CLIMATE CHANGE AND TORTS: NEW ZEALAND AND GERMANY

Philipp Semmelmayer*

Climate litigation is gaining momentum around the world. In addition to the lawsuits presently being brought on the grounds of human rights, fraud or failure to adhere to planning controls, climate litigation in tort law also plays a crucial role. This was illustrated in particular by the two high-profile cases Smith v Fonterra Co-operative Limited *in New Zealand and* Lliuya v RWE AG *in Germany. The former case was brought before the courts of a country practising a Common Law legal system; the latter was tried in a country where a civil law legal system is practised. This article uses the two decisions to make a comparative analysis of the two legal systems in the matter of climate litigation in tort law. It examines the issue of whether climate change can be addressed by tort law in the two legal systems.*

Les contentieux sur le changement climatique se multiplient dans le monde entier. Parallèlement aux recours actuellement engagés sur le fondement de violation des Droits de l'Homme, du détournement ou du non-respect des règles d'urbanisme, les contentieux sur le changement climatique relèvent aussi du droit de la responsabilité civile, fondement juridique qui est en train de devenir le centre des débats. Deux affaires largement médiatisées Smith v Fonterra Co-Operative Limited *en Nouvelle-Zélande et* Lliuya v RWE AG *en Allemagne illustrent si besoin est, le propos. La première affaire a été introduite devant les juridictions d'un pays de la Common Law, la seconde ayant été plaidée dans un pays de tradition civiliste. Cet article propose une analyse comparatiste de ces deux décisions notamment s'agissant des conditions de recevabilité d'une action en responsabilité civile dans le cadre d'un contentieux climatique.*

* LLM (Auckland), research assistant and doctoral candidate at the Friedrich-Alexander University in Nuremberg-Erlangen, Germany.

I INTRODUCTION

This article deals first with the legal situation concerning tort law in the legal system of New Zealand (II) and then with the legal situation concerning tort law in Germany (III). It concludes with a comparative analysis of the two systems (IV).

Climate change is mainly caused by the emission of greenhouse gases (GHGs) and results in large scale shifts in weather patterns. Scientifically, there is a large body of evidence to attribute climate change to human activity. The most substantiated evidence comes from an International Panel on Climate Change (IPCC) report, stating that there is 95 to 100 percent scientific certainty that anthropogenic climate change is the main cause of global warming.[1] A distinction must be made concerning the effects caused by climate change. While some phenomena, such as sea-level rise, cannot be explained without climate change, it is not possible to determine with certainty whether an extreme weather event, such as a storm or flood, is attributable to climate change, since such events also occur under natural conditions. Nevertheless, in some cases, the probability of causation could be determined, partly by using climate models and partly by using a statistical method.

At present, both New Zealand and Germany lack a nationwide legal approach to effectively address climate change.[2] New Zealand's legal framework to tackle climate change is the Climate Change Response Act 2002 (CCRA).[3] The most recent amendment to that Act is the much criticised[4] Climate Change Response (Zero Carbon) Amendment Act 2019 (ZCA). These Acts are insufficient to address climate change decisively, as demonstrated in particular by their lack of enforceability by

1 Thomas F Stocker and others *Climate Change 2013. The Physical Science Basis. Working Group | Contribution to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change* (Cambridge University Press, Cambridge, 2013) at v.

2 The New Zealand Ministry of Environment openly admitted this in Ministry for the Environment "Regulatory impact statement Zero Carbon Bill" at 1.

3 The best-known amendment is the Climate Change Response (Emissions Trading) Amendment Act 2008 that established the New Zealand Emissions Trading Scheme (NZ ETS), which, according to its s 5, is a national all-sectors all-GHGs uncapped and highly internationally linked emissions trading scheme.

4 Greenpeace New Zealand Submission on Zero Carbon Bill <https://www.greenpeace.org/new-zealand/publication/substantive-submission-on-zero-carbon-bill/>; Prue Taylor *The New Zealand Legislation: Pursuing Net Zero* (unpublished) at 1 and 9; Russel Norman "Toothless Zero Carbon Bill has bark but no bite" (SCOOP Politics, 2019).

individuals.[5] In addition, climate change was mainly debated in the context of the Resource Management Act 1991 (RMA), which deals with environmental management and planning. However, in *West Coast ENT Inc v Buller Coal Ltd*[6] a majority decision[7] of the Supreme Court of New Zealand removed all consideration of GHGs from the RMA.[8]

In Germany, climate change is already enshrined in the Grundgesetz (GG – the German Constitution) which establishes the "protection of the natural foundations of life" and thus also the protection of the climate as a state task. In addition to numerous "climate-friendly" measures and adjustments to, for example, tax law[9], the Bundes-Klimaschutzgesetz (Federal Climate Protection Act 2019) is said to play the decisive role in public climate change law. Yet German legislation also appears to be insufficient in decisively addressing climate change. Individuals can invoke neither the GG provision nor the Bundes-Klimaschutzgesetz as both lack enforceability. This is not surprising for the latter, as it is structured in a similar way to the ZCA.[10]

Nevertheless, the inadequacies of the law for those individually affected by climate change could be overcome in New Zealand or in Germany, and this is where tort law comes into play. As part of private law, tort law deals with the civil consequences of tortious acts and operates largely independently of the aforementioned statutes. Decisions such as *West Coast ENT Inc v Buller Coal Ltd* are not an impenetrable wall that will stop future climate litigation.[11]

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5 See the most recent debate about the arguably most controversially discussed s 5ZM of the ZCA, a provision that has led to the designation of the ZCA as "toothless". It states in subs (1) that no remedy or relief is available for failure to meet the 2050 climate target or a climate emissions budget, and that the target and budgets are not enforceable in a court of law.

6 *West Coast ENT Inc v Buller Coal Ltd* [2013] NZSC 87.

7 The Court's judgment was by a 4:1 majority, the Chief Justice dissenting. The majority decision has been subjected to critical commentary by legal commentators, and cited as a reason for further legal change.

8 Saul Holt and Chris McGrath "Climate Change: Is the Common Law up for the Task" (2018) 24 Auckland University Law Review at 11, 17.

9 Federal Ministry of Finance "Climate-friendly tax law from 2020" <www.bundesfinanzministerium.de/Content/DE/Standardartikel/Themen/Schlaglichter/Klimaschutz/2019-12-17-steuergesetz-klimaschutz-mobilitaet.html>.

10 Both the New Zealand and the German Acts follow the model of the Climate Change Act 2008 (CCA) of the Parliament of the United Kingdom.

11 Saul Holt and Chris McGrath, above n 8, at 11.

This article focuses exclusively on those torts that can be applied in private disputes, leaving out state liability. This is because private companies and private land owners have by far the biggest impact on the environment and climate.[12] Also, in Germany, state liability mostly takes place in public law and not in tort law.[13] In the context of this article, defendants are mainly companies emitting GHGs. Companies are therefore to be understood here as subjects of private law which, irrespective of the form of their organisation, are not consumers but commercially driven. Companies act through their executive bodies. Hence, New Zealand law has developed the principle of vicarious liability: a company will be vicariously liable for acts or omissions of any persons acting on the company's behalf. German corporate law has a number of vicarious liability provisions.[14] Insofar as the claims examined in this article require corresponding action on the part of the defendant, or are directed at a certain conduct, the attribution of the executive body action is presupposed and, for the sake of simplicity, only the action of the defendant is spoken of. The same applies, as far as claims require subjective characteristics.

II CLIMATE CHANGE AND THE LAW OF TORTS IN NEW ZEALAND

In the following, the various tort provisions and their prerequisites (B–F) as well as legal remedies (G) in the light of climate change are discussed. This Part begins with an overview of the pertinent New Zealand tort law (A). Where possible, *Smith v Fonterra Co-Operative Limited,*[15] so far New Zealand's only climate litigation involving tortious liability,[16] serves as a model.[17] The plaintiff Smith was of Ngāpuhi and Ngāti Kahu descent and the climate change spokesman for the Iwi Chairs' Forum. He claimed customary interests in lands and other resources situated in or around Mahinepua in Northland New Zealand, and asserted that various sites of customary, cultural, historical, nutritional and spiritual significance to him are close to the coast, on low-lying land or are in the sea. Smith brought suit in the New Zealand High Court against several defendants that operate facilities in New Zealand

12 For Germany, see worldometer "Germany CO2 Emissions" <https://www.worldometers.info/co2-emissions/germany-co2-emissions/>, for New Zealand, see "NZ GHG Inventory" <https://www.mfe.govt.nz/climate-change/state-of-our-atmosphere-and-climate/new-zealands-greenhouse-gas-inventory>.

13 In this context, also state liability cases of civil law legal systems (such as *State of the Netherlands v Urgenda Foundation* [2015] HAZA C/09/00456689) will play a role in the following.

14 See, for example, the basic liability of executive bodies under section 31 BGB, which is applicable *mutatis mutandis* to numerous forms of companies.

15 *Smith v Fonterra Co-Operative Group LTD* [2020] NZHC 419.

16 For an overview of all cases, see <http://climatecasechart.com/non-us-jurisdiction/new-zealand/>.

17 For details, see *Smith v Fonterra,* above n 15, at 1–18.

which emit GHGs – including dairy farms, a power station, and an oil refinery. He alleged that the defendants' contributions of GHG emissions were in part responsible for climate change.[18] He claimed that climate change would, amongst other things, result in increasing sea levels, irrevocably damaging his family's culturally and spiritually significant land, resources and other interests. He asserted that the defendants have interfered and will interfere with public health, safety, comfort, convenience and peace by emitting GHGs. He sought primarily a declaration that the defendants had unlawfully contributed to these wrongs, and an injunction requiring each of the defendants to produce or cause zero net emissions from their activities by 2030, by linear reductions in net emissions each year until that time. The High Court upheld the action only in part.

A New Zealand Tort Law

New Zealand operates on a common law legal system: a body of unwritten laws based on legal precedents established by the courts, but with New Zealand's parliamentary law (statutes) being superior to common law. Based on the English legal system, New Zealand's common law divides tort into particular forms of action, such as trespass, nuisance, or negligence. Nevertheless, New Zealand tort law does not force forms of action into such a tight frame as the codified, rigid German tort law does.[19] This has been shown by new duties and liabilities New Zealand tort law has recognised from time to time.[20] However, a specific climate change tort has not been recognised or established yet. Therefore, the torts that primarily come into consideration are the "traditional ones" and, of these, especially the torts of negligence (B), private nuisance (C), and public nuisance (D). In *Smith v Fonterra*, the New Zealand High Court left open the question whether these torts could possibly be modified or altered (F).

B Negligence

Negligence seems like a promising cause of action in relation to climate change due to the fact that "what amounts to negligence" is subject to the facts of each

18 R Abbs, P Cashman and T Stephens "Australia" in R Lord, S Goldberg, L Rajamani and J Brunné (eds) *Climate Change Liability: Transnational Law and Practice* (Cambridge University Press, Cambridge, 2012) 67 at [5.50].

19 See below III.A.

20 See for example Chris DL Hunt "New Zealand's New Privacy Tort in Comparative Perspective" (2015) OUCLJ 157.

individual case.[21] Negligence is a failure to exercise that care which the circumstances demand. Where there is a duty to exercise care, reasonable care must be taken to avoid acts or omissions which can be reasonably foreseen to be likely to cause physical injury to persons or property. In certain circumstances there is a duty to take care to avoid causing a person to suffer purely economic loss. This distinguishes the tort from the very similarly structured German tort of s 823 (1) BGB.[22] However, establishing negligence in climate litigation has several hurdles. The first issue is the establishment of a duty of care a company owes, and a breach of that duty. A duty is owed to those regarded in law as neighbours of the alleged wrongdoer, and as such the relationship must be proximate enough that a reasonable person would recognise that harm may result in the event of a lack of reasonable care being exercised.[23] Furthermore, it is necessary to show that harm to the plaintiff was a reasonably foreseeable consequence of the defendant's negligence.[24]

1 Foreseeability

Showing that the action of a company results in climate change, and that the harm alleged is a reasonably foreseeable consequence of this, is difficult. The plaintiff needs to establish that a reasonable person would have anticipated the creation of such a risk. In *Smith v Fonterra,* Justice Wylie stated that the damage claimed cannot be a reasonably foreseeable consequence of the defendants' acts or omissions, because the defendants could not apprehend that there was any real risk of the damage claimed.[25] This reasoning is questionable. Foreseeability may differ between individuals and be rather subjective.[26] It may be difficult to prove that smaller GHG emitting companies are aware of the risk they pose. However, this may well be different in the case of larger companies. They have been aware for many years – also mainly due to IPCC reports[27] and the current state of research as was presented by Smith[28] – that they are major contributors to climate change, and therefore

21 S Todd "Specific Torts: Negligence" in *Laws of New Zealand* (7th ed, Thomson Reuters, Wellington, 2016) at [1]; *Attorney-General v Prince and Gardner* [1998] 1 NZLR 262 (CA) at 267; *Couch v Attorney-General* [2008] NZSC 45, [2008] 3 NZLR 725 at [33].

22 See below III.B.1.

23 Todd "Specific Torts: Negligence and Breach of Statutory Duty" in Todd *Laws of New Zealand,* above n 21, at [1].

24 Abbs and others, above n 18, at [5.52].

25 *Smith v Fonterra,* above n 15, at 81 and 82.

26 Abbs and others, above n 18, at [5.61].

27 See above Part I.

28 *Smith v Fonterra,* above n 15, at 13 and 82.

arguably also apprehend that there were risks of damage. Such risks are not novel, since individual cases (in other jurisdictions) show that climate change is already becoming apparent in certain locations and that the actual situation is and was quite predictable.[29]

This can be seen differently with good reason. Compared to the rest of the world, one party's contribution to climate change is relatively marginal,[30] and as such it may be difficult to foresee that a particular harm occurred out of a specific corporation's actions.[31] Thus, the size of the company and the extent of its decision or action must arguably also be included into the legal reasoning. The decision must be made on a case-by-case basis. However, even when viewed from this perspective, the judgment in *Smith v Fonterra* lacks detailed and sufficient reasoning. Nevertheless, it can be stated that in the future – especially after *Smith v Fonterra* – it will become harder and harder for New Zealand companies to claim that the harm was not a foreseeable consequence of their actions.

2 Proximity

In terms of climate change, proximity means that a company's acts or omissions must have affected the potential plaintiff as they were in a sense neighbours.[32] The courts look at the "physical, circumstantial and causal connection" between the parties.[33] It is debatable to what extent the "neighbouring" concept can be interpreted, especially from the point of view of physical proximity. In *Smith v Fonterra,* Justice Wylie denied any form of proximity,[34] even though the plaintiff and the defendants are located in the same (comparatively small) country. This shows, how difficult it is, to establish physical proximity in climate litigation.[35] This is due to the fact that climate change is seen as a "global environmental tort",[36] in that a specific defendant's conduct affects people globally, rather than a particular

29 See for example *City & County of Honolulu v Sunoco LP* (2020) 1CCV-20-0000380; *Rhode Island v Chevron Corp* (2018) 19-1818.

30 Abbs and others, above n 18, at [5.67].

31 Jin Fong Chua "Corporate Liability and Risk in Respect of Climate Change" (2016) NZJEL 167 at 185 and 186.

32 At 186.

33 Todd "Negligence: The Duty of Care" in Todd *Laws of New Zealand,* above n 21, 147 at [5.3.02]; see also *Pounamu Properties Ltd v Brons* [2012] NZHC 590 at [219].

34 *Smith v Fonterra,* above n 15, at 92.

35 BJ Preston "Climate Change Litigation (Part 1)" (2011) 1 CCLR 3 at 7.

36 At 7.

locality.[37] This becomes particularly clear when considering the causal chain leading from GHG emissions to actual damage.[38] Nevertheless, at best, consideration could be given to the aspect of causal proximity which could be defined as "the closeness or directness of a causal connection or relationship between the particular course of conduct and the loss or the injury sustained".[39] This causal connection alone could therefore establish proximity.[40] In the 21st century, however, consideration must be given to the fact that not only globalisation, but also climate change in particular, has shown that everything is interconnected and that all, as a world community, are somehow also neighbours.[41] A future-oriented legal system can no longer ignore this.

In this context, however, establishing proximity brings another obstacle – also stated by Justice Wylie[42] – which is based on the wider policy concern of protecting companies against the imposition of indeterminate liability.[43] Extending proximity in climate change might lead to climate litigation becoming a global phenomenon with worldwide effects, which could lead to indeterminate liability.[44] Thus, the issue arguably lies in a judicial trade-off between a functioning economy and climate change. In particular, the situation of a worldwide pandemic gives greater importance to the economy. Accordingly, there could be reluctance on the part of the courts to find proximity in such circumstances.[45] With the ZCA in particular, the New Zealand government has shown that it is increasingly giving priority to the issue of climate change. Also from the point of view of the COVID-19 pandemic, a more climate-friendly restructuring of the economy through appropriate incentives is the

37 Abbs and others, above n 18, at [5.54]; Chua, above 31, at 186.

38 See below Sub-part 4.

39 *Sutherland Shire Council v Heyman* [1985] HCA 41, (1985) 60 ALR 1 at [55] and [56] per Deane J.

40 Chua, above n 31, at 187.

41 Douglas A Kysar "What Climate Change Can Do About Tort Law" (2011) 41 Environmental Law 1 at 54.

42 *Smith v Fonterra,* above n 15, at 96.

43 Todd, above n 21, at [5.3.02]; *Rolls-Royce New Zealand Ltd v Carter Holt Harvey Ltd* [2005] 1 NZLR 324 (CA) at [58] and [65].

44 Abbs and others, above n 18, at [5.63].

45 At [5.63]; Chua, above n 31, at 187.

path that the New Zealand government continues to follow.[46] This should be taken into account in the judicial trade-off.

3 Breach of duty

A breach of duty must be proven to exist. In practice, evaluating the applicable standard of care for the particular company seems problematic – for instance, assessing whether an act or an omission leading to the emission of GHGs is negligent and to what extent.[47] However, under the watchful eye of a public increasingly aware of and educated in climate change issues,[48] it is now for the courts to determine an appropriate overview of a company's operations. Evaluating the act, emission or negligence should become increasingly manageable with the progress in climate research and reports.[49]

Moreover, the court would need to consider whether a company should take reasonable precautions against the risk of harm. It would need to identify what a reasonable person would have done in this situation, which is again a rather subjective evaluation.[50] Not many conclusions can be drawn from *Smith v Fonterra.* Justice Wylie puts forward policy considerations like the economic inequality resulting in joint and several liability of several defendants, indeterminate liability[51] and inconsistency with Parliament's regulations that speak against the duty claimed.[52] These general considerations can be challenged with good reason, as this article has already shown. In this context, it is also worth mentioning the statement of the famous climate scholar Douglas A Kysar, who points out: "a duty within the common law of tort must be attentive to the changing circumstances while remaining stable enough to honour private expectations."[53] That a duty (for the administration) exists toward everyone, is argued by Nicola J Hulley, who claims that there is a public trust doctrine which is part of New Zealand's common law and imposes an

46 This is also shown by the recently published Climate Commission report, which shows the direction in which politics and the economy will be heading, see Marc Daalder "Climate Commission report: What you need to know" (Newsroom, 31.01.2021).

47 Chua, above n 31, at 188.

48 Abbs and others, above n 18, at [5.61]; Chua, above n 31, at 188.

49 See above Part I. and below Sub-part 4.

50 Abbs and others, above n 18, at [5.62]; Chua, above n 31, at 188.

51 See above Sub-part 2.

52 *Smith v Fonterra,* above n 15, at 98.

53 Kysar, above n 41, at 48.

obligation with respect to decisions that impact commonly held natural resources, to act in the interest of the public.[54]

4 Causation

Causation is arguably the biggest and most debated issue in climate litigation.[55] It concerns the question of causal relationship in the logical or scientific sense between the action and the loss, and is judged according to the "but for test" in Common Law. According to this test, a defendant is liable only if the plaintiff's damage would not have occurred "but for" the defendant's actions. In terms of climate change, this phrase would therefore read: The plaintiff's damage, resulting from (a specific event caused by) climate change, would not have occurred "but for" the defendant's emission of GHGs.

In order to claim this causation, in *Smith v Fonterra,* Smith in essence alleged that the release of GHGs into the atmosphere by the defendants increased the natural greenhouse effect, contributing to the warming of the planet, adversely affecting natural ecosystems and humankind, and resulting in sea level rise. Only by limiting the warming to 1.5°C by reducing GHGs, could further damage to the legal interests asserted by Smith be averted.[56] Taking this assertion at its word, a causal link between the defendants actions and climate change was established, in particular the fact that the defendants contribute significantly to climate change and that climate change, would not happen in the extend as it does, but for their actions.

Nevertheless, Justice Wylie stated that the "but for test" speaks against a causal link in this case. According to him the pleaded connection was not sufficiently direct to give rise to a liability because Smith did not, and could not plead, that but for the defendants' activities, he would not suffer the claimed damage.[57] However, such a rigid rejection is no longer the rule in such cases in Common Law jurisdictions. In the landmark *Massachusetts v EPA*[58] case, for instance, the court found that there was a link between the total emissions from the United States and the threat of sea level rise to the coastal areas of the plaintiff's state.[59]

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54 Nicola J Hulley *New Zealand's Public Trust Doctrine* (Research Paper, University of Wellington, 2018) at 5.

55 Kysar, above n 41, at 29; Will Frank "Klimahaftung und Kausalität" (2013) Zeitschrift für Umweltrecht (ZUR) at 28 ("Climate liability and causation" in Journal for Environmental Law).

56 *Smith v Fonterra,* above n 15, at 6–9

57 *Smith v Fonterra,* above n 15, at 67 and 84.

58 *Massachusetts et al, Petitioners v Environmental Protection Agency, et al* (2006) 549 US 497.

59 The case was ultimately dismissed for other reasons.

In *Smith v Fonterra*, a more differentiated approach would also have been justifiable. The causal link presented by Smith reflects the current state of research, is logically comprehensible[60], and complies with the international standards of the IPCC.[61] Increasingly more scholars support the application of such reports in courts, especially like the one from the IPCC.[62] In legal practice, in *State of the Netherlands v Urgenda Foundation* for instance, the court relied heavily on IPCC reports, stating the reports' application by the international community including the United Nations Framework Convention on Climate Change (UNFCCC).[63]

Furthermore, it should be noted, that in some Common Law cases, courts have abandoned the "but for test" in place of a "material contribution test".[64] This test has been applied where the courts were unable to ascertain which party is responsible, in the case of multiple defendants. Essentially, if it can be established that each defendant breached a duty of care to the plaintiff, which as a result materially increased the plaintiff's risk, such defendants could be liable for their actions.[65] This test has also been applied in cases where there was human harm or risk of harm.[66] The use of this test could well be considered for climate change. However, since the "material contribution test" has been applied in cases where there was a strong connection between the harm suffered by the plaintiff and the action of the defendant, applying the test in cases of extreme weather events[67] seems problematic. In *Smith v Fonterra,* however, Justice Wylie did not consider the "material contribution test", but merely refers to the case *Fairchild v Glenhaven Funeral Services Ltd.* He stated that the plaintiff could not avoid the "but for test" by referring

60 David Grossman "Warming Up to a Not-So-Radical Idea: Tort-Based Climate Change Litigation" (2003) 28 Colum J Envtl L 1 at 27.

61 See above Part I.

62 Maria Lee "The Sources and Challenges of Norm Generation in Tort Law" (2018) European Journal of Risk Regulation at 9; Kysar, above n 41, at 4; Helen Winkelmann, Chief Justice of New Zealand, Susan Glazebrook and Ellen France, Judges of the Supreme Court of New Zealand "Climate Change and the Law" (Asia Pacific Judicial Colloquium, Singapore, 28–30 May 2019) at [99].

63 The reason, why in *State of the Netherlands v Urgenda Foundation* (above n 13) the court rejected causation was mainly because the plaintiff sought an order, where causation plays a limited role.

64 *Bonnington Castings Ltd v Wardlaw* [1956] AC 613 (HL); *McGhee v National Coal Board* [1973] 1 WLR 1 (HL) at 12; *Fairchild v Glenhaven Funeral Services Ltd* [2002] UKHL 22, [2003] 1 AC 32 at [67]; *Auckland City Council v Selwyn Meys Ltd* [2003] DCR 671 (DC) at 677.

65 Abbs and others, above n 18, at [5.70] and [5.73]; Chua, above n 31, at 193.

66 For the whole issue see Louis C Chambers *Tort Law, Climate Change and Private Nuisance* (Dissertation, University of Otago, 2012) at 18–20.

67 See above Part I.

to this case because this case dealt with the scientific uncertainty of proving which of several defendants was the cause of loss, whereas in *Smith v Fonterra* the plaintiff did not assert any scientific uncertainty. It was deemed impossible to determine each defendant's contribution to global GHGs and thus apply a material contribution threshold.[68]

Altogether, it depends on the specific case, its circumstances and the individual judge. For example, a damage or event caused by climate change can arguably be more easily linked to the contribution of a large company with immense GHG emissions. Furthermore, the actual event caused by climate change also plays a role. Arguably, judges like Justice Wylie would have been even more hesitant, if extreme weather events were the reason for climate litigation. As mentioned before,[69] it is in fact difficult to prove a relationship on a case-by-case basis between climate change and the particular event, especially under the strict criteria for causation of the "but for test". By legal standards, a mere statistical correlation may not be regarded as sufficient proof of causation.[70] What will certainly be of help in the future, is that since about 15 years ago, attribution science has gained importance in climate research, investigating the contribution of climate change to individual extreme weather events. Lawyers and scholars expect that with the increasing understanding of what weather events can be expected, the responsibilities of states and non-state actors will change.[71] In general, it can be said, that developments in climate litigation are heavily influenced by advancements in the scientific understanding of climate change.[72]

Finally, in the context of causation, carbon budgets must be mentioned. The carbon budget is defined by the IPCC as the estimated amount of carbon dioxide the world can emit while still having a likely chance of limiting global temperature rise to 2°C above pre-industrial levels. In New Zealand, the ZCA introduced emissions

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68 *Smith v Fonterra,* above n 15, at 84–88.

69 See above Part I.

70 Will Frank "Störereigenschaft für Klimaschäden – Anmerkungen zum Urteil des LG Essen vom 15.12.2016 in der ersten deutschen Klimaklage" (2017) NVwZ at 6 ("Disturbance property for climate damage - Remarks on the judgment of the LG Essen of 15.12.2016 in the first German climate complaint").

71 For the whole issue see Sophie Marjanac and Lindene Patton "Extreme weather event attribution science and climate change litigation: and essential step in the causal chain?" (2018) 36 Journal of Energy & Natural Resources Law.

72 Elisa de Wit, Sonali Seneviratne and Huw Calford "Climate change litigation update" (2020), available at <https://www.nortonrosefulbright.com/en/knowledge/publications/7d58ae66/climate-change-litigation-update>.

budgets[73] as the quantity of emissions that will be permitted in each emissions budget 5-year period, as a net amount of carbon dioxide equivalent. Those budgets have been said to provide a convenient tool for framing climate litigation and establishing causal links and therefore counter-arguing that individual emissions are de minimus or vanishingly small. With an accurate measuring of the GHG emissions of individual private "climate-damaging" companies and landowners, it would be possible in the future to track exactly by how much the annual permissible emission quantities have been exceeded, thereby determining an exact liability share. *West Coast ENT v Buller Coal Limited*[74] already set a good example for this. In that case, the plaintiffs sought a declaration that those deciding the resource consent applications for a coal mine were also required to consider the impact of coal mining on climate change if the coal were burnt overseas. The case is illustrative of claims focusing on activities which indirectly result in GHGs and how these apply to statutory interpretation. Generally speaking, the further away the chain of defendants action sits, in comparison to the harmful impact, the more difficult it will be to establish causation.[75] However, using the international (or increasingly nationally established) carbon budgets enables an informed estimate of the amount of carbon pollution from the mines in question in that case to be quantified.[76]

5 *Statutory defences*

Ultimately, a statutory defence could stand in the way of climate litigation. In New Zealand in particular, a defendant ie a company, could argue that the CCRA and the ZCA constitute a statutory authority to emit GHGs and thus it is unjustifiable to require it to lower its emission levels. In *Smith v Fonterra,* the defendants argued this, claiming that each of them was acting lawfully and in accordance with relevant statutory and regulatory requirements.[77] Nevertheless, it could be argued that the CCRA is a public regulatory scheme (meaning that companies remain free to choose how carbon-intensively they operate), and therefore the Act confers general powers, and thus is not a form of statutory authorisation for private entities to emit GHGs.[78] Furthermore, the ZCA leaves the question of implementation of and compliancy with

73 CZA, ss 5V–5ZO.

74 *West Coast v Buller,* above n 6.

75 Winkelmann, Glazebrook and France, above n 62, at [86].

76 At [88]; Kysar, above n 41, at 4.

77 *Smith v Fonterra,* above n 15, at 18.

78 Chua, above n 31, at 194.

the 2050 climate target or emissions budgets to Common Law.[79] It remains to be seen how far this is understood by the courts. However, the courts cannot simply arbitrarily set a more ambitious (eg 2030) climate target, as Justice Wylie in *Smith v Fonterra* rightly points out.[80] But then again, this raises the question of New Zealand's 2030 target as set in its nationally determined contributions (NDCs).[81] In this respect, the judgment in *Smith v Fonterra* is silent.

In addition to these statutory defences, regulatory permissions could also constitute a defence. The extent to which the courts are bound by these must be determined in each individual case. Nonetheless, it is not difficult to find cases in which a reasonable person is expected to do more than merely comply with regulations.[82] In confirming the reasonableness of relying on the Code of Practice, Lord Dyson in the English case *Baker v Quantum Clothing Group Limited* commented that regulatory instruments may be "comprised", for example in a failure to keep pace with changing technology and science.[83]

Another defence a company could put forward, is that it cannot be sued for GHGs under Common Law, because a specific Act delegates the management of GHGs to a specific (state) authority or agency. This argument was first successfully put forward in the US Supreme Court case *American Electric Power Co v Connecticut*[84]. In New Zealand, however, only the Climate Change Commission established by the CZA[85] exists and – as mentioned – the Act was clearly designed in a way where Common Law and courts still have a say. Furthermore, the Commission largely holds the Government to account and has no broader management functions.

79 See above n 5 and the wider debate about s 5ZM.

80 *Smith v Fonterra,* above n 15, at 94 and 98.

81 New Zealand Foreign Affairs & Trade, "Our global agreements", available at <https://www.mfat.govt.nz/en/environment/climate-change/negotation-and-agreements/>; the obligation arises from the Paris Agreement 2015, art 3.

82 Maria Lee "The Intersection Between Environmental Law and Tort Law" draft, in Robert L Glicksman, Lee Paddock and Nicholas S Bryner *Decision Making in Environmental Law* (Cheltenham, 2015) at 9.

83 *Baker v Quantum Clothing Group Limited* [2011] UKSC 17, [2011] 1 WLR 1003.

84 *American Electric Power Co v Connecticut,* (2011) 564 US 410.

85 CZA, s 5A.

C Private Nuisance

Worldwide, most tort law cases on climate change in Common Law legal systems have been based on nuisance.[86] In contrast to public nuisance, private nuisance seems to play a minor role. In *Smith v Fonterra* private nuisance was not considered (neither by the plaintiff nor by the court). The reason for this is arguably inherent in the nature of private nuisance itself. Conduct which interferes with a person's use or enjoyment of his or her land or of some right connected with the land, is actionable as a private nuisance where the defendant's use of land was not reasonable.[87] It violates an individual's private rights and is not a violation of rights held in common with other members of the public. Therefore, private nuisance is not an attractive cause of action in relation to climate change as the emission of GHGs does not affect a specific individual but rather the global public.[88] Nevertheless, some scholars argue that private nuisance could be available to a private person, where its land is affected by the impacts of climate change.[89] Again, therefore, a case by case approach has to be taken: a beachfront homeowner, whose house is at risk from rising seas might have to be treated differently from the general public. However, this argumentation is better placed under the heading of special damage in the context of public nuisance.

D Public Nuisance

Despite being asserted by some that it cannot be applied to just about anything because of its indefinability,[90] public nuisance has the reputation of being the most convincing of the climate torts.[91] This is, because public nuisance affects a large group of the public and hence it seems more suited to climate litigation as climate change affects the world globally.[92] Furthermore, the type of special damage which succeeds in respect to public nuisance, includes damage to property,[93] depreciation

86 In this article *Rylands v Fetcher* is not considered, because climate change is considered a continuing wrong.

87 S Todd "Private Nuisance" in Todd *Laws of New Zealand,* above n 21, at 1.

88 Chua, above n 31, at 186.

89 Preston, above n 35, at 6.

90 James W Shelson "The Misuse of Public Nuisance Law to Address Climate Change" (2011) 78 Def Counsel J 195 at 195.

91 This became especially obvious because of US cases like *American Electric Power Co v Connecticut* and *Kivalina v ExxonMobil Corp* [2011] 131 S Ct 2527.

92 Chua, above n 31, at 189.

93 *Overseas Tankship (UK) Ltd v Miller Steamship Co Pty Ltd* [1967] 1 AC 617 (PC); *Halsey v Esso Petroleum Co Ltd* [1961] 1 WLR 683 (QB).

in the value of land,[94] and interference with an occupier's right to enjoy land.[95] These types of damage are especially relevant in climate litigation as such damage could occur, for example, due to rising sea levels and changing weather conditions. Additionally, it is not necessary for a plaintiff to own land or an interest in the land for an action to be taken.[96]

1 Special damage

However, public nuisance requires a special damage, which is problematic when it comes to climate change. Climate change affects the world at large, so it could be difficult to establish special damage suffered by specific victims.[97] To suffer such special damage typically involves direct transmission to affected locations. Emission of GHGs, however, translate to a global phenomenon. It is a proximity issue, where the plaintiffs lack control in respect of interference.[98] However, in certain cases, special damage already seems to be suffered. An example of this are smaller island countries in the Pacific and the people living there. In some cases, they see their existence threatened by the rising sea level due to climate change.[99] This becomes especially obvious by the increasing number of climate refugees, who make claims.[100] Furthermore, it should not be forgotten that New Zealand is also an island state with fragile flora and fauna and therefore, special damages could occur sporadically that do not occur elsewhere. In *Smith v Fonterra*, Justice Wylie rejected the existence of special damage, as the plaintiff was no worse off than people living in other parts of New Zealand.[101] This reasoning is questionable against the background that the plaintiff's claimed interests (his family's culturally and spiritually significant land, resources and other interests) lie close to the coast. Arguably, the individual rights and interests could have been looked at more closely and examined for special damage.

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94 *Walsh v Ervin* [1952] VLR 361 (VSC).

95 *Coldicutt v Ffowcs-Williams* HC Auckland AP 130-SW00, at [14].

96 Chua, above n 31, at 190.

97 At 192.

98 Abbs and others, above n 18, at [5.78]; Chua, above n 31, at 192.

99 See for example *City & County of Honolulu v Sunoco LP* 1:2020-cv-00163.

100 See *Ioane Teitiota v The Chief Executive of the Ministry of Business, Innovation and Employment,* [2015] NZSC 107.

101 *Smith v Fonterra,* above n 15, at 62.

Furthermore, in *Smith v Fonterra* the plaintiff argued that an exception to the prerequisite of special damage was necessary; this was rejected by Justice Wylie.[102] However, in similar cases, courts seem increasingly willing to make exceptions. Hawaii's Supreme Court in *Akau v Olohana Corp,*[103] for instance, rejected a requirement of special damage, instead adopting a new approach. According to the court "a member of the public has standing to sue to enforce the rights of the public, even though his injury is not different in kind from the public's generally, if he can show that he has suffered an injury in fact, and that the concerns of a multiplicity of suits are satisfied by any means, including class action". Similarly, the New Zealand High Court in *Coldicutt v Ffowcs-Williams* held that substantial interference with rights enjoyed by the public generally may constitute a public nuisance even if few are affected.[104] Another approach can be found in the US, where some courts have been willing to interpret the requirement of special damage with greater flexibility if the injury suffered is significant.[105] These approaches could have been given more consideration, especially in the partly similar case of *Smith v Fonterra.*

2 *Other (unjustified) restrictions and difficulties*

The problem of causation also plays a role in the context of public nuisance. Moreover, the case *Smith v Fonterra* raises further questions. Justice Wylie stated that public nuisance is either an interference with the life, health, property, morals or comfort of the public, or an interference with the public in the exercise or enjoyment of rights common to all Her Majesty's subjects.[106] However, in his further statements, he completely ignored the second alternative.[107] Property damage has usually been considered special damage. The judgment mentions this but does not go into further detail.[108] Finally, public nuisance is committed where a person by an act unwarranted by law, or by any omission to perform a legal duty, inflicts damage, injury, or inconvenience.[109] Although Justice Wylie also expressly mentioned the

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102 At 64.

103 *Akau v Olohana Corp,* 652 P.2d 1130 (Haw 1982).

104 *Coldicutt v Ffowcs-Williams* HC Auckland AP 130-SW00, 8.2.2001, at [14].

105 See to the whole problem James R Drabick "Private Public Nuisance and Climate Change: Working within, and around the Special Injury Rule" (2005) 16 Fordham Environmental Law Review, Symposium: a new legal frontier in the fight against global warming 503 at 532.

106 *Smith v Fonterra,* above n 15, at 58.

107 At 67.

108 At 67.

109 Todd "Public Nuisance" in Todd *Laws of New Zealand,* above n 21, at [1].

"unwarranted" prerequisite,[110] he later stated only that the action must be "unlawful".[111] These strict and questionable standards distinctly narrowed the plaintiff's chance of success.

E Strict Liability – Focusing on the Consumer Guarantees Act 1993

Establishment of strict liability is more difficult. As a strict liability tort, liability under the Consumer Guarantee Act 1993 (CGA) (New Zealand's product liability Act), may be considered in the context of this article. The CGA sets out quality guarantees that a business or person in trade must provide to its customers. It forbids businesses to knowingly sell faulty products or substandard services. Therefore, on the one hand, only GHG-emitting products such as cars could be considered as products. On the other hand, it would hardly be possible to prove that the product is defective, even though, it is not ruled out either. It remains to be seen how the CGA will be interpreted in this respect by the courts.

F A New Tort and the Breach of an Inchoate Duty

Finally, the question arises whether there is a need for change in the current tort system. Proposals range from an extension or modification of one of the torts listed above, to the introduction of a new tort for climate change. And, as demonstrated so far in this article, in isolated cases, some courts appear to soften certain tort prerequisites.[112] In *Smith v Fonterra,* however, Justice Wylie refused to modify a tort, but also explained that it may be that the special damage rule in public nuisance could be modified in the future. Whether that will happen depends on improvements in climate change science.[113]

It can be expected that, since the measures recently introduced by the New Zealand Government do not seem sufficient, and the CZA leaves room for the Common Law, calls for change, and a more progressive stance by judges, will become even louder in the future. Kysar and others believe that change will happen and that the Common Law tort system has all the tools to include the issue of climate change in its structure.[114] At least, however, in *Smith v Fonterra* the court declined to strike a breach of an inchoate duty as a third cause of action, which alleged that the defendants have a duty to cease contributing to climate change. The court found

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110 *Smith v Fonterra,* above n 15, at 58 and 68.

111 At 68, 70 and 71.

112 See above for example Sub-part B.4. or D.1.

113 *Smith v Fonterra,* above n 15, at 101 and 102.

114 Kysar, above 41; Jack Hodder "Climate Change Litigation: Who's Afraid of Creative Judges?" (2019, paper for presentation to the "Climate Change Adaptation" session) at 3.

that there were "significant hurdles" for the plaintiff in persuading the court that this new duty should be recognised, but determined that the relevant issues should be explored at a trial. However, it also found that the breach of an inchoate duty does not constitute a new tort.[115]

G Legal Remedies

The monetary remedy of damages, with the object of compensating the plaintiff for loss suffered as a result of the defendant's wrong, is the common response to a tort in Common Law and thus also in climate litigation in New Zealand.[116] Punitive damages, which may well play a role in big commercial cases, are arguably ruled out against the background that they are normally only used for torts such as deceit or assault. Moreover, following a precedent-setting climate litigation, a wave of lawsuits against GHG emitting companies could sweep in, which would bring large companies to their knees if punitive damages were awarded additionally to each plaintiff.

In climate litigation, a big problem for many potential plaintiffs is that the most devastating impacts of GHGs are not expected to begin until later this century and thereafter.[117] Seeking recovery for a present risk of future harm, is hardly feasible, since the circumstances under which courts permit such recovery, are quite limited. Medical monitoring claims in the context of toxic substance exposure arguably present the best analogy. Although courts have rejected the notion that enhanced risk of future injury is itself a compensable harm, they have been more agreeable towards claims based on the need for medical surveillance.[118]

Because climate change is a continuing tort, courts could grant an injunction. In *Smith v Fonterra,* Smith also sought an injunction to restrain the continuance of the massive GHG emission.[119] In his favour is the fact that often in nuisance cases of indivisible, cumulative harm, injunctions are granted.[120] This was the case for

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115 *Smith v Fonterra,* above n 15, at 101 and 102.

116 M Pawson "The nature of damages as a compensatory remedy" in Todd *Laws of New Zealand,* above n 21, at [1].

117 Kysar, above n 41, at 42.

118 At 42.

119 *Miller v Jackson* (1977) EWCA Civ 6.

120 Chambers, above n 66, at 23; Karen Morrow "Nuisance and Environmental Protection" in John Lowry and Rod Edmunds (eds) E*nvironmental Protection and the Common Law* (Portland, 2000) 140 at 143–151, using the cases of *Hanrahan v Merck Sharp & Dohme Ltd* [1988] ILRM 629 and *Graham and Graham v Re-Chem International Ltd* [1996] Env LR 158.

instance in *Thorpe v Brumfitt*.[121] For the sake of policy concerns alone, prohibitory injunctions should not be avoided for the mere reasons that it may be too difficult to put in practice, have impractical consequences, or restrain a company's activities. On the contrary, this may be the only way to get big corporations to make a "green" transition.

Another issue arises with assessing the damage. The ideas here are many and varied. Some scholars suggest a system of proportionate liability,[122] others promote the market share theory like in the US, when apportioning the responsibility of defendants in causal intractable drug liability cases.[123] However, as regulators grapple with the challenge of compounding centuries-spanning climate impacts into the price of carbon, courts might feel less timid using the liability system to bridge two or three decades in the case of toxic substances exposure.[124]

III CLIMATE CHANGE AND THE LAW OF TORTS IN GERMANY

In this Part, the relationship between climate change and the German law of torts is discussed. In accordance with the presentation above, the various tort provisions and their problematic prerequisites (B–D) as well as legal remedies (E) are considered. This Part begins with an overview of the pertinent German tort law (A). Where possible, the case *Lliuya v RWE AG*[125] serves as a model. The facts of this case are the following: The plaintiff was a Peruvian farmer who sued the German energy company RWE. He sought a declaratory judgment and wanted the defendant to pay a share of 17,000 Euros of the adaptation costs which he was incurring due to the climate change caused by RWE. According to the plaintiff, RWE was responsible for 0.47% of climate change (which corresponds to its share of global GHG emissions) and thus also in part responsible for the melting of the glacier above Lake Palcacocha in the Peruvian Andes causing its water level to rise to a dangerous level and threatening to flood his house below the lake. The case was dismissed in the first instance by the LG Essen (Regional Court of Essen). The OLG Hamm (Higher Regional Court of Hamm) decided to admit the evidence. An appeal is pending. Judgment has not yet been delivered and the court is currently selecting experts to take on-site evidence in Peru.

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121 *Thorpe v Brumfitt* (1872) LR 8 Ch App 650, at 656–657.

122 Chambers, above n 66, at 35.

123 Abbs and others, n 18, at [5.83].

124 Kysar, above n 41, at 71.

125 *Lliuya v RWE AG* [2016] 2 O 285/15.

A German Tort Law

In contrast to the New Zealand legal system, Germany operates a civil law legal system, ie the core provisions of the German law are codified in a system that serves as the primary source of law. In essence, German tort law is codified in ss 823–853 of the BGB. Outside these norms, there are tort provisions (eg ss 1 and 2 Umwelthaftungsgesetz [UmwHG, the Environmental Liability Act]). Hence the BGB offers a comprehensive catalogue of provisions, which follow the (rather strict) structure prescribed by the law. With a few exceptions, fault is regarded as the general rule of liability. This is also expressed in s 823 BGB, German law's basic tort provision. As in New Zealand tort law, a specific provision concerning climate change liability does not exist in German tort law. Therefore, the torts that primarily come into consideration are the "traditional ones" and, of these, especially the torts of s 823 (1) (B) BGB, s 823 (2) BGB (C) and ss 1 and 2 UmwHG (D).

B Section 823 (1) BGB

The basic tort provision in s 823 BGB (paras 1 and 2 constitute two different torts) will be dealt with first. Section 823 (1) BGB states that "a person who, intentionally or negligently, unlawfully injures the life, body, health, freedom, property or another right of another person is liable to make compensation to the other party for the damage arising from this".

1 Violation of protected rights and interests

Section 823 (1) BGB contains a restriction to certain legal interests (life, body, etc). For climate change, the violation of property, health and "another right" (the latter has to be an absolute right like the other rights listed) can play a role.[126] A violation of these rights can be seen, for instance, in property, possession and/or health being affected by a drought, which is a result of increasing temperatures due to climate change. It has to be noted that there is no ownership or possession of the climate as such. Furthermore, the conclusive list of legal rights and interests narrows the scope of the tort. So s 823 (1) BGB in contrast to the New Zealand tort of negligence[127] does not cover pure financial losses.[128] Thus, it does not cover, for example, loss of turnover or misinvestment.

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126 At 202 and 203.

127 See above Part II.B.

128 BeckOK BGB/Förster *BGB* (53th ed, 2020) at s 823 at 3 (Online Commentary Civil Code).

2 *Infringement act*

The violation of rights must be the result of an act of infringement, ie a human behaviour, which is subject to control by consciousness and will and which can consist of either an action or an omission.[129] Of course it could be argued that climate change occurs as a result of an action, ie actively emitting GHGs into the atmosphere, which leads to anthropogenic climate change and consequently to a violation of the before mentioned rights and interests. However, if, for example, the owner of a GHG emitting company fails to maintain certain (environmental) standards, the behaviour must rather be considered as an omission to comply with the standards. In this case, a violation of the so-called "Verkehrssicherungspflicht" (duty of care) comes into consideration. This duty ensures that dangers arising from an opened hazard source do not materialise.[130] Whether or not such a duty exists towards everyone is highly debated in German tort law.[131]

The Supreme Court of the Netherlands[132] in *State of the Netherlands v Urgenda Foundation* affirmed a duty of care of the state towards its citizens against climate changes that endanger life and health, which results from state liability law.[133] If private entities act like states, this decision could be applied in German tort law. This decision may well serve as a model, as it shows that the question of whether there is a duty of care also depends on the "GHG emitter", directly or indirectly. The larger and more influential the emitter, the greater the duty of care. Companies that have an annual turnover of several hundred million or billions – thus comparable to a government budget – must therefore answer to a larger circle of people, their duty of care has a wider scope and perhaps even the scope of a state.

As indicated above in the illustration of the violation of rights and interests,[134] the tort of s 823 (1) BGB also shows here that it is subject to certain factual and personal limitations. Nevertheless, the limitations should not be interpreted to the effect that the tort of s 823 (1) BGB is altogether unsuitable in climate litigation. Rather, the limitations are case-dependent and set by case law and academic literature.

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129 MüKoBGB/Wagner *BGB* (7th ed, 2017) at s 823 at 63 (Munich Commentary Civil Code).

130 BeckOGK/Spindler *BGB* (1.2.2020) at s 823 at 74 (Grand Commentary Civil Code).

131 Palandt/Sprau *BGB* (79th ed, 2019) at s 823 at 51 (Palandt Commentary Civil Code).

132 Also practising in a civil law legal system.

133 *State of the Netherlands v Urgenda Foundation,* above n 13.

134 See above Sub-part 1.

3 Causation

The main problem for a plaintiff comes with establishing causation. German civil law applies a two-fold test for causation. A distinction is made between the question of causal relationship in the logical or scientific sense between the action and the loss (causation) and the further question of whether it is justifiable to hold the person who has caused the loss responsible (accountability). Causation in the logical or scientific sense is judged according to the *conditio sine qua non* formula, which corresponds to the "but for" test in Common Law. Accountability essentially establishes an evaluative prerequisite.[135]

Similar to *Smith v Fonterra,* the plaintiff in *Lliuya v RWE AG* also presented the chain of causation. He argued that the entire causal chain can be traced along the following steps: The released GHG emissions of the defendant ended up in the atmosphere, where they led to an increased concentration of GHGs in the entirety of the Earth's atmosphere. Due to the increased density of GHGs in the atmosphere, heat dissipation from Earth and thus global temperatures rise. The rise of global temperatures leads to accelerated meltdown of glaciers (like the one near the plaintiff's house) and heightens the probability of glacial break-offs. Due to the accelerated glacial meltdown, the water volume in Lake Palcacocha increased, which in turn increased the threat of the plaintiff's property falling victim to a flood wave.

At first instance, the LG Essen dealt in depth with the question of causation, and denied it mainly for two reasons: Firstly, the complexity of climate change and its consequences would make it impossible to trace a clear causal link between the emissions of the defendant's power plants and the endangerment of the plaintiff's house in Peru.[136] According to the *conditio sine qua non* formula, causation was therefore to be dismissed. Thus, reference can already be made here to what has been stated above on causation in the case *Smith v Fonterra* about the state of research, the comprehensibility, and the conformity with international standards (as stated in the IPCC),[137] which contradicts the reasoning of the LG Essen. Secondly, the court held further that the defendant was not accountable because of the countless other contributors to climate change.[138] The reasoning is thus very similar to the case of *Smith v Fonterra.*

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135 BGH NJW 1987, 2671 (2672).

136 *Lliuya v RWE AG,* above n 125, at 44.

137 See above Sub-part II.B.4.

138 *Lliuya v RWE AG,* above n 125, at 43.

Nevertheless, at second instance, the OLG Hamm sought to trace the causal relationship in the scientific sense more closely, and selected experts to take evidence on-site in Peru. This is encouraging because the existence of causation depends very much on scientific findings. These findings should finally be established and recognised in court. The highest courts in Germany have already recognised anthropogenic climate change as such,[139] however, this presupposes a recognised scientific link between human behaviour and climate change.

Regarding the second question of accountability, and the reason why the LG Essen rejected this prerequisite, it is true that the extraordinary number of GHG emitters leads to implications for establishing causation, as any individual defendant can quite plausibly offer the "consequentialist alibi" that its emissions are simply too small a share of global emissions to cause a discernible difference.[140] This is also related to the issue denounced by many, and indicated above, that actions of one emitter are arguably almost never the direct cause, and a potential plaintiff would only be able to show that the defendant's/company's actions increased the risk of causing damage[141] – it is never known where the exact harming pollution comes from.[142] Yet the size of the company RWE and the fact that the exact GHG emissions as well as the (major) share in climate change are specified (0.47 %) weakens this argument to a large extent. Additionally, the number of emitters/co-causers is, according to many, not a convincing reason for a "blanket ban" on attributing liability for causal contributions by individual emitters that are quantifiable and not insignificant. There is no legal basis for conflating the liability of major emitters for consequences of climate change, for which they are to a significant extent co-responsible, with a de facto "collective non-responsibility" of the countless minor emitters.[143] According to so-called cumulative causation, the act of an offender is still a cause even if it in itself could not result in the damage but only in combination

139 See eg Bundesverwaltungsgericht (BVerwG, Federal Administrative Court) 8 C 13/05 (25.01.2006); Bundesverfassungsgericht (BVerfG, Federal Constitutional Court) 1 BvF 1/05 (13.03.2007); LG Köln 28 O 456/05 (26.10.2005).

140 Kysar, above n 41, at 35.

141 Alexandros Chatzinerantzis and Markus Appel "Haftung für Klimawandel" (2019) NJW 881 at 883 (climate change liability).

142 Donald Dewees "The Role of Tort Law in Controlling Environmental Pollution" (1992) 18 Canadian Public Policy 425 at 429; R G Lee "From the Individual to the Environmental: Tort Law in Turbulence" in John Lowry and Rod Edmunds *Environmental Protection and the Common Law* (2000, Portland) 77 at 83.

143 Frank, above n 55, at 3.

with the actions of another.[144] In this context, the OLG Hamm has already indicated that it could decide the issue of causation differently.

Moreover, carbon budgets are now also adopted in Germany[145] and set as permissible annual emission quantities. The considerations discussed above on carbon budgets in New Zealand's legal system apply here accordingly.

Finally, there may be legal developments where novel concepts of causation come to the fore. One possibility is the probabilistic causation test, where even less than 50% contribution to the risk of harm suffices and where the scientific evidence confirms the cause of damage.[146] It is worth mentioning the Chinese courts' approach. They apply the principle of causation presumption in environmental tort litigation in their civil law system, whereby the party causing the injury bears the burden of proving that there is no causation.[147] It must be noted, however, that in China, mainly a civil law country, the constraints of tort provisions do not leave room for climate litigation. Also worth mentioning in this context are the cases heard by the Japanese courts concerning the Minamata Mercury Poisoning. Here, too, in the Japanese civil law system (more precisely: Germanic law system), the courts created a presumption of causation in favour of the plaintiffs, regarding claims for damages due to environmental violations.[148]

4 Unlawfulness

In German tort law, the violation of a protected right usually indicates unlawfulness. However, it is debatable what effect it might have, when a company acts according to the environmental or climate regulations (an example is the so-called TA-Luft which are the technical instructions for air quality that set the allowed emission limits) or an official permit that allows the company to emit a certain amount of GHGs. This issue as such is almost identical to that of "statutory defence",

144 Roda Verheyen "Loss and damage due to climate change: attribution and causation – where climate science and law meet" (2015) 8 Int J Global Warming, 158 at 163.

145 Section 4 Bundes-Klimaschutzgesetz.

146 Luke Elborough "International Climate Change Litigation: Limitations and Possibilities for International Adjudication and Arbitration in Addressing the Challenge of Climate Change" (2017) NZJEL 89 at 99.

147 Robert Blomquist "Comparative Climate Change Torts" (2012) Valparaiso University Law Review 1053 at 1065, 1066 and 1074.

148 Koichiro Fujikura "Litigation, Administrative Relief and Political Settlement for Compensating Victims of Pollution: Minamata Mercury Poisoning after 40 years" (Institute of Comparative Law, Symposium held in December of 1997) 24 at 26 and 27.

discussed above.[149] In *Lliuya v RWE AG,* the company of RWE defended itself with the argument that they comply with the legal and permitted requirements. However, since the LG Essen ruled out causation and the OLG Hamm is still examining evidence for causation, neither court has taken a position on this matter.

Concerning the compliance with regulatory guideline or permissions, in German law some scholars note that if compliance provides an automatic defence, it would be impossible to use s 823 (1) BGB and arguably tort law in general, to challenge climate change. Of course, this is thought of from a different point of view.

Rather problematic in this context are the recently established climate budgets set forth in the Bundes-Klimaschutzgesetz.[150] Complying with the already rather strictly set climate budgets leads to the emitting GHGs being lawful. This is where the tort of s 823 (1) BGB reaches its limits, because German judges cannot, as in the Common Law legal system, establish something new or deviate from existing torts.[151]

5 Fault

Acting according to the legal statutory or regulatory standards, as mentioned before,[152] leads to the further issue that fault might be absent because the defendant assumes that it is acting within the framework of the law and is therefore acting neither intentionally nor negligently.[153] However, it is also being discussed whether defendants who have complied with the legal framework have been negligent nonetheless. After all, compliance with legal requirements does not without more exclude fault, especially against the background of the growing awareness of climate change and its effects. Therefore, again the individual case and its circumstances are decisive.

C Section 823 (2) BGB

Following s 823 (1) BGB, para 2 states that the same duty (as in para 1) is held by a person who commits a breach of a statute that is intended to protect another person. On the one hand, the scope of protection of the provision is somewhat

149 See above Sub-part II.B.5.

150 See above Part I.

151 See above Sub-part II.B.5. As in the example of Lord Dyson.

152 See above Sub-part II.B.4.

153 Wissenschaftliche Dienste des Deutschen Bundestags „Rechtliche Grundlagen und Möglichkeiten für Klima-Klagen gegen Staat und Unternehmen in Deutschland" (2016) at 10 and 11 (translation: Scientific Services of the German Bundestag "Legal bases and possibilities for climate lawsuits against state and companies in Germany").

broader, because s 823 (2) BGB also covers pure financial loss[154] according to the prevailing view in legal literature and practice.[155] On the other hand, liability under s 823 (2) BGB requires the breach of a protective statute. A protective statute in this sense is not every statute but only those that aim precisely at protecting the plaintiff. Finding such a law in the context of climate change is not easy. The Bundes-Klimaschutzgesetz or the Treibhausgas-Emissionshandelsgesetz (TEHG, GHG Emissions Trading Act), for instance, are public laws and therefore do not aim precisely at protecting the claimant but at the climate as such. Sections 4–6 of the German Umweltschadensgesetz (USchadG, Environmental Damage Act) give individuals the right to demand redress for conduct that is harmful to the environment and thus arguably also to the climate, and therefore do not create a duty of protection for the individual against another party such as a company.[156] The case is arguably different with s 5 (1) Bundes-Immissionsschutzgesetz (BImSchG, Federal Immission Control Act) which only includes the neighbourhood within in the scope of protection. This raises the problem of proximity.[157] Of course, the problems of causation, unlawfulness and fault also exist with s 823 (2) BGB.

D Strict Liability – Focusing on Sections 1 and 2 UmwHG

German law also provides for strict liability. The focus here is on the UmwHG, which is arguably the only Act that might be relevant or useful for climate litigation. The Produkthaftungsgesetz (ProdHaftG, the Product Liability Act), Germany's counterpart to the New Zealand CGA, will be briefly discussed. Sections 1 and 2 UmwHG state that if an environmental impact caused by a facility causes a person's death, injury to his body or damage to his health or property, the operator of the facility has an obligation to compensate the injured person for the resulting damage. The term 'facility' includes several GHG emitting companies like combustion installations for the use of coal and could therefore be quite essential in climate litigation. Furthermore, the UmwHG has the advantage that there is no need for the conduct to be unlawful. Therefore, emissions are also covered that are within the scope of an official permit.[158] Naturally, the issue of fault does not arise in the case of strict liability under ss 1 and 2 UmwHG either. Furthermore, in terms of causation,

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154 In contrast, see above Sub-part B.1.

155 MüKoBGB/Wagner, above n 129, s 823 at 540.

156 Erik Pöttker *Klimahaftungsrecht* (Tübingen, 2014) at 69–71 (Climate Liability Law).

157 See above Sub-part II.B.2.

158 Alexandros Chatzinerantzis and Benjamin Herz "Climate Change Litigation – Der Klimawandel im Spiegel des Haftungsrechts" (2010) NJOZ 594 at 596 (Climate change as reflected in liability law).

s 6 UmwHG states that, if a facility is likely to cause the damage that occurred on the basis of the given facts of the individual case, it is presumed that the damage was caused by that facility.

The UmwHG therefore appears to be promising from a plaintiff's perspective. However, there has not yet been a case in Germany based on these provisions and the tort was also left out in *Lliuya v RWE AG* – arguably due to the following reasons: A claim based on ss 1 and 2 UmwHG, is limited with regard to the legal consequence (compensation) and in terms of amount (s 15 UmwHG). Furthermore, most "extreme weather events" are excluded by s 4 UmwHG which states that no liability for damages shall exist insofar as the damage was caused by force majeure. In addition, only the environmental impacts caused by certain companies are covered. Furthermore, and most importantly, it is not possible to determine in general whether the UmwHG is available for climate litigation as it only covers damage caused by environmental impacts within the meaning of s 3 UmwHG.[159] The deciding factor of whether or not the UmwHG is applicable is determined by the competent court and the particular case.

Finally, to come to the ProdHaftG, it must be said that the scope of the Act does not go further than the UmwHG and thus the same inadequacies arise. In general, the same problems arise mutatis mutandis for the ProdHaftG as for the CGA. Once again, it depends decisively on the interpretation of the courts in legal practice. In conclusion, however, it can be said that compared to the torts listed so far, the UmwHG seems to be quite promising as a tort in climate litigation.

E Legal Remedies

As to compensable damage, German tort law adheres to the universal principle of restitutio in integrum as a "starting-point".[160] The basic principle of full compensation for damage suffered is thus limited by the policy that tort law must

159 Wissenschaftliche Dienste, above n 153, at 11.

160 Sections 249–258 BGB.

not result in enrichment.[161] Punitive damages are not possible. Only actual damage is compensable, which means that "the damage must have been felt"[162]. Focusing on the climate change context, depending on the objectives of statutes, compensation possibilities differ.[163]

Under German tort law, plaintiffs cannot seek recovery for a present risk of future harm. They can only file an action for acknowledgement on the grounds that the prerequisites of a tort provision exist but there is no harm/damage yet. At present, in practice, for a (lower) court to uphold such an action, there must arguably be existing precedents where there is real damage. However, the BGB also allows claims for removal or injunction, in particular s 1004 (1) BGB (but also s 862 (1) BGB for instance). According to s 1004 (1) BGB a property owner may require removal of an interference, if a disturber interferes with the ownership. If further interferences are to be feared, the owner may seek a prohibitory injunction. It is recognised by the courts that a claim based on s 1004 (1) BGB can rest on a violation of any protected right and interest stated in s 823 (1) BGB (such as health).[164] In *Lliuya v RWE AG,* the plaintiff primarily based his claim on s 1004 (1) BGB since he had as yet suffered no actual damage. However, since the disturber must have a causal relationship to the interference, the LG Essen dismissed the action.[165]

IV CONCLUSION

It is astonishing, how the application of tort law in the context of climate change of two completely different legal systems, practised at opposite ends of the world, is so similar. The illustrations of foreseeability, causation and the question of establishing a new tort show how important it is that climate change is increasingly brought to the attention of the population worldwide. In this context, the role that climate change plays is also relevant; it clearly shows how interconnected the world's population is. This in turn is reflected in the question of who can be a neighbour of an affected person and how the concept of neighbour is to be interpreted in the light of climate change, which above all show the prerequisites of proximity on the one

161 Marie-Louise Larsson *The Law of Environmental Damage. Liability and Reparation* (Stockholm, 1999) at 351.

162 BGH NJW 1986, 2037.

163 For example, see the conclusive rights protected by s 823 (1) BGB, above Sub-part B.I.; see Larsson, above n 161, at 353.

164 BeckOK BGB/Förster, above n 128, at s 823 at 50.

165 *Lliuya v RWE AG,* above n 125, at 40–47; another issue concerning s 1004 BGB is that interference must be tolerated if insignificant s 906 BGB), which is arguably the case for minor emitters (see Pöttker, above n 156, at 127).

hand and the protective provisions in s 823 (2) BGB on the other. Then of course the actual individual case and how far the competent court is willing to push the limits of the respective tort always play a role. These limits are particularly reflected in the prerequisites of foreseeability, breach of duty, causation, statutory and regulatory defences, special damage (as well as the other restrictions in *Smith v Fonterra*) and the CGA on the New Zealand side, and the prerequisites of infringement act, causation, unlawfulness and UmwHG on the German side. Across prerequisites, the question of indeterminate liability also plays a role.

The two cases *Smith v Fonterra* and *Lliuya v RWE* have been decided only marginally differently in many respects, such as the issue of breach of duty respectively of infringing act, causation, or official/statutory defences respectively of unlawfulness. The two cases would arguably not have been decided significantly differently (ie at least with the same outcome) in the other legal system. This is partly because the two tort systems are poorly adapted to climate litigation, ie to dealing with the consequences of large-scale industrial activity. Partly this is arguably also due to the fact that the courts have dealt with the cases somewhat restrictively. This could change, at least in Germany, with a decision in the second instance of the OLG Hamm, which seems to want to push the definitions a little further.

As this article shows, in both legal systems, many shortcomings of the existing, traditional legal systems could be addressed with a slightly more progressive approach. Concerning causation, for instance, despite minor differences in jurisdiction, a common principle in both legal systems is that where two or more causes combine to bring about harm, an act is legally causative if it materially contributes to the harm.[166] This principle should be quite decisive in the question of causation. Furthermore, and most importantly, headway is evidently being made in science. Developments in climate science and research, particularly attribution science, could bolster climate litigation. Courts may be more willing to hold corporations responsible if their emissions can be scientifically linked to their actions.[167]

Overall, the Common Law by its nature seems to be more flexible to adapt to changes such as climate change. Kysar in particular demonstrates that the Common Law has all the tools needed to include climate change in the tort structure.[168] Although it is true that in the German legal system, the constituent elements of a tort provision can be interpreted more "climate friendly" and thus become more flexible,

166 Holt and McGrath, above n 8, at 28.

167 Kysar, above n 41, at 4; Winkelmann, Glazebrook and France, above n 62, at [109].

168 Kysar, above n 41.

German courts in particular seem to be cautious when it comes to a wider interpretation of the codified law. Due to the issue of unlawfulness alone, a path via the UmwHG seems the most likely way to address the issue of climate change by way of tort law in Germany.

In contrast, more and more voices in New Zealand are calling for more creativity of judges in declaring and making law in climate litigation.[169] Influenced by the growing body of climate litigation throughout the world, New Zealand judges also seem to be increasingly aware of climate change as a problem that can also in part be tackled by the courts. This becomes especially obvious in *Smith v Fonterra* or cases like *Thomson v Minister for Climate Change.*[170] Although the plaintiffs were ultimately unsuccessful in these cases, they demonstrate the willingness of the courts to adjudicate on climate change issues. In *Smith v Fonterra* this becomes visible by the remarks on an inchoate duty.

In conclusion, it can be said that the current tort law of two very different, yet westernised, advanced legal systems leaves room for interpretation when it comes to climate change. In many respects, the task now is for policy-makers and legal scholars and also for the courts to fill the space. Hopefully tort law in common law and civil law legal systems evolve to meet the challenge of climate change.

169 Hodder, above n 114, at 3 and 4; Holt and McGrath, above n 8, at 28.

170 *Thomson v Minister for Climate Change Issues* [2018] 2 NZLR 160.