Transnational corporate liability in the era of loss and damages: the case of *Asmania Et Al. V Holcim*

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DOI: 10.54103/milanoup.151.c195

As the climate and ecological crisis exacerbates, its effects are increasingly contributing to loss and damage (L&D) around the world, disproportionately affecting those who have contributed the least to climate change and have the least economic capacity to cope with it. Despite this pressing scenario, efforts at the UN level have so far failed to secure sufficient funding for vulnerable states to address L&D. Against this background, attention has been increasingly focusing on litigation targeting public and private actors for their contribution to climate-related impacts. Civil litigation has been a primary course of action for attempting to attribute responsibility to major private polluters. Yet, despite offering an opportunity to embark on a potential road to reparation, tort-based claims face several procedural, legal and evidentiary challenges, especially when it comes to extraterritorial responsibility. This article presents a detailed analysis of *Asmania et al. v. Holcim*, the lawsuit filed by four inhabitants of the island of Pari, Indonesia, against the Swiss cement company Holcim for its contribution to climate change and consequently to the financial and non-financial damages suffered by the plaintiffs due to sea level rise on the island. The authors argue that despite the challenges posed by the traditional tort system a new interpretation of Swiss civil law provisions might open the possibility for a civil liability regime able to effectively address the question of climate related L&D in an extraterritorial setting.

Keywords: Loss and Damages; climate litigation; Small Island and Developing States; Swiss tort law; human rights; climate reparations; transnational litigation; corporate accountability

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1. Introduction

As the climate and ecological crisis exacerbates, its effects are increasingly contributing to loss and damage (L&D) around the world, particularly affecting Indigenous Peoples, small islands developing states and those in the Global South, who have contributed the least to climate change and have the least economic capacity to cope with it.[2] Although the UN Framework Convention on Climate Change (UNFCCC) does not provide a definition of the term L&D, the literature suggests that it encompasses both reversible and irreversible impacts that cannot be avoided either because they surpass the limits to adaptation and mitigation (unavoidable) or due to financial or technical constraints (unavoided).[3] Another categorization of L&D is that of economic and non-economic loss and damages (NELD). While economic L&D corresponds to harm that can be assigned a financial value or be associated with loss of earnings, NELD refers to tangible or intangible impacts that cannot be commercialised but still hold significant value for people, e.g. loss of biodiversity, territory, cultural heritage, or traditional knowledge.[4]

The latest IPCC report establishes that L&D are rising dramatically;[5] potential costs for developing countries have been estimated to amount to a total of US$290–580 billion in 2030 and reach US$1–1.8 trillion in 2050 (excluding

2 H. O. Pörtner, (Ed.), *Climate Change 2022: Impacts, Adaptation and Vulnerability: Working Group II Contribution to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change*, Cambridge University Press, 2022.

3 M. Doelle, & S. L. Seck, *Introducing loss and damage*, in *Research Handbook on Climate Change Law and Loss & Damage*, Edward Elgar Publishing, 2021, p. 1-16.

4 E. Boyd, B. C. Chafin, K. Dorkenoo, G. Jackson, L. Harrington, A. N'guetta, & Stuart-Smith, *Loss and damage from climate change: A new climate justice agenda,* One Earth, 4(10), 2021, p. 1365-1370.

5 See H. O. Pörtner. (Ed.), 2022 (n 2).

non-financial damages).[6] Despite this pressing scenario, efforts at the UN level have so far failed to secure finance for vulnerable states to address L&D, mainly due to a strong resistance by industrialised countries around questions of historical responsibility, equity and fairness.[7] The COP 27 decision to establish a fund to assist developing countries in responding to L&D[8] represents a major step forward, nevertheless it is yet to be operationalized and resourced sufficiently to meet the needs of those who are most affected.

Against this background, attention has been increasingly focusing outside the UN system, especially through litigation targeting not only states but also private corporations as actors to be held accountable for their contribution to climate-related impacts.[9] Recent research shows that 108 corporations are responsible for 52% of global industrial greenhouse gas emissions (GHG) since the industrial revolution.[10] Not only have these corporations profited massively "from their actions while externalising the associated harm",[11] but they have done so despite having access to scientific data on the significance of climate change and the contribution of their business activities to its impacts.[12]

Civil litigation has been a primary course of action – mainly due to its compensatory function – for attempting to attribute responsibility to major private polluters and to seek redress for the L&D they have contributed to.[13] Yet, despite offering an opportunity to embark on a potential road to reparation, tort-based claims face several procedural, legal and evidentiary challenges, especially when it comes to extraterritorial responsibility, which might be the course of action in the case of claimants from the Global South seeking monetary compensation from a corporation based in the Global North for the cross-border impacts of its GHG emissions. This is the case of four islanders of the island of Pari,

6 A. Markandya, M. Gonzalez-Eguino, *Integrated assessment for identifying climate finance needs for loss and damage: A critical review*, in R. Mechler, Reinhard, et al, *Loss and damage from climate change: Concepts, methods and policy options. Springer Nature*, 2019, p. 343-362.

7 Grantham Research Institute On Climate Change And The Environment, *What is climate change 'Loss and Damage'*, 28.10.2022.

8 UNFCCC, Decision -/CP.27 -/CMA.4, *Funding arrangements for responding to loss and damage associated with the adverse effects of climate change, including a focus on addressing loss and damage*, 20.11.2022.

9 Sabine Center for Climate Change, S. (ed.), *Corporation Archives*, in Global Climate Change Litigation Database, 19.03.2023.

10 P. Griffin, & C.R. Heede, *The carbon majors' database.* CDP carbon majors' report 2017, 14.

11 S. Mascher, *Towards a civil liability regime for climate-related loss and damage*, in M. Doelle, S. Seck (ed.), *Research Handbook on Climate Change Law and Loss & Damage,* Edward Elgar Publishing, 2021. p. 350-368.

12 P.C. Frumhoff, R. Heede, N. Oreskes, *The climate responsibilities of industrial carbon producer*s, Climatic Change, 2015, vol. 132, no 2, p. 157-171.

13 M. Doelle, S. Seck, *Loss & damage from climate change: from concept to remedy?* Climate Policy, 2020, vol. 20, no 6, p. 669-680.

Indonesia who, inspired by the German case *Luciano Lliuya v. RWE*[14], have filed a civil lawsuit against the Swiss based building materials company Holcim, seeking not only a reduction of absolute CO2 emissions, but also proportional compensation for climate change-related damages on the island, as well as a financial contribution to adaptation measures in Pari.[15]

Due to the transboundary nature of climate change the question of extraterritorial obligations of states and corporations is becoming increasingly relevant. This article will present a novel approach to transnational civil litigation in the context of climate change, through the analysis of the case *Asmania et al. v. Holcim*. It argues that despite the challenges posed by the traditional tort system a new interpretation of Swiss civil law provisions might open the possibility for a civil liability regime able to effectively address the question of climate related L&D. To this end, the first section will reflect on the use of civil litigation (primarily tort law) as a way forward in seeking redress for those affected by climate change in transnational contexts. The second section will present how the plaintiffs in *Asmania et al. v. Holcim* addressed the main challenges linked to a tort-based climate litigation in an extraterritorial setting. Finally, the third section will reflect on the value of advancing transnational litigation efforts in the context of climate change and its potential for addressing questions of climate and distributive justice.

2. Corporate accountability for climate related loss and damages

The extremely rapid pace at which climate impacts, including extreme and slow onset events, are increasingly affecting the lives of vulnerable communities worldwide, particularly in the Global South, combined with the lack of effective and timely solutions at the political level, have reinforced the need to seek alternative legal avenues to ensure redress for those on the frontlines of climate change. Within this context, large private corporations – primarily the so-called 'carbon majors'[16]- have become the focus of several claims seeking monetary compensation to reduce the financial burden of climate related L&D.[17] Due to the myriad of hurdles faced by such lawsuits, to date, most have been unsuccessful.

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14 The Grantham Research Institute on Climate Change and the Environment at London School of Economics, *Luciano Lliuya v. RWE,* in Climate Change Laws of the World, 15.03.2023.

15 See Sabine Center for Climate Change, S. (ed.), *Asmania et al. vs. Holcim*, in Global Climate Change Litigation Database, 19.03.2023.

16 C. P. Frumhoff, et alt. 2015 (n 12).

17 D. A. Kysar, *What climate change can do about tort law,* in *Envtl. L.*, 2011, vol. 41, p. 1; C. Higham, H. Kerry, *Taking companies to court over climate change: who is being targeted?* LSE Business Review, 2022; P. Toussaint, *Loss and damage and climate litigation: The case for greater interlinkage*, in *Review of European, Comparative & International Environmental Law*, 2021, vol. 30, no 1, p. 16-33.

These include, most prominently, *Comer v. Murphy Oil* and *Native Village of Kivalina v. ExxonMobil Corp*, filed before US courts, in 2005 and 2007 respectively. In Comer,[18] plaintiffs sought financial compensation from a number of fossil fuel companies for their contribution to climate change and thereby to the ferocity of Hurricane Katrina, which caused catastrophic damages, particularly in New Orleans. The Court dismissed the case based on the plaintiffs' inability to prove a causal link between the alleged damage and the companies' GHG emissions.[19] In the same vein, the impossibility to prove causality together with questions around the justiciability of the matter – also known as the 'political question doctrine' in common law jurisdictions – precluded the inhabitants of Kivalina, Alaska from obtaining redress from major hydrocarbons and power companies for their potential relocation, due to the erosion of the Kivalina coast as a result of climate change.[20]

More recently, two unprecedented lawsuits, *Luciano Lliuya v. RWE* and *Asmania et al. v. Holcim*, were brought before German and Swiss courts respectively, seeking compensation from private corporations for climate related harm. As will be discussed in the following chapters, the particularity of these cases lies, first, in the extraterritorial aspect of the claims, as the plaintiffs are based in Peru and Indonesia respectively, and, second, in the way in which the plaintiffs have interpreted tort law so that it can respond to the complexity of climate change. Much has been written about the procedural and legal challenges posed by climate-related tort litigation, including primarily issues of attribution, causation and justiciability.[21] This section will first question whether, despite these obstacles, civil litigation can offer a way forward for individuals and communities affected by climate change. To this purpose it will discuss how the issues of causality, attribution and unlawfulness were addressed by Saúl Luciano Lluiya, the Peruvian plaintiff in the case against RWE. This will be followed by a reflection on the horizontal impacts of human rights based climate litigation in relation to tort law, as a phenomenon of legal cross-pollination that might increasingly contribute to moving beyond a restrictive interpretation of legal concepts that prevent effective climate litigation under civil law.

18 Sabine Center for Climate Change, S. (ed.), *Comer v Murphy Oil*, in Global Climate Change Litigation Database, retrieved on 19.03.2023.

19 M. Hinteregger, *Climate change and tort law*, in *Climate Change, Responsibility and Liability*, Nomos Verlagsgesellschaft mbH & Co. KG, 2022, p. 383-414.

20 Sabine Center for Climate Change, S. (ed.), *Native Village of Kivalina v. ExxonMobil Corp,* in Global Climate Change Litigation Database, retrieved on 19.03.2023.

21 D. A. Kysar, 2015 (n 17); M. Hinteregger, *Civil liability and the challenges of climate change: a functional analysis*, in *Journal of European Tort Law*, 2017, vol. 8, no 2, p. 238-259.

2.1. Civil litigation a way forward?

Although L&D has mainly been discussed at the political level, it remains true that climate change, and thus its impacts, are a legal issue and even more a matter of justice and rights.[22] In the absence of specific legislation relating to civil liability and compensation for climate change induced damages, tort law has become the default legal avenue to fulfil the basic principle of law determining that "those who cause significant, foreseeable harm to others should be held liable for damage they cause victims of this harm".[23] Nevertheless, such lawsuits have confronted the courts with complex questions around harm, causation and responsibility, calling into question the 'suitability' of conventional tort law for the compensation of climate damages. [24]

Along with procedural and justiciability related hurdles, evidentiary challenges remain one of the major obstacles plaintiffs face when seeking redress for L&D in court. The climate system is "diffuse and disparate in origin, lagged and latticed in effect"[25] which makes it complex to demonstrate a linear causal link between the defendant's behaviour (emissions) and the plaintiff's injury (climate related harm). This becomes even more challenging as there are multiple polluters contributing to climate change and in turn to its impacts. However, climate change is not the first constellation in which courts have found themselves facing a case that defied the existing system for compensating and deterring harm. In certain medical and toxic tort cases, like asbestos or tobacco, courts have developed innovative approaches that have provided solutions for complex causality scenarios.[26] Some of these theories acknowledge not only liability in case of concurrent, cumulative and alternative causality constellations, but they also provide for solutions to apportion compensation according to the statistical evidence of causation.[27]

As Verheyn explains, science can rarely determine cause-effect relationships with 100% certainty, rather scientists will generally refer to the likelihood of an event in terms of probability.[28] Since climate change may increase the likelihood or intensity of an extreme event, attribution statements in this context are typically probabilistic.[29] This has also been the case in lawsuits seeking compensation for medical conditions arising from exposure to tobacco and asbestos,

22 C. P. Frumhoff et alt. 2015 (n 12).

23 S. Mascher, (n 11) referring to R.V. Pervical, *Liability for environmental harm and emerging global environmental law*, Md. J. Int'l L., 2010, vol. 25, p. 37, 38.

24 M. Hinteregger, 2022 (n 19) at 383.

25 D. A. Kysar, 2015 (n 17) at 41.

26 M. Hinteregger, 2022 (n 19) at p. 397.

27 *Ibidem.*

28 R. Verheyen, *Loss and damage due to climate change: attribution and causation-where climate science and law meet,* in *International Journal of Global Warming*, 2015, vol. 8, no 2, p. 158-169.

29 R. F. Stuart-smith, F.E. Otto, A. I. Saad, G. Lisi, P. Minnerop, K. C. Laut, & T. Wetzer, *the evidentiary gap in climate litigation* in *Nature Climate Change*, 2021, vol. 11, no 8, p. 651-655.

where such conditions may have occurred in the absence of this exposure.[30] While it might be complex to meet the requirements of causality tests in different jurisdictions on the basis of probabilistic assessments, it is noteworthy that courts around the world have already ruled that anthropogenic climate change is happening (general causation), based on the IPCC reports, despite its probabilistic approach.[31]

Furthermore, recent developments in attribution science have made it possible not only to determine the contribution of a specific company to climate change in terms of GHG emissions[32] but also to establish when human made climate change has contributed to specific events (specific causation)[33] as well as the damages attributable at least partially, to anthropogenic climate change (damage attribution).[34] Similarly, in certain cases, attribution science would be able to provide evidence showing that the defendant's conduct has made a plaintiff worse off (in terms of intensity of the harm), which would align with the logic of the 'but-for' test and the *conditio sine qua non* formula.[35] Against this background, science seems to be expanding the horizon of tort law.

Along these lines, Ganguly et al. concluded that new developments in climate science, recent changes around legal discourse, particularly in relation to the augmented value of successful tobacco and asbestos litigation, have significantly raised the chances of success for plaintiffs in pending and future climate change cases.[36]

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30 *Ibid,* at 652.

31 See Bundesverwaltungsgericht, Federal Administrative Court, 8 C 13/05, Judgement of 25.01.2006, Bundesverfassungsgerich (Federal Constitutional Court), 1 BvF 1/05, Judgement of 13.03.2007, LG Köln, 28 O 456/05, Judgement of 26 October 2005; Supreme Court of the United States, Massachusetts et al. v. Environmental Protection; Gerechtshof Den Haag, *Urgenda Foundation vs The State of Netherlands*, C/09/456689/HA ZA 13-1396, 9.10.2018; Bundesverfassungsgericht, *Neubauer et al. vs Germany*, Beschluss des Ersten Senats, BvR 2656/18, 78/20, 96/20, 288/20, 24.3.2021.

32 P. Griffin, & C.R. Heede, 2017, (n 10); B. Ekwurzel, J. Boneham, M.W. Dalton, R. Heede, R.J. Mera, M. R. Allen & P.C. Frumhoff, *The rise in global atmospheric CO2, surface temperature, and sea level from emissions traced to major carbon producers*, Climatic Change, 2017, vol. 144, no 4, p. 579-590.

33 R. F. Stuart-smith et al., 2021, (n 29) at 652; F. Stuart-Smith, G. H. Roe, S. Li, & M.R. Allen, *Increased outburst flood hazard from Lake Palcacocha due to human-induced glacier retreat,* in *Nature Geoscience*, 2021, vol. 14, no 2, p. 85-90 (b).

34 B. H. Strauss, P. M. Orton, K. Bittermann, M.K. Buchanan, D.M. Gilford, R.E.Kopp & S. Vinogradov, *Economic damages from Hurricane Sandy attributable to sea level rise caused by anthropogenic climate change* in *Nature Communications*, 2021, 12(1), 2720; J. Hinkel, G. Gussmann, V. Völz, D. Lincke, Heutige und zukünftige Auswirkungen des Klimawandels und Meeresspiegelanstiegs auf der Insel Pari, GCF Working Paper 1/2023, Global Climate Forum, Berlin 2023.

35 R. F. Stuart-smith et al et al., 2021, (n 29) at 652; R.F. Stuart-Smith, A. Saad, F. Otto, G. Lisii, K. Lauta, P. Minnerop & T. Wetzer, A*ttribution science and litigation: facilitating effective legal arguments and strategies to manage climate change damages*, 2021.

36 G. Ganguly, J. Setzer, V. Heyvaert, *If at first you don't succeed: Suing corporations for climate change, Oxford Journal of Legal Studies,* 2018, vol. 38, no 4, p. 841-868.

Following Dougals Kysar's thinking around the question of "what climate change can do about tort law?",[37] it can be argued that an influx of climate change claims, like the one filed by the people of Pari island against the cement giant Holcim, may force a reevaluation of tort law as they will require courts to better articulate or reform areas of doctrine that are not well equipped for the complexity of climate change.[38] These cases represent an opportunity for judges to reinterpret the law in a way that is aligned with the current risks to be adjudicated in our society as well as to address the corporate accountability gap – especially of carbon majors – within the framework of climate change.[39]

As the science of attribution continues to provide increasing clarity on the actors that have contributed heavily and historically to climate-related L&D as well as on the complexities underlying climate change, it will become harder for judges to continue to rely on rigid legal and evidentiary requirements that, as the toxic and asbestos cases demonstrate, can be reinterpreted in order to comply with demands of fairness and justice.

2.2. Breaking legal paradigms

The case of *Luciano Lliuya v. RWE* was the first transnational climate litigation case in civil courts when filed on 24 November 2015 in Germany.[40] In his claim, the Peruvian mountain guide and farmer Saúl Luciano Lliuya argues that his house is threatened by a flood wave from a nearby glacial lake Palcacocha, which is more likely to occur due to climate change. He asks the court to declare RWE – Germany's biggest energy corporation, with large operations in the coal business – responsible to bear a share of the costs of appropriate protective measures, in order to protect the plaintiff's property from the glacial flood. The relevant share in the case is 0.47 percent of the overall costs, because, as he argues, RWE caused 0.47 percent of all industrial greenhouse gas emissions.[41] Interestingly, the claim is built on German property rights, more specifically on Section 1004 of the German Civil Code, the basic nuisance provision for property under German law. Although more than 10'000 kilometres distance the corporation's headquarters in Germany from the village in the Peruvian Andes where the plaintiffs lives, he argues that they both live in a neighbourly relationship and that the corporate behaviour and emissions of RWE thus

37 D. A. Kysar, 2015 (n 17) at 41.

38 W. Bonython, *Tort law and climate change*, in *The University of Queensland Law Journal*, 2021.

39 J. Galperin, D.A. Kysar, *Uncommon Law: Judging in the Anthropocene, in Climate Change Litigation in the Asia Pacific*, Cambridge University Press 2020, 2020, no 2020-33.

40 For an overview of the timeline and legal documents see Germanwatch, *The climate case – Saúl vs. RWE*, retrieved on 20.3.2023 or Sabine Center for Climate Change, S. (ed.), *Luciano Lliuya v. RWE AG,* in Global Climate Change Litigation Database, retrieved on 20.03.2023.

41 Regional Court of Essen, *Lliuya vs. RWE*, claim filed on 23 November 2015, p. 18.

affects his property.[42] While rejected in the first instance by the Regional Court of Essen on 15 December 2016 due to lack of legal causality (yet conceding a potential 'scientific causality'), the second instance Higher Regional Court of Hamm acknowledged in November 2017 that the effect of climate change in the Global South can, in principle, be attributed to major emitters like RWE, even though such an emitter might be operative in a completely different part of the world.[43] The Higher Regional Court of Hamm found that climate change has cross border effects which has brought about a kind of global neighbourly relationship, which is why Section 1004 of German property law is applicable. In an oral hearing the judges stated: "We live at the bottom of a sea of air. This circumstance necessarily means that human action extends into the distance […] If the permission or prohibition of such an emission is to be determined, one must not only consider the relationship of neighbour to neighbour; rather, the scope of the owner's right can be made to bear on all people. […] Someone who causes or spreads imponderabilia must know that these go their own way. Their propagation across the border can be attributed to them as a consequence of their action."[44]

With these preliminary findings, the case already broke a legal paradigm. If upheld by the judgement and higher instances, this means that corporate emitters *can be* liable for the consequences of their emissions if there is sufficient scientific evidence to prove causation to the specific damage. Since then, the case entered the stage of assessing the case-specific causation in an extensive evidentiary proceeding. Thereto, the judges and court appointed independent experts travelled in May 2022 to the Peruvian Andes to assess the facts on the ground.[45] It remains to be seen if the scientific evidence presented to the judges convinces them of the threat to the plaintiff's property in question. Yet, importantly, the longer this case runs in court, the more scientific data and studies emerge on the relevant causality questions. A recent study published by researchers from the University of Oxford and the University of Washington, for example, concluded that it is virtually certain (>99% probability) that the retreat of Palcaraju glacier cannot be explained by natural variability alone, and that the retreat of the glacier until 1941 represented already an early impact of anthropogenic greenhouse gas emissions. They observe further that the overall retreat of the glacier is entirely attributable to the rise of temperature, and that

42 *Ibid*, p. 2-3, 25-31. See further N. Walker-Crawford, *Climate change in the courtroom: An anthropology of neighbourly relations*, in *Anthropological Theory*, 23/1 (2023), p. 76-99.

43 Oberlandesgericht Hamm, *Lliuya vs RWE*, Hinweis- und Beweisbeschluss, 30.11.2017 and oral hearing of 17.11.2017.

44 Quote mentioned in Germanwatch, *A precedent-setting case*, in The Climate Case – Saúl vs. RWE, retrieved on 20.3.2023.

45 See e.g. S. Kaplan, *A melting glacier, an imperilled city and one farmer's fight for climate justice*, in Washington Post, 28.08.2022.

the resulting change in the geometry of the lake and valley has substantially increased the outburst for local flood hazards.[46]

As for the question of unlawfulness, the Higher Regional Court of Hamm held in very general terms that it is in accordance with legal systematics that a person who acts lawfully can also be held liable for the impairment of property caused by him or her. Any reasons why this fundamental legal concept should not apply in the context of 1004 and 1011 BGB are not apparent and do not result from the intention of the legislator or from the principles of teleological interpretation either. The court stated further, as brought forward by the defendant, that the case was not about a question of an omission in breach of duty, but of active (co-)causation of the flood hazard through the active operation of the power generation companies or the subsidiaries controlled by RWE.[47] In addition to the preliminary findings mentioned above, this judicial conclusion is of great relevance for other civil proceedings, such as the case of *Asmania et al. v Holcim*.

2.3. Horizontal effects of climate change litigation

Since the first cases filed before US courts in 2005 and 2007 respectively, practitioners in the field of climate litigation have been carefully following the legal developments around the globe. The questions of attribution, unlawfulness and causation around climate change as well as the handling of scientific evidence in legal fora are relevant in each case, regardless of whether it is brought against a state or a corporation. And since climate litigation in recent years was increasingly put forward through a human rights lens addressing human rights bodies and courts,[48] findings of these institutions also inspired arguments in civil proceedings. The RWE claim, for instance, offered various references to the *Urgenda* case, which at the time was before lower Dutch courts.[49]

The rulings of the Dutch courts in *Urgenda* were furthermore the basis for the case *Milieudefensie et al. v. Royal Dutch Shell plc.*, which can be deemed as a major catalyst of this development.[50] The 2021 ruling of the Hague District Court in this case marks the first time a court imposes a specific mitigation obligation on

46 R. F. Stuart-smith et al. (n 33b), p. 85-90.

47 Oberlandesgericht Hamm, *Lliuya vs RWE*, Hinweis- und Beweisbeschluss, 30.11.2017, p. 2-3.

48 See for many J. Fraser and L. Henderson, *The human rights turn in climate change litigation and responsibilities of legal professionals*, in *Netherlands Quarterly of Human Rights*, Vol. 40/1 (2022), p. 3-11. C. Heri, *Climate Change before the European Court of Human Rights: Capturing Risk, Ill-Treatment and Vulnerability*, in *The European Journal of International Law*, Vol. 33/3 (2022), p. 925-951.

49 *Lliuya against RWE*, claim filed on 23 November 2015 to Regional Court of Essen, p. 28, 33 and 36, referring to Gerechtshof Den Haag, *Urgenda Foundation vs The State of Netherlands*, C/09/456689/HA ZA 13-1396, 9.10.2018.

50 The Hague District Court, *Milieudefensie et al. vs Royal Dutch Shell plc.*, C/09/571932/HA ZA 19-379, 5.5.2021, referring to the Urgenda judgments in paras 2.4.13. and 4.4.10.

a private company based on its duty of care towards current and future Dutch residents based on an unwritten duty of care established in the Dutch civil code.[51] In its decision the Court took into consideration the United Nations Guiding Principles on Business and Human Rights (UNGPs), the OECD Guidelines for Multinational Enterprises, and other soft law instruments as a guideline for interpretation of the unwritten standard of care. The interpretation of the court showed that it considered the UNGPs to be "the global standard of expected conduct for corporations, establishing the corporate responsibility to respect human rights over and above compliance with national laws and regulations".[52]

The cascade of influence and reference continues with the German Federal Constitutional Court or the UN Human Rights Committee referring to the *Urgenda* judgement,[53] and the claims against Volkswagen[54] and BMW[55] in Germany referring again to the judgement of the German Federal Constitutional Court. Consequently, civil courts, as e.g. the Hague District Court, referred to arguments arising from human rights cases based on public law, but also constitutional courts and human rights bodies increasingly use arguments that were being developed under tort law in other jurisdictions. This, in turn, informed the arguments brought forward in *Asmania et al. v Holcim*, as will be described below in more detail.

3. Asmania et al v Holcim

3.1. Facts of the case

3.1.1. The Plaintiffs

The four plaintiffs, Asmania, Arif Pujianto, Mustaqfirin (Bobby) and Edi Mulyono live on Pari, a small island in the Indonesian Western Pacific Ocean. Pari is located about 40 km from Jakarta, the capital of Indonesia. The island is about 2.6 km long and measures 430 m at its widest point. Approximately 1,500 inhabitants live permanently on the island.[56]

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51 The Hague District Court, *Milieudefensie et al. vs Royal Dutch Shell plc.*, C/09/571932/HA ZA 19-379, 5.5.2021. See further C. Macchi and J. van Zeben, *Business and human rights implications of climate change litigation: Milieudefensie et al. v Royal Dutch Shell*, in *Review of European, Comparative & International Environmental Law*, Vol. 30/3 (2021), p. 409-415.

52 The Hague District Court, *Milieudefensie et al. vs Royal Dutch Shell plc.*, C/09/571932/HA ZA 19-379, 5.5.2021, paras 4.4.2. and 4.4.11. See further C. Macchi and J. van Zeben, *Business and human rights implications of climate change litigation: Milieudefensie et al. v Royal Dutch Shell*, in *Review of European, Comparative & International Environmental Law*, Vol. 30/3 (2021), p. 409-415.

53 See Bundesverfassungsgericht, *Neubauer et al. vs Germany*, Beschluss des Ersten Senats, BvR 2656/18, 78/20, 96/20, 288/20, 24.3.2021, p. 59, 68, 69, 86 and 93; Human Rights Committee, *Daniel Billy et al,* CCPR/C/135/D/3624/2019, 22.09.2022, paras 4.7, 10 and 14.

54 *Anspruchsschreiben an Volkswagen AG*, 2.9.2021, p. 2, 6, 7, 22, 26.

55 See *Deutsche Umwelthilfe vs. Mercedes-Benz AG*, Claim filed on 21.09.2021 to the Regional Court of Stuttgart, p. 6-7, 28, 46, 67.

56 *Asmania et al. vs Holcim*, claim filed to the District Court of Zug on 30.01.2023, p. 18.

Asmania has lived on Pari Island since 2005 with her husband and three children. The family makes a living from fishing and started tourism activities in 2013. They own a fish farm and operate a so-called homestay, a private accommodation for tourists visiting Pari, predominantly holiday guests from the Jakarta area. In addition, they run a small shop for daily tourist groceries and rent out snorkel equipment for tourist trips to the nearby coral reefs.

Arif Pujanto came to the island as a young boy with his parents and has since lived, meanwhile with his wife and an adult son, at the south-western end of the island, very close to a picturesque beach called Pantai Bintang (starfish Beach). Arif Pujanto understands his cultural identity as a traditional fisherman. Nowadays he works as a mechanic since fishing has not brought enough income in recent years. He also coordinates the work of a neighbourhood group to keep the beach and its recreational facilities clean and maintained for guests.

Mustaqfirin, called Bobby, and Edi Mulyono both grew up in Pari, as did their ancestors. Bobby works as a traditional fisherman and is active as the coordinator of a local neighbourhood initiative called Forum Peduli Pulau Pari (Forum Care of Pari Island), which works for the well-being of the island and its inhabitants, including in particular environmental protection. He and his wife have four children. Edi Mulyono is also a traditional fisherman. He owns two homestays, which he rents out to short-stay tourists, and two boats which he uses for fishing as well as for tourist trips to the nearby coral reefs. Edi Mulyono is also a local tourism coordinator for the island and, as such, takes care of the protection of the island and its ecological and economic existence within the framework of community initiatives.[57] The four plaintiffs and their legal cause are supported by a strong community and a community-based association with the mandate to protect the island and its inhabitants.

3.1.2. The Effects of Climate Change on Pari Island

The Intergovernmental Panel on Climate Change (IPCC)[58] states that climate change is an existential threat to small islands and low-lying coasts.[59] Due to climate change induced sea level rise such areas are exposed to cascading and mutually reinforcing impacts (and this – in the IPCC's jargon – with a "high

57 *Ibidem*, p. 18-22.

58 The IPCC was founded in 1988 as an institution of the United Nations and is both a scientific body and an intergovernmental committee (UN institution) with 195 member states. In its regularly published Assessment Reports [AR], the current state of scientific knowledge on climate change is synthesised and evaluated by experts based on the analysis of thousands of scientific studies. The Assessment Reports are adopted with the consent of all Member States, which is why they have a particularly high level of legitimacy. The aim of these reports is to objectively assess the current and future dangers of climate change, as well as to generate possible solutions from the scientific community.

59 IPCC, *Summary for Policymakers*, in Climate Change 2022: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change, B.4.5.

confidence level"): loss of coastal ecosystems and ecosystem services, salinisation of groundwater[60] or the flooding and damage to coastal infrastructure. These impacts in turn affect the health, well-being, food and water security, including access to safe drinking water, as well as the cultural values of the humans living in these areas.[61] On small islands, climate change leads to loss of assets, economic degradation due to the destruction of infrastructure, economic decline and collapse of livelihoods in fisheries and tourism. It causes loss of biodiversity in traditional agro-ecosystems and, ultimately, reduced habitability of small islands, leading to displacement of islanders.

Indonesia's geographic location and its many coastlines make it particularly vulnerable to these effects. The World Bank therefore classified Indonesia as particularly vulnerable to climate risks. Estimations show that by the end of the century, more than 4.2 million people in Indonesia will be exposed to flooding every year if no climate protection and adaptation measures are taken.[62]

The plaintiffs' claim that these abstract scenarios described in the IPCC and by the World Bank unfold on Pari island already today. In their claim, they present not only general scientific evidence on anthropogenic climate change, but also evidence on the causality chain of sea level rise and its impact in the region, ultimately leading to the specific damages brought forward by the plaintiffs (occurring in 2021 and impending for the future). They argue that due to anthropogenic greenhouse gas emissions, in the pacific region around Pari, the mean sea level rose by 11-21 cm between 1861 and 2005. From 2005 to 2021 human-induced sea level continued to rise again by 5 cm. That adds up to a total sea level rise of 16-26 cm from 1861 until 2021. With that pace, the average sea level around Pari is rising faster than on the global average.[63] Pari island lies on a coral reef, is partly forested, and has three main beaches maintained by the island's inhabitants, which are regularly visited by tourists. On its highest point in altitude, Pari Island's elevation measures 1.5 metres.[64] This geographic location combined with the low elevation above sea level and the relatively low variability of the water level (low tides, low extreme water levels, low waves),

60 IPCC, *Climate Change 2021: The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change, Chapter 12*, p. 1786.

61 *Ibid*, at B.4.2, B.4.3, B.5.2 and figures SPM.2, SPM.3.

62 The World Bank Group, *Indonesia*, Climate Change Overview, World Bank Climate Change Knowledge Portal, 2020; The World Bank Group and Asian Development Bank, *Climate Risk Profile: Indonesia* (2021), p. 16, p. 2 and 17, Table 7.

63 Mean global sea level rose by 0.2 (range: 0.15-0.25) metres, or 20 cm, between 1901 and 2018. The average rate of sea-level rise has also increased massively. Between 1901 and 1971, the rise was 1.3 [0.6 to 2.1] mm per year, from 1971 to 2006 it was 1.9 [0.8 to 2.9] mm per year and from 2006 to 2018 already 3.7 [3.2 to 4.2] mm per year. IPCC, *Summary for Policymakers*, 2021 (n 59); J. Hinkel et al. 2022 (n 34), paras 2.1.2 und 2.2.2.

64 According to Hinkel et al., 68 percent of the Pari island complex lies below the present 100-year extreme water level of 1.07 m; J. Hinkel et al. 2022 (n 34)p. 17.

make Pari particularly exposed to sea-level rise and therefore in scientific terms a 'high-risk area'[65], as even a small rise in mean sea level implies major changes in flood risk.[66] Consequently, they say, Pari is very concretely and particularly affected by the impacts of global climate change.

According to the inhabitants of the island, these risks have already materialised as floodings have been occurring with increasing frequency and severity for about three years.[67] A study by German climate scientists assessing the climate impact on Pari confirms their observations: Tidal flooding has recently reached water levels of over 90 cm, in addition to the human-made sea level rise of 16-26 cm.[68] The study then links the specific damages to climate change induced sea-level rise, stating that it is *almost certain* that human-made global warming and the associated sea-level rise have already led to climate change-related impacts and damages on Pari.[69] They offer further very specific calculations on how extreme events, as the floodings in 2021 would have looked like without human induced sea level rise. For example, the house of the plaintiff Arif Pujanto, which was flooded by about 20 cm in December 2021, would not have been flooded or only flooded by 4 cm without climate change. Accordingly, they conclude, 80-100% of the damage of the 4/5 December 2021 flood event to Arif Pujanto's building can be attributed to anthropogenic sea level rise.[70]

Regarding alleged impending *future damages* claimed by the plaintiffs, the scientists assert with *high confidence* that mean sea level will continue to rise for the next centuries to millennia due to human-induced climate change, with the extent of future sea level rise largely dependent on how much the earth warms. The rise in average sea level will lead to an increase in extreme water levels and thus to more frequent and more intense floods.[71] The study concludes further, that therefore it is *almost certain* that man-made global warming and the associated sea level rise will lead to future climate change-related impacts and damages on Pari. However due to high uncertainty about future greenhouse gas

65 *Ibid*, p. 18.

66 A. Karegar Makan, H. Dixon Timothy, R. Malservisi, J. Kusche and S. E. Engelhart, *Nuisance Flooding and Relative Sea-Level Rise: the Importance of Present-Day Land Motion*, Sci Rep. 7, 11197 (2017), p. 1; IPCC, *Climate Change 202*, (n 60).

67 Testimonies of the plaintiffs presented in the claim and WALHI (ed), *The Impacts of Climate Change on the Island of Pari*, Indonesia, December 2022. See further F. Gaper, *Warga Pulau Pari Terdampak Banjir Rob, Holcim Digugat*, in KBR Indonesia, 21.9.2022; P. Jeung, *Four Indonesians take Swiss cement giant to court over climate*, Al Jazeera, 1.2.2023; M. Müller, *Ein Paradies zerrt Holcim vor Gericht,* Neue Zürcher Zeitung, 2.2.2023.

68 J. Hinkel et al. 2022 (n 34), p. 18.

69 *Ibid*, p. 30.

70 *Ibid*, p. 32.

71 A. Karegar Makan et. al., 2017 (n 66), p. 1; IPCC, *Climate Change 2021*, (n 60) at 1786; See further S. Vitousek, P. L. Barnard, C. H. Fletcher, N. Frazer, L. Erikson and C. D. Storlazzi, *Doubling of coastal flooding frequency within decades due to sea-level rise*, Scientific Reports 7, 1399 (2017).

emissions they refrain from giving an answer to how habitable Pari Island will be in the future. Despite these uncertainties, they are able to calculate the risk of future damages on housing referring to a model building on the island. They conclude that for such buildings, future damages in the range of 52% to 99.9% can be attributed to anthropogenic sea level rise.[72]

In addition to the specific material damages, the scientists hold that local biodiversity and environmental stability on the island will also decrease in the future. The coral reefs, which have been degraded by climate change, will be less and less able to protect the island as sea level rises, because unlike healthy reefs, they can no longer grow with sea level rise. Degraded coral reefs further produce less sediment, which increases coastal erosion, which in turn increases the risk of flooding, as eroding coasts provide less protection against waves.[73] As a consequence, many coral reef islands, such as Pari, will become uninhabitable by 2050 due to this circumstance if no far-reaching adaptation measures are taken.

3.1.3. The Carbon Footprint of the Global Cement and Concrete Industry

The global cement industry produces approximately 4 billion tonnes (Gt) of cement per year. A report published by the Swiss NGO HEKS in January 2023 calculated that this amounts to a global production of approximately 130 tonnes of cement per second.[74] This vast quantity of cement contributes significantly to global CO2 emissions as cement production is very CO2-intensive.[75] *Olagunju* and *Olanrewaju* calculated that 911 g of CO2 is emitted for every 1000 g of cement produced.[76] That means that nearly every ton of cement also causes a ton of CO2 emissions. Contradicting pledges to become net zero, since 2015, the cement and concrete industry has increased its average emission intensity as well as its global absolute emissions.[77] By 2022, the cement industry as a whole emitted an estimated total of up to 8% of global CO2 emissions.[78]

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72 J. Hinkel et al. 2022 (n 34) p. 32.

73 *Ibid*, p. 20.

74 *Holcim's Climate Strategy: Too little – too late*, HEKS/EPER (ed.), January 2023, p. 7; R. M. Andrew, Global CO2 emissions from cement production, 1928–2018, Earth System Science Data, 2019, p. 2.

75 Approximately two thirds of the CO2 emissions during production are caused by the calcination of limestone, in which heat is used to decompose limestone (CaCO3) into Calcium oxide, commonly referred to as burnt lime or quicklime. The other third of cement production's CO2 emissions are caused by the carbon fuels (mainly coal) used for heating up the materials to 1,400 °C.

76 B. Olagunju B. and O. Olanrewaju, *Life Cycle Assessment of Ordinary Portland Cement (OPC) Using both Problem Oriented (Midpoint) Approach and Damage Oriented Approach (Endpoint)*, in A. Petrillo and F. De Felice, *Product Life Cycle*, 2021.

77 See International Energy Agency, *Subsector Cement*, retrieved 20.3.2023.

78 R. M. Andrew, *Global CO2 emissions from cement production, 1928–2018*, Earth System Science Data, Vol. 11/4 (2019), p. 1675-1710, p. 2.

Alternatives to cement and concrete are available on the global construction market. Housing and infrastructure could, at least to some extent, be built with less emission intensive materials, such as ground limestone and calcined clays and greenhouse gas emissions could be further reduced using new technologies.[79]

3.1.4. The Defendant

The defendant targeted with the claim of the four Indonesian islanders is Holcim Ltd., a public limited company with its headquarters registered in the canton of Zug, Switzerland.[80] Holcim Ltd. is the world's largest cement manufacturer and has subsidiaries in 70 countries. According to its Annual Report 2021, the Group operates 266 cement and grinding plants around the world and is active in four business lines focused mainly on cement and concrete production. However the group has recently changed its strategy to widen its portfolio to all kinds of building solutions.[81] Holcim publishes its total Scope 1, 2 and 3 emissions in its annual Sustainability Performance Report, which includes all its consolidated subsidiaries.[82] It has pledged to be net-zero by 2050 and has set relative reduction targets in relation to every ton of cement produced.[83] The company has not set any absolute reduction pathways.[84]

According to a report by attribution scientist *Richard Heede*, Holcim and its predecessor Lafarge have produced 7.26 billion tonnes (Gt) of cement from 1950 to 2021.This amounts to 6.5% of global cement production over the same time period (7.26 Gt of 112 Gt). *Heede* then modelled an estimation of the company's overall scope 1, 2 and 3 emissions from the whole production (e.g. calcining, fuel combustion, power generation, aggregates and ready mix, purchased electricity), amounting to 7.15 GtCO2 from 1950 to 2021.[85] This number accounts for 0.48 percent of all global "industrial emissions" (as fossil

79 See IPCC, Climate Change 2022, *Assessment Report 6 Working Group III, Mitigating Climate Change. Chapter 11 Industry*, p. 7; A. Favier, C. De Wolf, K. Scrivener and G. Habert, *A sustainable future for the European Cement and Concrete Industry. Technology assessment for full decarbonisation of the industry by 2050*, p. 6.

80 The group was created after the merger of the companies Holcim Ltd and Lafarge in 2015.

81 Holcim, *Strategy 2025 – Accelerating Green Growth*, Press release on Capital Markets Day, 18.11.2021.

82 See all the reports available on Holcim, *Sustainability Reports*, retrieved 20.03.2023. For the majority of the subsidiaries listed in the consolidated report, the defendant holds a 100 percent stake.

83 Holcim, *Climate Report 2022*. See further Holcim, *Holcim unterzeichnet Net-Zero Pledge*, Press release, 28.09.2020; Holcim, *Sustainability Performance Report 2021*.

84 For a detailed analysis see *Holcim's Climate Strategy: Too little – too late*, HEKS/EPER (ed.), January 2023.

85 Of this total, scope 1 operational emissions account for 5.33 GtCO2 (74.6%), scope 2 emissions 0.40 GtCO2 (5.5%), and scope 3 indirect emissions 1.42 GtCO2 (19.8%). R. Heede, *Carbon History of Holcim Ltd: Carbon dioxide emissions 1950–2021*, Climate Accountability Institute, 7.07.2022, p. 20-23 with further references.

fuel & cement emissions are called) from 1950 to 2021, or 0.42 percent of all global industrial emissions from 1751 to 2021.[86]

3.2. Holistic approach

The legal prayer of the plaintiffs includes a holistic set of claims underpinned by a novel interpretation of Swiss civil law. They ask the court i) to adjudge them compensation for financial and non-financial damages (NELD) they have already suffered as well as for future impending damages; ii) to oblige the defendant to undertake mitigation measures; and iii) to order the defendant to contribute to the costs of local adaptation measures. These claims are based on different legal norms of Swiss civil law, all linked to the violation of the personality rights of the plaintiffs.[87]

In order to understand their legal argumentation, a brief introduction to the relevant legal provisions seems helpful: The legal concept of the protection of personality rights codified in the Swiss Civil Code (CC) is usually known to courts in cases of media reporting when an individual or a legal entity claims that one's reputation or right to privacy have been violated by media reporting. Article 28 of the CC states that "(a)ny person whose personality rights are unlawfully infringed may petition the court for protection against all those causing the infringement." An infringement is unlawful if it is not justified by the consent of the person whose rights are violated or by an overriding private or public interest, or by the law.[88] Yet, while not widely known or applied in practice, the protection of personality rights has a much wider scope than the protection from invasive journalism. Essentially, it is the realisation of the horizontal effect of human rights, or under Swiss law, constitutional rights.

The Swiss Federal Constitution states that authorities shall ensure that fundamental rights, insofar as they are suitable for this purpose, also become effective among private parties.[89] This rule obliges the authorities – and thus also the legislator and courts – to realise fundamental rights in private legal relationships.[90] The authorities applying the law are obliged to interpret general clauses and indeterminate legal concepts of statutory law in conformity with fundamental rights and to allow the normative content of fundamental rights to flow into the

86 R. Heede, *Carbon History of Holcim Ltd: Carbon dioxide emissions 1950–2021*, Climate Accountability Institute, 7.07.2022, p. 24. These calculations do not include other anthropogenic sources of greenhouse gases, such as non-CO2 gases (nitrous oxide, various methane sources, F-gases), and non-energy CO2, such as from land use, deforestation, agriculture, animal husbandry, etc.

87 See articles 28 forth following the Swiss civil code, available in English.

88 Para. 2 of article 28 of the Swiss Civil Code.

89 Article 35 para. 3 of the Federal Constitution of the Swiss Confederation of 18 April 1999, available in English.

90 B. Waldmann, *Article 35*, in B. Waldmann, E. M. Belser, A. Epiney (eds), *Basler Kommentar Bundesverfassung*, Basel 2015, N 60 and 67 f.

exercise of discretion. In this exercise, not only the individual rights enshrined in the Swiss Federal Constitution, but also in the European Convention of Human Rights (ECHR) and the human rights covenants of the United Nations, which Switzerland ratified on 18 June 1992 are to be considered.

These legal instruments are authoritative for the Federal Court and the other authorities applying the law.[91] This results in the principles of interpreting federal laws in conformity with the Federal Constitution as well as interpreting the Federal Constitution and other national law in conformity with international law. The authorities applying the law in Switzerland must therefore be guided by the Federal Constitution, the ECHR and the United Nations human rights covenants when interpreting the personality rights under article 28 CC.[92]

Accordingly, the term 'personality' albeit a uniform legal concept, consists of numerous facets which should be interpreted by legal notions ascribed to a person.[93] The legislature has deliberately refrained from enumerating these facets in detail. The literature lists, for instance, the following recognized sub-areas of personality rights, which are not exhaustive:

Physical areas of protection: sexual freedom;	a) the right to life, physical integrity, b) personal freedom, especially free dom of movement; c) the right to body and death (bodily self-determination).
Psychological areas of protection:	a) the right to relationships with loved ones (family, friends); b) the right to respect for loved ones; c) Emotional life (mental integrity).
Social spheres of protection:	a) the right to names and other means of identification; b) the right to one's own image, voice and words and the right to informational self-determination (data protection);

91 See article Art. 190 of the Federal Constitution of the Swiss Confederation of 18 April 1999, available in English.

92 See *Asmania et al. v Holcim*, 2023, (n 56) p. 103-111 and (n 15).

93 See for an overview A. Meili, *Article 28*, in T. Geiser, Th. Geiser, Ch. Fountoulakis (eds), *Basler Kommentar Schweizerisches Zivilgesetzbuch I*, Basel 2022, N 17 and 37 with further references.

> c) the right to respect for intimacy and privacy;
> d) the protection of economic advancement.[94]

In case of a violation of these facets of anyone's personality, the affected person may petition the court for protection against all those causing the infringement. The claimant may ask the court i) prohibit a threatened infringement, ii) to order that an existing infringement ceases, or iii) to make a declaration that an infringement is unlawful if it continues to have an offensive effect.

If an aggrieved party further claims to have suffered a financial damage due to the violation of his or her personality rights, and wants to request a financial *compensation*, the law refers them to the Swiss Code of Obligations (CO), which offers in article 41 a general clause for ex-contractual tort claims (in Switzerland called 'law of delic').[95] If an aggrieved party claims to have suffered mental harm from a violation of personality rights, they can request a *just satisfaction* (another form of financial compensation in Swiss law, in German "Genugtuung", in French "réparation morale"), based on article 49 CO.

In order to be held liable for a financial compensation under article 41 CO, the following conditions need to be fulfilled: damage, causation ('natural' and 'adequate' causality) as well as illegality and attributable misconduct (fault or negligence). The requirement of illegality is only fulfilled if a so-called 'absolute right' is violated, as it is property or physical integrity. Yet, pure economic losses cannot be claimed under this provision, as financial assets do not count as an 'absolute right' and therefore do not fulfil this requirement. The law further states different rules for assessing damage and compensation or just satisfaction. For instance, that the person claiming the damages has the burden of proof, or the so-called rule against unjustified enrichment, meaning that no one can be awarded a higher sum than the actual damage that occurred (which prohibits punitive damages).[96] Yet, in cases where the exact value of the damage cannot be determined, the court shall estimate the value at its discretion. The relative statute of limitations for compensation or just satisfaction is three years from the date on which the person suffering damage became aware of the loss, damage or injury and of the

94 A. Meili, *Article 28*, in T. Geiser, Th. Geiser, Ch. Fountoulakis (eds), *Basler Kommentar Schweizerisches Zivilgesetzbuch I*, Basel 2022, N 17 and 31; C. Kirchschläger, Articles 28/28a, in W. Fischer, Th. Luterbacher (eds), *Kommentar zu den schweizerischen Haftpflichtbestimmungen*, Zurich 2016, N 9 ff.

95 Article 41 of the Swiss Code of Obligations: "Any person who unlawfully causes loss or damage to another, whether wilfully or negligently, is obliged to provide compensation." Further, specific tort rules are e.g. available for product liability, consumer credits or the sale of travel packages.

96 Articles 43 to 47 Swiss Code of Obligations.

identity of the person liable for it. The absolute statute of limitations is ten years after the date on which the harmful conduct took place.[97]

3.2.1. Violation of Personality Rights

Based on the notion of personality rights, all plaintiffs argue that their right to economic advancement has been affected as they have lost income due to the two major floods in 2021: The floods not only prevented them from fishing but also forced tourists to cancel their trips to Pari. Local media reported on the floods which scared off tourists for two months. The community on the island could not rent out homestays, could not sell groceries and daily tourist gear to visitors, no boat and snorkelling trips took place. Furthermore, the water well of one of the plaintiffs was flooded with salt water and could not be used for a certain period, which caused him extra spending for water supply for the whole family.[98] These considerable and repeated losses from both economic sectors, fishing and tourism, significantly affected their economic existence and advancement, as protected under article 28 CC.

All of them are seriously concerned and suffer from the fact that further floods, which are to be expected in more frequency and intensity, will produce similar impairments in the years to come. Based on the experience from the last three years and especially from 2021, they further fear that fishing, fish farming and especially the tourist activities cannot continue to be operated in the form they have been in the long term. All plaintiffs further bring forward that they are all fearing for the future and especially their safety and physical integrity and that of their children. The more frequent and severe the flooding becomes, the more likely it is to be expected that their own children will suffer such significant consequences and damage that even before the island is largely flooded, dignified living and working on Pari may no longer be possible. It is to be expected that, according to general life expectancy, the children of three of the plaintiffs will live to see the year 2100, in which the island of Pari could be largely submerged and uninhabitable.

The island community is making massive efforts to promote the planting of mangroves. However, for dense mangrove vegetation off the coast, far more plants would be needed. Moreover, it takes several years to grow them. A (preferably) solid level of protection against high waves and erosion is therefore far from being achieved at present.[99] The people of Pari island claim to feel powerless as they alone have no means to avert these consequences, which are very likely to occur and which will be all the more serious if globally effective climate mitigation measures and protective measures for the island and its population are not taken immediately.

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97 Article 60 Swiss Code of Obligations.

98 *Asmania et al. v Holcim*, 2023, (n 56), p. 43.

99 *Asmania et al. v Holcim*, 2023, (n 56), p. 36-56.

The violations alleged by the applicants are of a different nature. One of the plaintiffs, whose house was already regularly flooded, fears for his and his family's physical integrity, their water and food supply, and the increasing damage to his house to the point of it becoming uninhabitable. Another plaintiff alleges that the progressive destruction of the environment on the island causes him great concern, especially in his role as a community leader responsible for the well-being of the island's population. Other violations argued by the plaintiffs highlight the changes in the environment that put the cultural, social and communal life of the collective of islanders at risk. Overall, these numerous impacts of climate change on their life, the life of their families, the ecosystem and on the community of the island's population as a collective is significantly affecting their rights to physical integrity, to personal freedom, to private and family life, to mental integrity and to economic advancement.[100]

Consequently, the plaintiffs argue that their personality rights have been violated by the excessive[101] greenhouse gas emissions of Holcim and its subsidiaries in the past and continue to be violated now and in the future without their consent and without overruling private or public interests. Although the associated violation of the plaintiffs' rights cannot be remedied by the defendant alone, nor can it be remedied entirely, it can at least be mitigated by consistently refraining from excessive emissions, and in addition by flood protection measures around the island. The violation of personality rights lays therefore the ground for the request for mitigation measures. It is furthermore the basis the request of the plaintiffs for just satisfaction for mental harm based on article 49 CO, as explained above.[102]

Similar to the argument in *Luciano Lliuya v. RWE,* to ascertain the violation of personality rights it is only required that a person *contributes* to the violation.[103] Mere contribution already leads to an infringement, even if the person acting is not aware of it or cannot be aware of it. This means that the injured party can take action against anyone who, objectively speaking – from near or far – played

100 They specifically refer to articles 10, 13 and 27 of the Swiss Federal Constitution and Art. 2 and 8 of the ECHR; See *Asmania et al. v Holcim*, 2023, (n 56), p. 36-56.

101 Excessive greenhouse gas emissions are described as those which, according to the current state of the best available scientific knowledge, are not compatible with the goal of limiting global warming to a maximum of 1.5 degrees Celsius (with 50% probability). Because, according to the current state of scientific knowledge, it is not compatible with the goal of limiting global warming to a maximum of 1.5 degrees Celsius to emit greenhouse gases which, in their aggregated amount, exceed the necessary absolute and relative reduction of 43% (scopes 1, 2 and 3) by 2030 and of 69% by 2040 compared to 2019.

102 All four plaintiffs ask for a compensation of IDR 15'427'813 excluding interest of 5 percent p.a. since 11 July 2022 (CHF 1'000 excluding interest of 5 percent p.a. since 11 July 2022 respectively) based on article 28*a* para. 3 CC in relation with article 49 CO.

103 See further B. Dörr., *Art. 28*, in: A. Büchler and D. Jakob (eds), *Kurzkommentar Schweizerisches Zivilgesetzbuch*, Basel 2018, N 13; A. Büchler, *Art. 28*, in J. Kren Kostkiewicz, S. Wolf, M. Amstutz and R. Fankhauser (eds), *OFK Schweizerisches Zivilgesetzbuch*, Zurich 2021, N 13.

a role in the creation or in the dissemination of the infringement, even if his role is only of secondary importance.[104] This jurisprudence stems largely from case law of different media outlets, all invasively reporting on private matters of an individual. The affected individual can ask the court to oblige all of these media outlets to stop reporting and remove personality infringing articles. For the case of the four inhabitants of Pari, it is well established that Holcim emitted greenhouse gases, as the company acknowledges in its own reports, and that this significantly contributed to global warming. Therefore, it will be hardly disputable for Holcim to *have contributed* to global warming,[105] and consequently to its impacts on the island, as proven by scientific studies on the specific causality aspect of the claim, as described under 3.3.3.

3.2.2. Compensation for damages

In addition to the request for mitigation measures and just satisfaction for mental harm, three of the four plaintiffs ask for compensation of financial damages they have suffered.[106] Among these damages are the costs for the reparation of house walls, a partially destroyed fishing boat and the destruction of fish stock in a fish farm. Notably, the plaintiffs ask for a compensation of 0.42 percent of the sum of all damages, since Holcim is responsible for a share of 0.42 percent of all industrial CO2 emission and should thus be legally accountable for this share.[107]

As described above, this is a classical tort claim under Swiss law, requiring a damage, a causal relationship, illegality and fault or negligence. As in the international literature,[108] a number of Swiss scholars have argued that article 41 CO could not be applied in the case of climate change, other authors and the plaintiffs in the Holcim case take a more optimistic vision of the matter.[109]

This is due to the fact that, in line with Swiss case law, in order to meet the evidence threshold for 'natural causality'[110] the cause of the damage does not need

104 *Asmania et al. v Holcim*, 2023, (n 56), p. 101; BGE 141 III 513, E. 5.3.1.

105 See e.g. Holcim, *Climate Report 2022*; further Holcim, *Sustainability Performance Report 2021*; and *Holcim's Climate Strategy: Too little – too late*, HEKS/EPER (ed.), January 2023.

106 *Asmania et al. v Holcim*, 2023, (n 56), p. 34 ff.

107 *Ibid.* p. 116 f.

108 See M. Hinteregger, 2022 (n 19) at 383; D. A. Kysar, 2015 (n 17).

109 Cautiously optimistic due to new attribution science outcomes A. Hösli and R. H. Weber, *Klimaklagen gegen Unternehmen*, in Jusletter 25.05.2020, p. 7; further A. Hösli, *Shell-Urteil – der Klimawandel im Gerichtssaal*, Neue Zürcher Zeitung, 12.07.2021; A. Nussbaumer-Laghzaoui, *La Suisse tient son premier procès climatique en responsabilité civile*, La Semaine Judiciaire, 2022/8, p. 657-659.

110 According to Swiss jurisprudence, a natural causal connection exists if the conduct causing the damage forms a necessary condition (*conditio sine qua non*) for the damage that has occurred, i.e. it could not be disregarded without the success that has occurred also ceasing to exist. See, e.g. BGE 142 IV 237 1.5.1.

to be exclusive.[111] The standard of proof for natural causality under Swiss law is 'predominantly probable'. This makes it possible to attribute responsibility for a given damage even in the presence of multiple polluters. The jurisprudence of the Swiss Federal Court established that a probability is predominant if there are such weighty reasons for the correctness of the factual assertion from an objective point of view that other conceivable possibilities cannot reasonably be considered to a decisive degree.[112] The plaintiffs rely on two landmark decisions dealing with liability for environmental pollution (one of them on the harvest of apricots in the canton of Wallis), in which the Federal Supreme Court has recognised contributory factors as a relevant cause of damage and the existence of a causal link between environmental damage and the resulting harm.[113] In light of the well documented scientific impacts of climate change on sea level rise and more specifically on Pari Island, the plaintiffs argue that this criterion is also fulfilled in their case.

As for the requirement of 'adequate causality,[114] the plaintiffs argue that a contribution or many contributions by third-parties in the sense that the defendant is not the sole polluter of greenhouse gas emissions does not constitute a reason for interruption of causality. A damage giving rise to liability can be attributable to several causes, i.e. several emitters. Hence, additional causes do not lead to an interruption of the adequate causal connection, but rather a competition of adequate causes arises.[115] At this point, the horizontal impacts of climate litigation takes effect: The plaintiffs refer to the jurisprudence of the Federal Constitutional Court of Germany in *Neubauer et al. vs Germany*[116], the first instance judgement in the Shell case in the Netherlands[117] and the deci-

111 So-called 'Äquivalenztheorie'; see e.g. Swiss Federal Court, BGer 6B_183/2010 of 23.04.2010 E. 3; Swiss Federal Court, BGer 4A_307/2013 of 6.01.2014.

112 Swiss Federal Court, BGE 133 III 153, 162; Swiss Federal Court, BGE 132 III 715, 720; further also Swiss Federal Court, 130 III 321, 325; Swiss Federal Court, 133 III 81, 89.

113 Swiss Federal Court, BGE 109 II 304; Swiss Federal Court, BGE 116 II 480, JdT 1993 I 19. For comments on the judgments see B. Chappuis, *Le dommage environnemental*, in CEDIDAC (ed.), *Les entreprises et le droit de l'environnement: défis, enjeux, opportunités*, Lausanne 2009, p. 13 – 14; A. Nussbaumer-Laghzaoui, *Responsabilité environnementale et causalité – L'enseignement des abricots valaisans*, in F. Werro, P. Pichonnaz (eds), *La RC en arrêts et une nouveauté législative de taille*, Bern 2022.

114 The adequate causal connection is to be affirmed if the conduct was suitable, according to the usual course of events and the experiences of life, to bring about or at least to favour a success such as the one that occurred. See Swiss Federal Court, BGer 6B_132/2016 of 16.8.2016, with further references to Swiss Federal Court, BGE 138 IV 57, E. 4.1.3; Swiss Federal Court, BGE 135 IV 56, E. 2.1; Swiss Federal Court, BGE 133 IV 158, E. 6.1.

115 M. Kessler, *Art. 41*, in C. Widmer Lüchinger and D. Oser (eds), Basler Kommentar Obligationenrecht I, N 22.

116 German Constitutional Court, *Neubauer et al. vs Germany*, Beschluss des Ersten Senats, BvR 2656/18, 78/20, 96/20, 288/20, 24.3.2021.

117 District Court Den Haag, *Milieudefensie et al. vs Royal Dutch Shell PLC*, C/09/571932/HA ZA 19-379, 26.05.2021, 2.3.2, B.

sion of Oberlandesgericht Hamm in the case *Luciano Lliuya v. RWE*[118], who all rejected so-called "drop-in-the-ocean" arguments. Such an approach was also taken in one of the two cases mentioned above by the Swiss Federal Court when dealing with impacts on the harvest of apricots in the canton of Wallis. In said case, the court found that circumstantial evidence indicated that fluorine emissions at least contributed to the damage to apricot crops, that a contrary assumption could not be substantiated in any case, and that this was sufficient for causality.[119] Thus, several partial causes – e.g. the interaction of several polluters – should not lead to an exclusion of the defendant's liability, especially in the present climate-relevant context.

As for the requirement of illegality the plaintiffs argue that the harming act is considered unlawful if it interferes with an 'absolute right' such as life, freedom or property and that it is irrelevant whether an infringing act is prohibited by public law regulations (e.g. emission standards or compensation schemes). They see no grounds for an apparent legal justification like self-defence or necessity and refer to the legal obligation that any justification for the occurred harm should further be proven by the defendant.[120]

3.2.3. Compensation for Future Damages (Adaptation Measures)

Based on the same legal arguments, all four plaintiffs further list both individual and collective adaptation measures and ask the defendant to pay for 0.42 percent of the costs. Individually, they ask for the compensation of a share of the costs of installing water filtration systems for each household to secure access to clean water and for raising their houses or rebuilding them at another higher place, in order to prevent future damages and increasing risks to their health and security. Collectively, they ask for a share of the costs for coastal protection measures for the whole island, namely the planting of two million new mangrove seedlings and the installation of breakwaters over 5.2 kilometres (so-called bronjongs).[121]

3.3. Challenges in the Swiss legal forum

As listed in the beginning, civil proceedings might be challenged by jurisdiction-specific hurdles which hinder plaintiffs from the Global South to access courts in transnational cases. This is also the case for the Swiss forum. As a non-member state of the European Union, some plaintiff-friendly procedural rules are not applicable. Furthermore, the case law states a rather strict regime for the burden and level of substantiation of civil claims, as will be described in the following paragraphs.

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118 Oberlandesgericht Hamm, *Lliuya vs RWE*, I-5U 15/17, Beschluss 1.02.2018, p. 4.
119 Swiss Federal Court, BGE 109 II 304.
120 *Asmania et al. v Holcim*, 2023, (n 56), p. 117 f.
121 *Asmania et al. v Holcim*, 2023, (n 56), p. 97.

3.3.1. Non-applicability of Rome II

Switzerland is not a member of the European Union. As such it has not ratified the Regulation 864/2007 of the European Parliament and of the Council of 11 July 2007 on the law applicable to non-contractual obligations (Rome II).[122] This leads to the complication that the plaintiffs do not have the choice of applicable law, as provided for in article 7 of Rome II, according to which the person seeking compensation for an environmental damage can choose to base her claim on the law of the country in which the event giving rise to the damage occurred. In Swiss law for international tort cases, the general rule applies that the law of the state is applicable in which the tortious act was committed.[123] Only in exceptional cases where the damage does not occur in the state in which the tortious act was committed and the defendant could expect the success to occur in that state, the law at the place of damage is applicable.[124] The plaintiffs argue that the harmful act originated in Switzerland, where Holcim Company's policy is decided, which means that the place of action is in Switzerland and that therefore Swiss law applies.[125] Yet it is not clear whether the court will follow that interpretation.

3.3.2. High hurdles of substantiation

The plaintiffs filed a request for legal aid. Under Swiss law, such a request should be granted if a plaintiff does not have sufficient financial resources and his or her claim does not seem devoid of any chances of success.[126] The four plaintiffs live in very modest conditions on a small island in the Pacific Ocean. Their income certainly falls under the generally required financial income level to be granted legal aid in Swiss judicial proceedings.[127] However, the devil might lie in the detail that the Swiss law requires a rather high standard of substantiation of facts in civil proceedings. As the plaintiffs take part in an informal economy on the island, they might lack detailed receipts and official transcripts for daily transactions. The plaintiffs are also exempt from paying taxes and therefore do not have a tax declaration they could hand in to the court, as it is

122 *Regulation 864/2007 of the European Parliament and of the Council of 11 July 2007 on the law applicable to non-contractual obligations (Rome II)*.

123 Lugano Treaty, ratified by Switzerland on 20.10.2010 in relation with Article 133, para. 2, sentence 1 of the Federal Act on Private International Law.

124 Article 133, para. 2, sentence 2 of the Federal Act on Private International Law.

125 *Asmania et al. v Holcim*, 2023, (n 56), p. 12-14.

126 See article 117 of Swiss Civil Procedure Code, based on Article 29 para. 3 of the Federal Swiss Constitution.

127 The required legal poverty exists if the person concerned is not in a position to meet the costs of the proceedings without having to draw on resources that are necessary to cover the basic needs of him or her and his or her family. The assessment of financial means is to be based on the minimum subsistence level under Swiss debt collection law. See for several e.g. BGE 128 I 225 E. 2.5.1; BGE 130 I 180 E. 2.2.

usually required for accessing legal aid. Yet in a recent decision in another case, a court in Basel granted legal aid to six plaintiffs from India who also had to rely on alternative evidence to prove their financial situation in a case against the Swiss multinational Syngenta.[128] It is to be seen whether the court in Zug will follow the same approach. Certainly, it will be interesting to see how the courts in Switzerland set the bar of access to justice for plaintiffs from the Global South.

3.3.3. Lost in translation among different disciplines

Every causal step of the chain of causation in the case *Asmania et al. v Holcim* is based on scientific evidence stemming from climate science. The individual contribution of the defendant to greenhouse gas emissions and its relation to overall global and industrial emissions are based on studies by *Richard Heede*, a US attribution scientist.[129] The consequences of greenhouse gas emissions in the atmosphere and the various effects of this process, specifically on sea level rise and small islands, are largely based on the findings of the IPCC.[130] The specific effects of climate change induced sea level rise on Pari Island and the causal link to the alleged damages is based on a study authored by the team of Global Climate Forum lead by German scientist *Jochen Hinkel,* a leading author of the IPCC reports.[131]

The scientific results are clear. Especially the causal relationship of every emitted ton of carbon dioxide emissions to an acceleration of global warming and the consequent accelerated rise of sea level are remarkably well established in natural sciences.[132] Yet, as Swiss courts have shown in the past, academic language describing scientific (un)certainties does not translate easily into legal interpretation.[133] Different authors have therefore argued that climate scientists need to adapt their labelling of certainties to mirror legal standards so that their results can be better used in courtrooms.[134] Since both disciplines use very different terminologies that might lead to mal-interpretations, this would certainly

128 See Zivilgericht Basel-Stadt vom 13. Juni 2022, Az. K1.2021.21 VOD, Az. K1.2021.22 VOD; Az. K1.2021.23 VOD.

129 R. Heede, *Carbon History of Holcim Ltd: Carbon dioxide emissions 1950–2021*, Climate Accountability Institute, 7.07.2022; R. Heede, *Carbon Majors: Accounting for carbon and methane emissions 1854 2010*, Methods & Results Report, Climate Mitigation Services 2014.

130 First and foremost: IPCC, *Climate Change 2021*, (n 60); IPCC, Climate Change 2022, (n 79)

131 J. Hinkel et al. 2022 (n 34).

132 See above, IPCC, *Summary for Policymakers*, 2021 (n 59); IPCC, *Climate Change 2021*, (n 60); IPCC, Climate Change 2022, (n 79); A. Karegar Makan et. al., 2017 (n 66); and S. Vitousek et. al., 2017, (n 71)

133 See for instance the findings of the Swiss Federal Court in the case of the *Klimaseniorinnen* (BGE 156 I 145) relating to climate change induced heat waves, which shocked many scientists since they did not reflect at all the current state of science.

134 E. A. Lloyd, N. Oreskes, S. I. Seneviratne and E. J. Larson, *Climate scientists set the bar of proof too high*, in *Climatic Change*, 2021/165, p. 1-10.

be useful. Yet, courts should also better explore and understand existing methodologies of attribution science so that obstacles to causation could better be addressed.[135] Legal assessments of the most pressing issues of our time which severely affect so many areas of life must consider state of the art in science. In this regard, exchange among the legal discipline and climate scientists should be encouraged, both in legal training and education as well as through oral hearings of climate scientists as expert witnesses in court cases.

4. The value of transnational climate litigation

For the purpose of this section 'transnational climate litigation' against corporations is understood as cases that seek to hold parent companies liable in the jurisdictions in which they are headquartered for climate related harms that have occurred in foreign states. Unlike in other constellations, the global impacts of climate change make it possible to argue a connection to the damage even when a company does not operate – directly or through its subsidiaries – in the plaintiffs' country. So far only the two cases mentioned in this article, i.e. *Lliuya v RWE* and *Asmania et al. v Holcim*, fit this definition of transnational litigation.

Bringing redress claims by communities or individuals from the Global South affected by climate change before European courts represents a political and legal action grounded in a legitimate call for climate justice. As affirmed by the UN Special Rapporteur on Climate Change, Ian Fry, in his latest thematic report on the promotion and protection of human rights in the context of climate change, "there is an enormous injustice being manifested by developed economies against the poorest and least able to cope."[136] The climate crisis, fuelled primarily by wealthy states and large multinational corporations, is exacerbating pre-existing social and economic inequalities, thus worsening the situation of those least responsible for climate change and who have the fewest resources to adapt. Along these lines, climate change "provides a vivid illustration of intersectional disadvantage arising from unjust and inequitable distribution of harms".[137] Transnational climate litigation could represent an opportunity for a fair adjudication of liability for climate-related damages in a global context.

There is a diversity of definitions for climate justice emerging from the academic community, international NGOs or grassroots movement perspectives.[138] Nevertheless, there are key areas where they overlap. One of them is

135 R. F. Stuart-Smith et al. 2021, (n 29).

136 I. FRY, *A/77/226 Thematic Report on the Promotion and Protection of Human Rights in the Context of Climate Change,* United Nations, 26.07.2022.

137 W. Bonython, 2021, (n 38), p. 454.

138 D. Schlosberg & L.B. Collins, *From environmental to climate justice: climate change and the discourse of environmental justice,* in *Wiley Interdisciplinary Reviews: Climate Change*, 2014, vol. 5, no 3, p. 359-374.

the argument of a historical responsibility approach, according to which those parties who contributed the most to climate change "should now bear the primary responsibility for the results of their actions, and should pay the costs caused by these past transgressions".[139] A second aspect of confluence is the understanding that the impacts of climate change undermine people's fundamental rights. In this context, climate justice means "providing for those rights to which – as society – we have already agreed".[140] On the other hand, as stated by Schlosberg, D., & Collins, L. B, the approach of grassroots movements to climate justice differs from other perspectives as it "focuses on local impacts and experience, inequitable vulnerabilities, the importance of community voice, and demands for community sovereignty and functioning."[141]

When local communities and grassroots movements, as in the case of the Pari islanders, are directly involved in transnational climate litigation initiatives, the law can be used as a tool not only to obtain the redress to which they are entitled by law, but also to give voice to their demands and their local experience of climate change impacts in a political and legal arena that would otherwise be restricted to them.

Global governance of climate change, especially in relation to economic and non-economic L&D involves a thorough understanding of "global systems with complex local linkages", which requires a transnational dialogue where the voices of those most affected are protagonists. Against this background, rethinking civil law in the context of climate change, informed by the view and demands of the most affected, can contribute to a genuine awareness of the political, social, and economic struggles underlying a given legal case.[142]A transnational understanding of the nature, significance, and extent of L&D is incomplete if it fails to encompass the experiences of communities on the frontline of the crisis.

An interpretation of tort law along these lines would imply easing the challenges that affected communities and individuals face when seeking judicial redress for climate related harm, such as high costs of litigation and rigid legal rules that lag behind the current development in the scientific realm. The understanding of the proper form and function of tort law cannot be detached from the raw realities of the contemporary problems of humanity and the differentiated impacts of these problems on different members of society. In this sense, judges are key actors in the struggle for climate justice as they have the

139 *Ibid,* at 7.

140 *Ibidem.*

141 *Ibid,* at 1.

142 See for such an approach: M. Saage-Maass, *Legal Interventions and Transnational Alliances in the Ali Enterprises Case: Struggles for Workers' Rights in Global Supply Chains, in* M. Saage-Maass et al., *Transnational Legal Activism in Global Value Chains: The Ali Enterprises Factory Fire and the Struggle for Justice,* Springer Nature, 2021, p. 25-58.

possibility and duty to apply the law in a way that adequately responds to the injustices underpinning climate change and its impacts.

Since the jurisprudence of human rights bodies and constitutional courts seems to develop at a faster pace than different pending civil law proceedings, it might be promising to search for avenues in different jurisdictions which allow the language and interpretation of human rights to flow into civil law, as used in the case of *Asmania et al. v Holcim*. Even though some judicial authorities might be reluctant to refer to case law from other jurisdictions, it can provide inspiration on how to overcome traditional legal concepts in the context of climate change. As a consequence, the horizontal effects of climate litigation might work their magic.

It is in this light that the case of *Asmania et al. v. Holcim,* might break stagnant legal paradigms, as it introduces a rigorous interpretation of Swiss tort law that aligns with the transnational nature of climate change, the principle of common but differentiated responsibilities and the most recent scientific developments on the past and future impacts of climate change, particularly on small islands and coastal areas.