of law could play a role in closing this emissions gap by compelling further individual or multiple public and private actors to comply with CDD and associated principles in order to limit global warming to 1.5°C. To do so, the world must be carbon (CO₂) neutral by 2050 at the latest, and reduce GHGs by approximately 50% between 2030 and 2035 compared to current levels.

102 UNFCCC, Article 2 (1).

103 IPCC, AR 6, WG III, § C.1, p 21.

104 See for a similar hypothesis: Maljean-Dubois S, “The No-Harm Principle as the Foundation of International Climate Law” in *Debating Climate Law* (2021) p 3.

0.3.2 The factors of individual and collective mitigation non-compliance

In the climate area, there are some causes of inaction. What are the factors of the collective and individual mitigation non-compliance with the Paris Agreement's objective? Can the concept of CDD serve as a remedy?

0.3.2.1 The lack of a legally binding and effective international climate regime

The PA does not provide for precise binding reduction obligations nor enforcement mechanisms¹⁰⁵. Is the current failure due to a lack of binding norms and sanctions in the PA?

The weak binding architecture of the PA is a common criticism in the legal and sociological literature, as summarised in the last IPCC AR6 report, but also its strength, since it collectively enables pursuing ambitious goals¹⁰⁶. Additionally, the commentators and the IPCC are divided on the issue of whether it is possible to go beyond the PA's structure in terms of enforceability in light of the previous failed attempts to regulate GHG emissions globally¹⁰⁷. As Professor Maljean-Dubois summarised this situation, "(almost) everyone now deem[s] the content of the Agreement to be insufficient but in any event both fragile and better than nothing"¹⁰⁸.

The same question remains: can due diligence assist the implementation of the Paris Agreement, by making the existing judicial enforcement mechanisms of tort and liability law available through the reliance on due diligence for the purpose of climate mitigation and action?

105 Maljean-Dubois S, "Climate Change Litigation" (2019) *Max Planck Encyclopedia of Procedural Law* § 29; as to the Paris Agreement, no clause foresees the possibility for contentious cases; but only so-called "soft-compliance mechanisms" in its Articles 13 and 15 (for more information, see subsections 3.2.1.3 and 3.3.2.5 of the thesis).

106 See for a summary of the controversy: IPCC, AR6 (2021-23), WG III, Chapter 1, p 172 - 173. See as well Viñuales Jorge E, "The Paris Climate Agreement: An Initial Examination", *C-EENRG Working Papers*, no 6, 15 December 2015.

107 See for more details part 3, especially part 3.2.2. on the USA's and Canada's dismissal of the KP, the low ambition of the European countries with the Doha Amendments etc. See as well: IPCC, AR6 (2021-23), WG III, Chapter 1, p 172 - 173.

108 Maljean-Dubois S, "Climate Change Litigation" (2019) *Max Planck Encyclopedia of Procedural Law* § 14; for a summary of the corresponding current debate by a leading legal scholar, see Bodansky D, "The Forever Negotiations" (EJIL: Talk!, 2022).

0.3.2.2 The collective and cumulative nature of climate harm: a “drop in the ocean”?

Global warming is physically only possible with the accumulation of GHGs in the atmosphere over a long period of time by multiple different sources. Thus, one person can only make a small contribution to global climate change. Some argue that the GHGs of one actor are only a “drop in the ocean”. This leaves the impression that no one causes the problem. Beyond this psychological factor, which provides a sense of innocence to individual actors, the *cumulative* and *collective* nature of global warming challenges the establishment of causation in climate liability cases against one actor. Can due diligence, which obliges everyone to prevent harm as soon as one is aware of it – or rather should be aware of it – overcome this problem, by obliging each individual actor to do its share in the context of the collective nature of the issue, following the principle of shared responsibility¹⁰⁹ or common but differentiated responsibilities¹¹⁰?

0.3.2.3 The onerousness of the climate transition

In addition to the cumulative nature of global warming, the required mitigation measures are onerous in economic, social and governance terms. They require wide-scale transformation, such as eliminating fossil fuels and replacing them with renewable and other forms of low-carbon energies, ensuring that industrial and energy systems become highly efficient.

Those actions are only possible with adequate state regulations, incentives, and investments – including public financing – in addition to the appropriate contribution of the private sector¹¹¹. However, countries and companies tend to reject those measures due to their economic and other competing interests¹¹². One could therefore say that public and private ac-

109 See the already cited *Urgenda* and *Shell* cases. See, furthermore, Nollkaemper A et al, “Guiding Principles on Shared Responsibility in International Law” (2020) 31(1) *European Journal of International Law* p 15 – 72.

110 The “common but differentiated responsibilities and respective capabilities” (CB-DRRC) principle was established in the 1992 UNFCCC.

111 See, among others: IPCC, AR6 (2021-23), WG III, SPM, § E.2 – E.5.4; also see COP 27, “Sharm el-Sheikh Implementation Plan”, *FCCC/CP/2022/L.19*, 20 November 2022, § 30 - 31.

112 For a summary of the necessary actions, see Subpart 1.2 and 1.3 describing the main results from the IPCC reports, especially those of the AR3 showing in 2001

tors *de facto* consider these efforts so far as *disproportionately* burdensome compared to their small individual contribution to global warming.

On the other hand, the risks linked to the aggravation of climate change are so great, that it becomes difficult to conceive the mitigation efforts as disproportionate. The IPCC precisely laid out the risks of overstepping the Paris Agreement's objective, in addition to the potential costs of mitigation of doing so. It also explained the benefits and feasibility of mitigating climate change in line with this objective¹¹³.

Since due diligence requires the implementation of appropriate, adequate, and proportionate measures, can it assist in generating choices in favour of mitigating global warming?

0.3.2.4 The “free-riding” and “carbon leakage” issues vs the need to do its share

Another factor contributing to climate inaction is the “free riding” issue¹¹⁴, being the intuitive perception, supposition, assumption, or fear that others do not do their part since mitigation is onerous, and the contribution of one actor is anyhow only *a drop in the ocean*. Additionally, the climate mitigation goal of the Paris Agreement is framed in global terms, and the related benefit of achieving it may appear to some far-fetched and abstract. Hence, why should any individual actor take action if everybody believes that others are, at the end of the day, free-riding?¹¹⁵

that taking action in line with the 2°C objective (450 ppm scenario) involved disproportionately high costs compared to the slightly higher scenario (just above 2°C).

113 See IPCC, AR6, WG III, SPM, § E.1.

114 The free riding issue (or “*passager clandestin*” in French) is regularly quoted in the analytical literature. See, for instance : Ostrom E, “A Polycentric Approach for Coping with Climate Change”, Background Paper to the 2010 *World Development Report*, Policy Research Working Paper 5095, 2009; Paavola J, “Climate Change: The Ultimate Tragedy of the Commons?”, in D H Cole and E Ostrom (eds), *Property in Land and Other Resources* (Lincoln Institute of Land Policy, Cambridge, MA); Mayer B, “Construing International Climate Change Law as a Compliance Regime” (2018) 7(1) *Transnational Environmental Law* p 115–137; Auverlot D, “La tragédie du réchauffement climatique: Du cinquième rapport du GIEC à la conférence du Bourget 2015”, *France Stratégie, Annales des Mines – Responsabilité et environnement*, 2015/1 No 77, 7 May 2014, p 20.

115 See the corresponding theory of “the tragedy of the commons”: Hardin G, “The Tragedy of the Commons”, *Science* 162, 13 December 1968, pp 1243–1248.

Additionally, global warming is a highly complex polycentric issue¹¹⁶, requiring the actions of everyone to be effective. The IPCC highlights in a larger and bold font that “[e]ffective implementation depends on policies and cooperation at all scales”¹¹⁷. The opposite *may* lead to “carbon leakage”¹¹⁸. For instance, if one actor decides to put in place some mitigation actions and policies, but not the others, it *may* lead to economic isolation and the displacement of high-emitting activities. This happened to some extent to the EU when it adopted in 2003 the first legislation worldwide on the regulation of GHG through a market-based system (EU Emissions Trading System, EU ETS)¹¹⁹. Six years later, in 2008, it rolled back the economic constraints on some branches of industry to avoid their relocation to other countries¹²⁰. Therefore, being among the first to regulate GHGs *may* entail the risk of leakage.

Can due diligence remedy the free-riding and carbon leakage issues by legally ensuring that everyone does their share to mitigate global warming?

0.3.2.5 The higher responsibility of the “developed countries”

Climate change was originally triggered by the “Global North”. In fact, industrialised or developed States are responsible for a large share of *historical* emissions (25% for the USA, 22% for the EU+UK, 2% for Canada, 1%

116 See the proposed definition of polycentricity in the Glossary of this thesis: “A polycentric issue or situation may also be defined as follows: one specific “central” problem requires its addressment by a multitude of actors (public and private) and levels of governance (international organisations, regional organisations such as the EU, nations, municipalities and local authorities, private companies, multinational companies, individuals etc (see, Ostrom E, “A Polycentric Approach for Coping with Climate Change”, Background Paper to the 2010 *World Development Report*, Policy Research Working Paper 5095, 2009).

117 The IPCC highlights in a larger and bold font that “[e]ffective implementation depends on policies and cooperation at all scales”, see IPCC, AR5 (2014), SYR, SPM, p 26.

118 Leakage in the climate context may be defined as the displacement of GHG emissions to another place due to the implementation of climate mitigation measures by a particular State or company.

119 Directive 2003/87/EC of the European Parliament and of the Council of 13 October 2003 establishing a scheme for greenhouse gas emission allowance trading within the Community and amending Council Directive 96/61/EC.

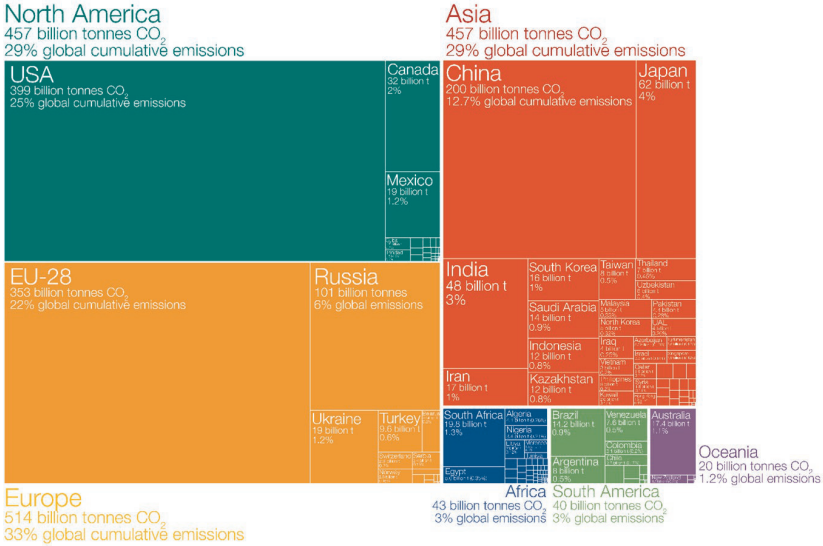
120 Directive 2009/29/EC of the European Parliament and of the Council of 23 April 2009 amending Directive 2003/87/EC so as to improve and extend the greenhouse gas emission allowance trading scheme of the Community.

for Australia – hence more than 50% for those countries; adding Russia would arrive at more than 56%)¹²¹.

Who has contributed most to global CO₂ emissions?



Cumulative carbon dioxide (CO₂) emissions over the period from 1751 to 2017. Figures are based on production-based emissions which measure CO₂ produced domestically from fossil fuel combustion and cement, and do not correct for emissions embedded in trade (i.e. consumption-based). Emissions from international travel are not included.



Figures for the 28 countries in the European Union have been grouped as the "EU-28" since international targets and negotiations are typically set as a collaborative target between EU countries. Values may not sum to 100% due to rounding.
 Data source: Calculated by Our World in Data based on data from the Global Carbon Project (GCP) and Carbon Dioxide Analysis Center (CDIAC).
 This is a visualization from OurWorldInData.org, where you find data and research on how the world is changing. Licensed under CC-BY by the author Hannah Ritchie.

Source: Ritchie H, “Who Has Contributed Most to Global CO₂ Emissions?,” published online at Our World in Data (2019), <https://ourworldindata.org/contributed-most-global-co2>, last accessed 28 October 2025.

These facts led to the recognition of the principle of “common but differentiated responsibilities and respective capabilities” (CBDRRC) in the first climate convention adopted, the 1992 UN Framework Convention on

121 Ritchie H, “Who Has Contributed Most to Global CO₂ Emissions?,” published online at Our World in Data (2019), <https://ourworldindata.org/contributed-most-global-co2>, last accessed 28 October 2025;
 Evans S, “Analysis: Which Countries Are Historically Responsible for Climate Change?,” *Carbon Brief*, 5 October 2021, <https://www.carbonbrief.org/analysis-which-countries-are-historically-responsible-for-climate-change/>, last accessed 28 October 2025.

Climate Change (UNFCCC)¹²². This concept encompasses (i) the historical contribution to climate change¹²³, (ii) the economic capability and (iii) the technical capability dimension, in light of their early industrialisation and experience with environmental protection, having notably led to scientific and technical progress such as energy efficiency. Thus, according to the UNFCCC, developed countries *should* “take the lead in combating climate change and the adverse effects thereof”¹²⁴. Notably, this recognition was scientifically supported by the first IPCC report’s findings on that issue in 1990, which recognised those needs.¹²⁵ The second climate convention of 1997, the Kyoto Protocol, also intended to operationalise the principle by only assigning GHG reduction obligations to developed countries.

Yet, despite all of this legal and scientific progress, the GHG reductions achieved globally and in the global North remain largely insufficient. Numerous studies using different metrics show that developed countries fail to meet their “fair share”. The ECtHR’s Grand Chamber recently recognised in its recent *Klimaseniorinnen* ruling “the States’ generally inadequate track record in taking action to address the risks of climate change [...] in the past several decades”¹²⁶.

Last, but not least, there is no longer any consensus on the burden sharing. The Paris Agreement only sets out a global objective, but leaves the leeway to States to self-determine their ambition. However, as the IPCC stated, “it is only in relation to such a ‘fair share’ that the adequacy of a state’s contribution can be assessed in the context of a global collective action problem”¹²⁷.

Since due diligence requires adequately preventing harm *as soon as* the risks are known, CDD should be historically applicable. Furthermore, since climate inaction is a problem of the last “past several decades” as the ECtHR pointed out, non-compliance with CDD over time is likely. Nonetheless, the consideration of economic capacities may also be a feature determining the onerousness of CDD (see section 0.2).

122 See, contradicting argument: Zahar A, “Two Arguments Against Historical Responsibility for Climate Change”, 2021, <https://ssrn.com/abstract=3679381>.

123 The UNFCCC recognises in its preamble that “the largest share of historical and current emissions of greenhouse gases has originated in developed countries”, see UNFCCC, Preamble § 3.

124 UNFCCC, Article 3 (1).

125 IPCC, ARI (1990), Overview (SYR), § 3.1.

126 ECtHR, *Klimaseniorinnen v Switzerland*, no. 53600/20, 9 April 2024, § 542.

127 IPCC, AR6 (2021-23) WG III, Chapter 14.

Hence, in light of what precedes, this thesis examines the question of whether there are indeed historical periods of negligence and non-compliance with due diligence, as those findings could trigger so-called “secondary obligations” requiring the rectification of previous shortfalls through the provision of compensation for losses and damages, or through the increase in mitigation ambition to make up for past shortcomings and historical wrongful emissions. Note that some fair share studies have sought to operationalise these general principles by interpreting ethical and scientific fair share results from a legal perspective¹²⁸.

0.3.2.6 Private actors' responsibilities, especially those of businesses

Some private actors, especially the fossil fuel industry (and the automotive sector ¹²⁹), resisted climate transformation, as described by the IPCC and numerous studies accepted by scientific journals. According to the IPCC, fossil fuel companies unduly highlighted scientific uncertainties, pressured decision-makers, and deflected responsibility for the climate crisis onto individuals, despite their early and accurate knowledge of the climate dangers¹³⁰. While this finding may give us the perception that the fossil fuel *industry* is the only and ultimate root cause of the problem, even more since fossil fuels were scientifically identified at the beginning of climate science as the main cause of greenhouse gases¹³¹, and prominent studies pointing at their responsibility¹³², one should not forget that the interests in *using* fossil fuels go way beyond the industry itself, as it is closely linked with national economic interests and all other economic branches (industry, transportation, construction, agriculture, finance etc). In fact, without energy sources, no other economic and industrial activity can work, no infrastructure can be built, etc. Put simply, without energy, “nothing” in the economy and human society happens. Humans are currently still dependent on fossil

128 See Rajamani L, Jeffery L, Höhne N, Hans F, Glass A, Ganti G and Geiges A, “National ‘Fair Shares’ in Reducing Greenhouse Gas Emissions within the Principled Framework of International Environmental Law” (2021) 21(8) *Climate Policy* p 11.

129 Joselow M, Exclusive: GM, Ford knew about climate change 50 years ago, 2020.

130 IPCC; AR 6, WG III, Chapter 5, p 84.

131 See Part I, demonstrating the evolution of climatology and the main political responses.

132 See the Carbon Majors term developed by Heede, in combination with the CDP: Heede R, *The Carbon Majors Dataset*, CDP, 2017.

fuels¹³³. In any case, these facts and previous findings also call for looking at the responsibility of business enterprises, beyond State actors, as they *can* play a key role in the mitigation of global warming¹³⁴.

Can due diligence provide the legal principles to justify the regulation of private persons in the climate realm? Moreover, can it apply directly to companies, and ground “secondary obligations” in cases of past and ongoing breaches?

0.3.3 The research questions: CDD as a remedy to the above non-compliance factors?

The mainstream recognition of the inability of the 2015 Paris Agreement, as a unique instrument, to address this planetary crisis justifies the study of alternative and complementary ways to solve this highly polycentric governance problem. As opposed to its predecessor, the 1997 Kyoto Protocol, which imposed direct binding reduction obligations on developed States, the so-called “*bottom-up*” architecture of the Paris Agreement leaves a wide latitude to the State parties as to the definition of their ambition and implementation (i.e., in terms of domestic GHG reduction targets, but also adaptation, climate finance etc.), which may be legitimately understood to be a factor of weakness. In any case, the Paris Agreement is not legally self-sufficient but requires active complementary implementing acts, by all States and all other relevant multilateral organisations, but also private actors (especially systemic private actors).

In line with this prevailing finding, this thesis proposes studying more deeply due diligence as a legal tool to assist the implementation of the Paris Agreement and, more generally, climate action since it presumably applies to all relevant actors worldwide, whether public or private. The existence of due diligence in different legal systems and its applicability to all types of public and private actors may also contribute to tackling the polycentric dimension of climate change, as it could enable the imposition of binding due diligence duties on each actor.

The IPCC took note in its recent full AR6 report of the possibility of combining the PA interpretation with international customary due dili-

133 This is shown by the facts since there is still an ongoing heavy reliance on fossil fuels: IEA, WEO 2022, p 18: “The share of coal, oil and natural gas in global energy supply – stuck for decades around 80%”.

134 IPCC, AR 6, WG III, Chapter 5, p 84.

gence, but did not elaborate further on it¹³⁵. The current outcomes of climate litigation also contribute to highlighting the potentialities of due diligence, but do not respond to all questions. Indeed, the current state of the (case-) law does not fully answer the following issues:

1. Is there a clear *transnational* recognition of the existence of CDD, establishing that due diligence applies to global warming?
2. If the first question is responded in the affirmative, it is not entirely clear what the main implications of CDD are.
3. Finally, no court has issued a judgement by assessing compliance with CDD over time, even though it may highlight perpetuated non-compliance, thereby grounding secondary obligations to compensate those past and/or ongoing breaches through increased GHG reductions, potentially legitimising the historical responsibility criterion of the fair share methodology and its associated global burden-sharing formula, besides other classic secondary obligations (i.e., compensate for losses and damages, declaration of responsibility etc).

This PhD thesis contributes to responding to these questions in international and comparative law.

0.4 The potentialities and critiques of CDD

0.4.1 Overview of general and specific CDD cases

This section provides a succinct overview of the main cases this thesis analyses, and classifies them either as “*general* CDD cases” or “*specific* CDD cases”.

In *Urgenda*, the courts relied on the duty of care or due diligence enshrined in tort and human rights law to issue the court injunctions. Given the general character of tort and human rights law, this doctoral dissertation classifies those cases as “*general* CDD”. The legal basis for grounding the interventions of the German Federal Constitutional Court (*Bundesverfassungsgericht*) is the German Basic Law (*Grundgesetz*), which lays out some fundamental rights, also drafted in a general manner. Additionally, since the Court explicitly mentioned that the constitutional provisions at hand also require “duties of care” to protect future generations,

135 IPCC, AR6 (2021-23), WG III, Chapter 14, p 1464.

the environment, and human rights¹³⁶, this PhD considers that this case also relied on *general* CDD. The ECtHR also usually applies the standard of due diligence when overseeing compliance with the positive obligations to protect human rights¹³⁷. In *KlimaSeniorinnen*, the Court even explicitly mentioned this concept¹³⁸. Given the high-level and rather vague nature of human rights provisions in the ECHR, this dissertation also categorises this case as a “*general* CDD” one.

Instead, the Irish¹³⁹, French¹⁴⁰, Belgian¹⁴¹, and British¹⁴² Courts compelled their own respective States and/or governments to achieve their GHG reduction objectives enshrined in *specific* legislation or regulation. In light of those circumstances, this thesis classifies these cases as “*specific* CDD” cases. However, since these specific legislations aim to implement *general* CDD, enshrined in the Paris Agreement, customary international law, constitutional law, and human rights law, this category should be rather called “*specific* legislation aimed at implementing *general* CDD”¹⁴³. Moreover, their ambition could theoretically be judicially reviewed, potentially based on principles similar to due diligence¹⁴⁴.

136 Constitutional Court of Germany, *Climate Protection Law*, 1 BvR 2656/18, 24 March 2021, Headline 1.b and § 230. A lower court decision by the Administrative Berlin Court (first instance) issued in 2020 also came close to the reasoning in *Urgenda* (see Berliner Court (*Verwaltungsgericht*), 31 October 2019 (VG 10 K 412.18)).

137 See, for instance, ECtHR, *Fadeyeva v Russia*, no. 55723/00, 30 November 2005, § 128 – 129.

138 ECtHR, *KlimaSeniorinnen v Switzerland*, no. 53600/20, 9 April 2024, see especially § 550.

139 Supreme Court of Ireland, *Friends of the Irish Environment v The Government of Ireland*, 31 July 2020.

140 Supreme Administrative Court of France, *Grande-Synthe*, n° 427301, 19 November 2020 ; Administrative Court of Paris, *Notre affaire à tous et al v France* (« affaire du siècle »), 3 February 2021, N°1904967, 1904968, 1904972, 1904976/4-1.

141 Court of Appeals of Brussels, *Klimatzaak*, 2021/AR/1589, 2022/AR/737 et 2022/AR/891, 30 November 2023.

142 High Court of London, *Friends of the Earth, Client Earth, Good Law Project v Secretary of State for Business, Energy, and Industrial Strategy*, [2022] EWHC 1841 (Admin), 18 July 2022.

143 For example, Section 8 of the UK Climate Change Act explicitly refers to the need to be compatible with international obligations of the UK, hence, indirectly the Paris Agreement.

144 In the USA, decisions taken by the EPA based on the main climate legislation, the Clean Air Act, may be judicially reviewed “if it finds it to be] arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law,” (see §7607(d)(9)). Similar principles apply in other jurisdictions.

Similar to the precedent set in the *Shell* case, a series of similar court cases in France invoke the French Duty of Vigilance Act against, among others, TotalEnergies (formerly Total)¹⁴⁵. The Paris Court of Appeal declared this case admissible in 2024¹⁴⁶. Since France implemented the human rights due diligence concept in a *specific* legislation, these cases are at the crossroads between *general* and *specific* CDD. Other cases against other corporate actors, such as those in Germany against some carmakers¹⁴⁷, rely instead on *general* tort law, making those cases *general* CDD ones.

Lastly, the UN General Assembly (UNGA) and a coalition of small island states requested the ICJ¹⁴⁸ and the ITLOS¹⁴⁹ to issue advisory opinions on climate change. The ICJ and ITLOS subsequently assessed the applicability of the general due diligence standard to global warming¹⁵⁰. Hence, these cases can also be considered as *general* CDD cases.

In light of what precedes, it is possible to differentiate between cases based on *general* CDD and others on *specific* CDD:

- Cases relying on *general* CDD aim to ensure the adequacy of the climate-related measures, including potentially by attempting to *increase* the ambition of a given actor, if *specific* climate policies are insufficient and, therefore, in breach of higher norms, such as human rights, constitutional provisions, or international law, which entail due diligence.
- Legal cases based on *specific* CDD aim to enforce particular requirements in statutes and regulations. Since the purpose of these *specific* laws

145 See the pending case of *Notre Affaire à Tous and Others v Total*: Case summary and documents: https://www.climatecasechart.com/document/notre-affaire-a-tous-and-others-v-total_85ea, last accessed 28 October 2025.

146 Court of Appeal of Paris, *Notre affaire à tous et al v TotalEnergies*, n° RG 23/14348, 18 June 2024, p 19-22.

147 See the cases filed by Deutsche Umwelthilfe against car manufacturers Mercedes Benz and BMW and oil and gas company Wintershall, and in November 2021 by Greenpeace and others against Volkswagen.

148 UN General Assembly, "Obligations of States in respect of Climate Change, Request for Advisory Opinion transmitted to the Court pursuant to General Assembly resolution 77/276", 29 March 2023.

149 The ITLOS climate advisory opinion was requested by the Commission of Small Island States on Climate Change and International Law (COSIS Agreement) in 2023, representing only 8 States in 2023 (see <https://treaties.un.org/Pages/showDetails.aspx?objid=08000002805c2ace>).

150 ITLOS, *Advisory Opinion on Climate Change and International Law*, 21 May 2024; ICJ, *Obligations of States in respect of Climate Change*, Advisory Opinion, 23 July 2025.

is to ultimately implement *general* due diligence in a certain manner¹⁵¹, their study falls within the scope of this PhD. Furthermore, these laws may need to be judicially reviewed due to their potential insufficiency, including through *general* CDD.

Other scholars (especially Setzer and Higham, as well as Burger and Tigres) elaborated comparative reports on climate litigations and have for this purpose devised slightly different categories, which remain consistent with the ones of this PhD thesis.

Setzer and Higham highlight differences between cases based on “pre-existing legal duties” and those on “climate change legislation”¹⁵². This classification is very similar to the typology of this PhD: “pre-existing legal duties” overlap with *general* due diligence because of the pre-existing and overarching nature of due diligence, whereas “climate change legislation” refers to specific legislation. However, this thesis focuses on due diligence to trace and discuss its presence and relevance in the climate case law, even if the notion is not explicitly mentioned. Moreover, this dissertation hypothesises that *specific* legislation ultimately aims to implement *general* CDD. In turn, *specific* laws may be revised in case of non-compliance with *general* CDD by arguing the violation of the latter. This proposal on the consistency of global law does not seem to be present in previous literature.

Additionally, Burger and Tigres differentiate between cases seeking “orders to legislators, policymakers and business enterprises to be more ambitious” and others seeking “the enforcement of existing laws”¹⁵³. These categories describe the respective requests and objectives of cases relying on *general* CDD and *specific* CDD: while *general* CDD cases seek in principle “orders to legislators, policymakers and business enterprises to be more ambitious”, cases relying on *specific* legislation seek “the enforcement of existing laws”. Hence, this categorisation is also compatible with this PhD dissertation, whose typology seeks to categorise the law on a higher conceptual level to ultimately show the more profound interrelations between *general* law and *specific* legislation. However, cases seeking the enforcement

151 For example, Section 8 of the UK Climate Change Act explicitly refers to the need to be compatible with international obligations of the UK, hence, indirectly, the Paris Agreement.

152 Setzer J and Higham C, *Global Trends in Climate Change Litigation: 2023 Snapshot* (Grantham Research Institute and Centre for Climate Change Economics and Policy, LSE 2023) p 13.

153 Burger M and Tigre MA, *Global Climate Litigation Report: 2023 Status Review* (UNEP 2023) XI.

of specific CDD are not necessarily limited in terms of ambition: a system of remedies may enable judicial review of inadequate *specific* CDD, besides its inadequate implementation.

Last but not least, this PhD typology also aims to analyse the sufficiency of the *specific* legislation and regulations addressing *general* due diligence over time, which could ultimately uncover breaches of CDD, and legitimise the imposition of secondary obligations to make up for potential past and/or ongoing shortfalls (see Part 3).

0.4.2 The main critiques of CDD in the legal literature

Despite many outcomes favourable to climate action, showing an increasing recognition of CDD, some authors, such as Mayer, criticise the application of due diligence in the climate field¹⁵⁴. Mayer, Van Asselt, and Bodansky even stated that domestic and international climate litigation – notably based on the interpretation of vague concepts such as due diligence – *could* rather do harm instead of good¹⁵⁵.

The first critique is of a procedural nature: for Mayer, due diligence in combination with the doctrine of systemic integration is used by “judges to bypass rules on jurisdiction and admissibility”¹⁵⁶ to enforce the climate conventions although, as such, it “provides no justification for overlooking the absence of state consent to jurisdiction with regard to the application of the referential rule.”¹⁵⁷ He also disagrees with the current trend of systematically integrating the Paris Agreement into other legal instruments, especially human rights instruments, a process he redefined as the “incorporation

154 See, among others, Mayer B, “International Advisory Proceedings on Climate Change” (2023) 44 *Michigan Journal of International Law* 113–114 ; see as well: Mayer B and van Asselt H, “The Rise of International Climate Litigation” (2023) *RECIEL*; Mayer B, “The State of the Netherlands v Urgenda Foundation: Ruling of the Court of Appeal of The Hague (9 October 2018)” (2019) 8(1) *Transnational Environmental Law* p 180.

155 Mayer B and van Asselt H, “The Rise of International Climate Litigation” (2023) *RECIEL* p 3; Bodansky D, “The Role of the International Court of Justice in Addressing Climate Change: Some Preliminary Reflections” (2017) *Arizona State Law Journal* p 689–712.

156 Mayer B, “Climate Change Mitigation as an Obligation under Human Rights Treaties?” (2021) 115(3) *American Journal of International Law* DOI: 10.1017/ajil.2021.9.

157 *Ibid.*

theory”, which “has been tacitly accepted rather than carefully demonstrated” and overall “inconsistent with the tenets of treaty interpretation”¹⁵⁸.

The second major line of the critique concerns the substance, more precisely the lack of real “enforceability” of due diligence, due to its vagueness, and lack of operational guidance in the climate area¹⁵⁹. Other authors consider that framing due diligence mainly as a “doing more” requirement is superfluous and redundant with the climate conventions¹⁶⁰. In fact, due diligence as such is even more vague than the Paris Agreement’s obligation. More generally, some prominent scholars who directed collective research on international due diligence stated that the wide margin of discretion granted by due diligence to its duty-bearers does not guarantee any result, which may ultimately “undermin[e] the governance capacity of the law”¹⁶¹.

Thirdly, reliance on due diligence may also have triggered specific reduction obligations, such as in *Urgenda*. Some authors have criticised this outcome, as they consider it to be “creative” or rather “arbitrary”, i.e., going beyond mere interpretation, and in violation of the Court’s fundamental role¹⁶². Furthermore, Mayer highlights the counterproductive effects on climate action of “creative” rulings such as *Urgenda* and *Shell* on climate action, arguing that the absence of a proper legal basis hinders compliance. One may remain conscious of the basic consideration that a violation of the separation of powers or an impression that judges overstep their role may create counterproductive effects, such as political opposition to the ruling, or “carbon leakage”¹⁶³. The IPCC seems to confirm this position as it generally considers that “[m]itigation options that align with prevalent

158 *Ibid*, p 436.

159 Mayer B and van Asselt H, “The Rise of International Climate Litigation” (2023) *RECIEL*; Mayer B, “The Applicability of the Principle of Prevention to Climate Change: A Response to Zahar” (2015) 5 *Climate Law*.

160 Mayer B, “International Advisory Proceedings on Climate Change” (2023) 44 *Michigan Journal of International Law* p 113–114. ; see as well: Mayer B and van Asselt H, “The Rise of International Climate Litigation” (2023) *RECIEL* p 8.

161 Krieger H and Peters A, “Due Diligence and Structural Change in the International Legal Order” in Krieger H, Peters A and Kreuzer L (eds), *Due Diligence in the International Legal Order* (Oxford University Press 2020) p 348–385, 390.

162 Mayer B and van Asselt H, “The Rise of International Climate Litigation” (2023) *RECIEL*; Mayer B, “The State of the Netherlands v Urgenda Foundation: Ruling of the Court of Appeal of The Hague (9 October 2018)” (2019) 8(1) *Transnational Environmental Law* p 180.

163 Mayer B, “The Contribution of Urgenda to the Mitigation of Climate Change” (2023) 35(2) *Journal of Environmental Law* p 18.

ideas, values and beliefs are more easily adopted and implemented.”¹⁶⁴ Although this position was issued with a high level of generality, it may well apply to the issue of climate litigation and case law (i.e., note that the IPCC expressed this opinion in 2022, just after addressing the still uncertain effects of climate litigation). Therefore, this PhD attaches significant importance to analysing the compatibility of CDD with core principles of the separation of powers and the rule of law (its “justiciability”, as analysed in subpart 2.3).

0.4.3 The potentialities identified by other scholars

In contrast to those critiques, numerous prominent authors of the legal literature consider that due diligence (or similar norms) applies to climate change and that courts of law can redress shortcomings based on this kind of general concept¹⁶⁵. The IPCC also took note of the possibility of interpreting due diligence and climate conventions together, by quoting notably Maljean-Dubois, Voigt, Rajamani and Mayer.¹⁶⁶ The IPCC even addressed the outcomes achieved so far in the realm of climate litigation and stated in its summary for policymakers that climate litigation *could* reinforce climate action but did not specify whether it is favourable or nor to climate action¹⁶⁷.

164 IPCC, AR6 (2021-23), WG III, SPM, § E3.3.

165 See for instance, Maljean-Dubois S, “The No-Harm Principle as the Foundation of International Climate Law” in *Debating Climate Law* (2021) p 4.

166 IPCC, AR6 (2021-23), WG III, Chapter 14, p 1464 and 1466.

167 IPCC, AR6 (2021-23), WG III, SPM, § E3.3.

Firstly, due diligence could provide a legal basis to turn voluntary commitments into hard and enforceable obligations¹⁶⁸, as the Irish¹⁶⁹, French¹⁷⁰, Belgian¹⁷¹, and British¹⁷² Courts did.

A second bolder proposal in line with *Urgenda* would consist of using due diligence to enforce individual fair shares, and thereby, potentially contributing to solving the burden-sharing issue. Rajamani and climate scientists from the CAT followed this line of thought and proposed to generally interpret due diligence and other general norms in combination with equity and fair share studies¹⁷³: since those studies found that developed States should be carbon neutral by 2030, (i.e., which seems considerably more ambitious than current plans), Rajamani et al inferred they must achieve net zero emissions by 2030 either domestically, or by funding emission reductions overseas if they cannot reach those objectives domestically, on the basis of the principle of cooperation¹⁷⁴. This interpretation is very ambitious since it aims to transform general principles such as due diligence into very precise and radical requirements, which are not agreed with by developed states in particular¹⁷⁵.

A third middle ground proposal exists, shared by several notable lawyers. Considering the *Urgenda* case, the Rajamani and CAT paper, and the critiques of Mayer¹⁷⁶, Voigt expressed doubts on “whether courts would be able, or are the right forum” to resolve the fair share and burden sharing

168 Maljean-Dubois S, “The No-Harm Principle as the Foundation of International Climate Law” in *Debating Climate Law* (2021) p 3–4.

169 Supreme Court of Ireland, *Friends of the Irish Environment v The Government of Ireland*, 31 July 2020.

170 Supreme Administrative Court of France, *Grande-Synthe*, n° 427301, 19 November 2020; Administrative Court of Paris, *Notre affaire à tous et al v France* (« affaire du siècle »), 3 February 2021, N°1904967, 1904968, 1904972, 1904976/4-1.

171 Court of Appeals of Brussels, *Klimatzaak*, 2021/AR/1589, 2022/AR/737 et 2022/AR/891, 30 November 2023.

172 High Court of London, *Friends of the Earth, Client Earth, Good Law Project v Secretary of State for Business, Energy, and Industrial Strategy*, [2022] EWHC 1841 (Admin), 18 July 2022.

173 Rajamani L, Jeffery L, Höhne N, Hans F, Glass A, Ganti G and Geiges A, “National ‘Fair Shares’ in Reducing Greenhouse Gas Emissions within the Principled Framework of International Environmental Law” (2021) 21(8) *Climate Policy* p 11.

174 *Ibid*, p 18.

175 See all the government responses in the *Duarte Agostinho* case here, which followed such an approach: <https://youth4climatejustice.org/case-documents/>, last accessed 27 October 2025.

176 Voigt C, “The Power of the Paris Agreement in International Climate Litigation”, *RECIEL*, 2023 p 244 -248.

debate in a manner akin to *Urgenda* or to the proposals of Rajamani and CAT¹⁷⁷. She added that determining what is precisely a fair share is politically too disputed as well, as States have not been able to resolve this issue for decades, and that solving it would require “a number of fundamental value judgments”. To solve this conundrum, Voigt believed that a court may still “inquire whether States deployed their best efforts [...] in adopting all reasonable and appropriate measures to effectively address climate change.”¹⁷⁸ Said differently, courts could verify whether States are approaching the issue of climate change with due diligence, in other words, assessing whether they comply with the core mitigation obligations of Article 4 Paris Agreement (achieving progress, establishing its highest possible ambition, taking the lead as a developed state etc) without being overly prescriptive. Voigt concluded that a systemic “Paris-aligned interpretation” would enhance the integration of Paris-related principles and the cross-fertilisation with other legal norms such as due diligence, ultimately leading to more climate action without necessarily taking away the fundamental leeway provided by the PA to States¹⁷⁹. Maljean-Dubois agreed with her, arguing that due diligence enables courts to intervene domestically and internationally, complementing themselves and thereby creating a “circular continuum”¹⁸⁰. Even Mayer laid out a corresponding proposal in a critique on the *Urgenda* case, arguing that courts still have a role to play if they leave aside a top-down approach, and instead ensure that all “appropriate mitigation action [...] by way of procedural injunctions”¹⁸¹.

Furthermore, one must be conscious of the possibility of analysing compliance with due diligence *over time*, which should be possible, given its likely pre-existence (in the sense of the historical applicability to climate change). Carrying out this analysis may lead to the establishment of *historical* non-compliance findings, which may be significant, opening up avenues for establishing judicial remedies and so-called “secondary obligations”, including the duty to compensate for the lack of past mitigation, by setting up higher mitigation targets which reflect historical responsibility (i.e., the results of the fair share studies may be relevant for this purpose). Secondary

177 *Ibid*, p 248.

178 *Ibid*.

179 *Ibid*, p 249.

180 Maljean-Dubois, Climate change litigation. Max Planck Encyclopedia of Procedural Law, 2019, § 46.

181 Mayer B, “The State of the Netherlands v Urgenda Foundation: Ruling of the Court of Appeal of The Hague (9 October 2018)” (2019) 8(1) *Transnational Environmental Law*.

obligations may also take the form of more classic remedies, such as monetary compensation to address losses and damages.

Thus, this comparative PhD will deliver further responses on due diligence in the context of climate change, especially:

1. The universal applicability of due diligence to climate change.
2. The extent of the enforceability of due diligence in mitigation cases.
3. The potential historical legal failures to adequately tackle climate change over time.

0.5 Method, scope, and structure

This section of the introduction addresses the methods, scope, materials and structure of the PhD.

0.5.1 The reliance on climate science

This thesis has a specific characteristic, akin to any other study or lawsuit in the field of climate mitigation: its overall significant reliance on climate science. Relying on this field and this body of literature is more than necessary to specify the facts, the problems, and the solutions. In fact, science is used to find the applicability of due diligence to climate change, as it establishes the factual elements, notably specified by science (see Part 1). Moreover, in litigation, plaintiffs are largely dependent on climate science to specify their injury, causation, and the solution they request (see Part 2). To know whether States and companies properly carry out CDD, it is necessary to rely on climate science, a common evidential theme enabling the assessment of whether climate action is sufficient by comparing the ambition of a given climate measure against the measures indicated by the scientific and institutional consensus (see Part 3).

The scientific consensus is mostly highlighted in the IPCC reports, upon which this PhD significantly relies, as does all other serious climate-related legal work. The science of the International Panel on Climate Change (IPCC) is very relevant for legal reasoning, as it presents the most consensual findings and is considered by State Parties of the UNFCCC and the Paris Agreement as “best available science”. The IPCC was founded in 1988 by the United Nations to establish peer-reviewed scientific reports on the science of climate change, including summaries for policymakers reviewed

by state officials¹⁸². Authoritative and institutional scientific reports, showcasing some scientific consensus, may also be found in other reports of international bodies, such as the IEA (International Energy Agency).

0.5.2 The functional approach to find harmonisation or fragmentation

Given that this PhD compares different legal systems of the “Global North”, it needs to follow a comparative “method” or “approach” (i.e., the word approach may be preferable since there is no clear comparative law “methodology” in general¹⁸³). This dissertation takes a somewhat *functional* or *universalist* approach¹⁸⁴ as it compares the existence and implications of “due diligence” in the context of climate action, a subject matter that is, *per se*, a global issue physically and legally.

More precisely, this comparison focuses on due diligence or similar concepts with analogous criteria and *functions*, stemming from norms and

182 The IPCC is an intergovernmental body with 195 member states. Its mission is to make public the elements of consensus in the scientific community and to identify limitations in knowledge or in the interpretation of results. Its studies are the fruit of the collaboration of thousands of experts from some forty countries, and are based on thousands of scientific references and are assessed by public institutions from all over the world, which are given the opportunity to comment on them. According to the IPCC itself, it “has different levels of endorsement, including “approval”, “adoption” and “acceptance”¹. “Approval” is the process used for IPCC Summaries for Policymakers (SPMs). Approval signifies that the material has been subject to detailed, line-by-line discussion, leading to agreement among the participating IPCC member countries, in consultation with the scientists responsible for drafting the report. This process strengthens the SPM by ensuring that SPM statements are as direct, clear and unambiguous as possible in summarizing the material contained in the corresponding Working Group Assessment Report or Special Report. Participation of assessment authors ensures that any changes to the SPM are consistent with the underlying report and are scientifically robust.” IPCC, “About the IPCC” (2024), <https://www.ipcc.ch/about/>, accessed 19 May 2024.

183 Michaels R, “The Functional Method of Comparative Law” in M Reinmann and R Zimmermann (eds), *Oxford Handbook of Comparative Law* (Oxford University Press 2006) p 342: “First, there is not one (‘the’) functional method, but many. Second, not all allegedly functional methods are ‘functional’ at all. Third, some projects claiming adherence to it do not even follow any recognizable ‘method’. Does functionalist comparative law actually have any meaning?”

184 Zweigert K and Kötz H, *Einführung in die Rechtsvergleichung*, 3rd ed, Mohr, 1996; see English translation by Tony Weir, *An Introduction to Comparative Law*, 3rd ed, Oxford University Press, 1998; see as well, Michaels R, “The Functional Method of Comparative Law” in M Reinmann and R Zimmermann (eds), *Oxford Handbook of Comparative Law* (Oxford University Press 2006) p 340-380.

principles meant to be universal, such as the no-harm principle, human rights, tort law, or customary law of the nations (see above, due diligence in international law and business and human rights law, and Part 1 on Applicability for more detailed assessments). Although these concepts often carry different names in different legal systems, their *function* remains the same as they impose a reasonable obligation or standard of conduct to prevent or mitigate harm to others. Hence, “due diligence” can be found by identifying the common functions and criteria.

Additionally, given that all countries have a general interest in the protection of the climate, and given the similar problems they face in mitigating this phenomenon (balancing contradictory interests with economic development, conflicting fundamental and human rights etc), a *praesumptio similitudinis* can be assumed, which is the basic requirement to use the functionalist method. Climate action is, in fact, addressed in various domestic and international norms and litigations. The database of the Sabin Center¹⁸⁵ and the comparative climate litigation reports (Setzer et al, Burgers et al) facilitate the wide-scale comparison project of this PhD since they provide all the necessary information on climate litigation (case documents, judgements), including in a synthetic and analytic manner.

Thus, given the legal and factual similarities developed countries face with respect to climate change, and the similar nature of ongoing climate cases, this comparative law undertaking seems feasible.

Nonetheless, given the wide scope of the thesis, it is still necessary to take a close look at the differences in the related legal systems assessed, namely the legal cultures, institutions, domestic concepts, and translations into other languages, by following the so-called “differential”¹⁸⁶ or relativity method. Being conscious of those differences requires knowing the underlying languages and context. The author of this thesis speaks French, German and English, and has studied French law, German law, and common law. Furthermore, he has researched the specific legal areas across these legal systems, besides working with academics and NGOs in this field. For instance, he volunteered for Our Children’s Trust, which managed the *Juliana v USA* case between 2017 - 2018, and he worked for the French NGO Notre Affaire à Tous in France for all the climate cases in which

185 See the “climate case chart” of the Sabin Center for Climate Change Law (Columbia Law School) <https://www.climatecasechart.com/>, last accessed 28 October 2025.

186 Legrand P, “La comparaison du droit expliquée à mes étudiants” in P Legrand (ed), *Comparer les droits résolument* (PUF, 2009) p 225.

the NGO is involved¹⁸⁷, as well as the Global Legal Action Network for the *Duarte Agostinho v Portugal and 31 States*. He also participated in numerous conferences and symposiums on climate litigation and relied on NGO communications, press articles and domestic legal doctrine to properly understand what is at stake in these lawsuits.

While comparison enables highlighting differences or similarities, numerous scholars considered that the functional approach aims to emphasise similarities rather than differences in order to aspire to the unification of transnational law¹⁸⁸. However, the purpose of the functional method is not biased. It still aims to compare by determining both similarities and differences¹⁸⁹. In any case, this particular PhD aims to compare legal systems and due diligence within those to find both similarities and differences to *understand* whether the law may result in more harmonisation or fragmentation¹⁹⁰. A transnational situation of fragmentation, in which legal requirements and interpretations of CDD differ significantly, may hinder climate protection and the implementation of the Paris Agreement. Previous scholarship addressed this risk in the climate field, but merely on the international level¹⁹¹. This PhD study goes beyond that by looking at the interactions between the domestic and regional legal systems.

More precisely, concerning the fragmentation risks in the realm of this thesis, there is some uncertainty about (i) whether or not due diligence is applicable to climate change, (ii) the extent to which courts can judicially intervene and (iii) its potential historical applicability and corresponding consequences on liability. The outcomes of the climate cases appear, so far,

187 See notably *Notre affaire à tous et al v France*, *Grande-Synthe v France*, the *Total* climate cases, the *BNPP* climate cases, the *FIFA* case, etc.

188 Ralf Michaels, “The Functional Method of Comparative Law”, in: Mathias Reinmann et Reinhard Zimmermann (dir), *Oxford Handbook of Comparative Law*, Oxford, OUP, 2006, p 380-381.

189 *Ibid.*

190 This risk, studied by the ILC in international law points to the situation in which different laws enter into direct conflict, potentially hindering any climate protection in this field (for instance commercial laws vs climate laws). See: ILC, *Fragmentation of international law: difficulties arising from the diversification and expansion of international law, 2000 – 2006* (see especially, the Report of the Study Group of the International Law Commission, Finalized by Martti Koskenniemi, A/CN.4/L.682, 13 April 2006).

191 See, as well, the following book on the fragmentation of climate governance and the different regimes on the international level (only): Van Asselt Harro, *The Fragmentation of Global Climate Governance: Consequences and Management of Regime Interactions*, Edward Elgar Publishing, 2014.

quite different: while the Dutch courts found the applicability of *general* due diligence to climate matters and inferred from it specific reduction obligations (25% by 2020 and 45% by 2030), akin to the top-down manner of the Kyoto Protocol; other domestic courts rejected climate cases (e.g., *Juliana v USA*), or left the applicability of *general* due diligence to climate change explicitly aside.

If these differences and uncertainties continue or develop, which may be characterised as fragmentation, there is a high risk of rendering the achievement of the Paris Agreement impossible since its global long-term temperature target (1.5°C to well below 2°C) requires that everyone does their part in a manner which is sufficient and commonly accepted. Indeed, as set out above, significant causes of inertia in the climate area are the “free riding” and “carbon leakage” issues, being the fear that some do not do their share, or the fact that one’s positive climate actions will simply be offset by another actor, leading to the maintenance of the *statut quo* and the continuation of business as usual.

Litigation on the domestic, regional, and international levels by relying on due diligence norms, combined with the interpretation of international law, especially the Paris Agreement’s objectives, may have the potential to break this international inertia, by compelling States – especially developed States – and companies to reinforce their measures to properly do their part¹⁹². Hence, the enforcement of general CDD in the respective legal systems may lead to polycentricity as being the solution rather than an ongoing problem. According to Ostrom, “[p]olycentric order is likely to emerge in a *bottom-up* way when diverse actors in a phenomenon like climate change seek to realize diverse benefits (or to avoid diverse costs) that accrue on different scales.”¹⁹³ The polycentric order is exactly what climate litigators (in favour of climate action) aim to achieve by creating a

192 Beyond the IPCC concurring finding on the potential of climate litigation to influence the outcome and ambition of climate governance (AR 6, WG III, SPM, § E.3.3), see the other concurring opinions: Voigt C, “The Power of the Paris Agreement in International Climate Litigation”, *RECIEL*, 2023; See as well the concurring decision of the German Constitutional Court: Constitutional Court of Germany, *Climate Protection Law*, 1 BvR 2656/18, 24 March 2021.

193 Ostrom E, “A Polycentric Approach for Coping with Climate Change”, Background Paper to the 2010 *World Development Report*, Policy Research Working Paper 5095, 2009.

“circular continuum”¹⁹⁴. This dissertation aims to assess whether CDD can contribute to this polycentric solution, notably through climate litigation.

0.5.3 Considering “framework cases” against systemic public and private global North actors

Although this thesis has a very broad and somewhat eclectic approach with respect to the consideration of domestic legal systems, it eventually examines the climate responsibility of public and private persons located in industrialised States, labelled as “developed States” or “Annex I” countries in the climate conventions (UNFCCC, Kyoto Protocol, Paris Agreement). This international environmental law category makes the legal, factual, and geographical scope of the comparative assessment sufficiently consistent and justified since developed States have higher climate obligations than their counterparts from the so-called “global South” since they emitted more GHG historically and have more capacities to mitigate global warming. In addition, those countries have legal and political systems which are, *in principle*, democratic and based on the rule of law. This level of similarity is also necessary to properly apply the functional approach according to its conceptions¹⁹⁵.

This PhD also *mainly* focuses on high-profile “systemic mitigation cases” or “framework cases”, which rely on general norms such as due diligence and aim to increase the overall ambition in terms of planned GHG reduction targets, akin to the *Urgenda* and *Shell* cases. Nonetheless, this dissertation will not exclude other cases relying on *specific* CDD, as they may entail due diligence features and other interesting elements concerning the existence and breadth of CDD. And since climate-related harms have already occurred, this PhD does not exclude from its ambit cases seeking compensation or climate adaptation, categorised as “Polluter pays’ (com-

194 Maljean-Dubois S, “Climate Change Litigation” (2019) *Max Planck Encyclopedia of Procedural Law* § 46.

195 Zweigert K and Kötz H, *Einführung in die Rechtsvergleichung*, 3rd ed, Mohr, 1996; see English translation by Tony Weir, *An Introduction to Comparative Law*, 3rd ed, Oxford University Press, 1998.

pensation) cases”¹⁹⁶ or “compensation for climate harms” by Burger and Tigre (Sabin)¹⁹⁷.

0.5.4 The PhD structure

The objectives of this dissertation are to assess, in the legal systems of developed countries (Global North) – including international law – the existence and the substantive content of CDD, meaning that the thesis is structured as follows:

Part 1 discusses the pervasive applicability of due diligence to climate change in customary international general law, human rights law, and domestic general law in France, Germany and Common-law jurisdictions. To do so, this section examines whether legal cases already confirmed or hinted in some manner at the existence of CDD, and carries out legal analysis to deconstruct and confirm the reasoning in each jurisdiction.

Part 2 analyses the extent of the enforceability of CDD in comparative case law by relying on the “standing” conditions – as tested in the USA – by analysing how courts respond when asked to find climate-related “injury”, “causation” and “redressability”. Note that the term “redressability” encompasses issues related to the justiciability of the requests, separation of powers, constitutional democratic principles, rights of other States, etc. This assessment ultimately aims to know whether courts accept the enforcement of individual 1.5°C fair shares, as theoretically proposed in the *Urgenda* case.

Part 3 assesses the pre-existence of CDD and compliance with it over time, to know whether i) the international community and ii) key public and private actors in developed States have adequately responded to the risks so far, based on the principle of individual and collective responsibility. For this purpose, it compares the historical evolution of the facts, science and the international legal regime against the measures enacted by the international community and the public and private actors of the “Global North”. Given the requirements of due diligence as laid out in this introduction, this thesis assesses whether significant discrepancies between

196 Setzer J and Higham C, *Global Trends in Climate Change Litigation: 2023 Snapshot* (Grantham Research Institute and Centre for Climate Change Economics and Policy, LSE 2023) p 4.

197 Burger M and Tigre MA, *Global Climate Litigation Report: 2023 Status Review* (UNEP 2023) p XI.

climate-related knowledge and action could be defined as breaches of CDD and ground *secondary* obligations to compensate for the past and ongoing shortfalls.

