18

Remedies

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18.1 INTRODUCTION

The right to a remedy is based on the idea that whoever commits a wrongful act must repair the damage caused.[1] The standard that reparation is expected to achieve is full restitution, that is, that the affected party is restored to the status quo before harm. In the intricate tapestry of climate litigation, the concept of a legal remedy stands as a pivotal culmination point in the process, offering a beacon of resolution and redress for the parties involved. At its core, a legal remedy represents the means through which the rights of individuals or entities are enforced or the violation of said rights is prevented or redressed.

As climate change impacts intensify globally, the quest for adequate remedies in climate litigation has become paramount, serving as the tangible bridge between abstract legal principles and real-world outcomes. These remedies can be broadly categorised into different types based on their nature and objective.[2] Reparation is one remedy to restore the injured party to the position they would have been in had the violation not occurred. This might include restitution or the restoration of specific property or rights.[3] On the other hand, injunctive relief is forward-looking and aims to prevent further harm or violation.[4] Like injunctive relief, a writ of mandamus is unique due to its origins as an extraordinary writ or remedy and its distinct legal guidelines. This writ obliges a public official to perform a non-discretionary

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[1] Dinah Shelton, *Remedies in International Human Rights Law* (Oxford University Press 2015) 13.

[2] African Court on Human and Peoples' Rights, 'Comparative Study on the Law and Practice of Reparations for Human Rights Violations' (Registry of the African Court on Human and Peoples' Rights 2019).

[3] Lisa J. Laplante, 'The Plural Justice Aims of Reparations' in Susanne Buckley-Zistel and others (eds), *Transitional Justice Theories* (Routledge 2014).

[4] Jaap Spier, *Climate Litigation in a Changing World* (Eleven 2023) 222.

ministerial duty.[5] To obtain a writ of mandamus, the petitioner must prove that a governmental agency has breached an unambiguous legal obligation and lacks any other sufficient means to achieve the desired outcome.[6] These are particularly relevant in climate cases where ongoing activities may contribute to environmental degradation. Compensation, another critical remedy, focuses on providing monetary relief to the injured party for loss and damage.[7] This becomes especially pertinent in climate litigation cases where environmental damages might have led to economic losses for communities or regions.

One of the most comprehensive and earliest exercises to consolidate the practice of remedies in international law, which to a significant extent reflects the practice at the national level, comes from the International Law Commission (ILC), which documented since the late 1970s State practice relating to the international responsibility of States.[8] The 2001 final report recognised that reparation could take three forms: restitution, compensation, and satisfaction. In parallel, international human rights law, specifically the work of rapporteur Theo Van Boden,[9] added rehabilitation and guarantees of non-repetition to the list. Consequently, the right to a remedy implies a wide range of modalities, the determination of which will depend on the specific type of violation, that is, on the primary norm that establishes the content of the obligation transgressed.

This chapter aims to show the status and debates concerning remedies in climate change litigation.[10] To this end, the chapter will describe the general framework of the right to a remedy, briefly explaining its evolution and content. It will then analyse how courts and tribunals have interpreted the right to a remedy. Finally, five examples of emerging best practices will be presented, along with tools that judges can use to replicate reparations in climate change litigation.

[5] J. Jonas Anderson, Paul R. Gugliuzza, and Jason A. Rantanen, 'Extraordinary Writ or Ordinary Remedy? Mandamus at the Federal Circuit' (2022) 100 Washington University Law Review 327, 336.

[6] John C. Dernbach and Patrick Parenteau, 'Judicial Remedies for Climate Disruption' (2023) 53 ELR 10574, 10580.

[7] Michael Faure, 'Climate Change Adaptation and Compensation' in Jonathan Verschuuren (ed), *Research Handbook on Climate Change Adaptation Law* (Edward Elgar 2013).

[8] ILC, 'Draft Articles on Responsibility of States for Internationally Wrongful Acts, with commentaries' (2001) UN Doc A/RES/56/83 (2001), 53 UN GAOR Supp (No 10) at 43, Supp (No. 10) A/56/10 (IV.E.1) (ILC Draft Articles).

[9] Theo van Boven, 'Victims' Rights to A Remedy and Reparation: The New United Nations Principles and Guidelines' in Carla Ferstman, Alan Stephens, and Mariana Goetz (eds), *Reparations for Victims of Genocide, War Crimes and Crimes against Humanity* (Brill 2009) 22.

[10] Request for an Advisory Opinion on Climate Emergency and Human Rights to the Inter-American Court of Human Rights from the Republic of Colombia and the Republic of Chile (January 2023), questions D and F <www.corteidh.or.cr/docs/opiniones/soc_1_2023_en.pdf> accessed 3 March 2024. In the literature, see Helen Keller, Corina Heri, and Réka Piskóty, 'Something Ventured, Nothing Gained? – Remedies before the ECtHR and Their Potential for Climate Change Cases' (2022) 22(1) Human Rights Law Review; Margaretha Wewerinke-Singh, *State Responsibility, Climate Chance and Human Rights Under International Law* (Hart 2019).

18.2 BACKGROUND TO LEGAL REMEDIES

The right to a remedy in most national systems is based on the idea that whoever commits a wrongful act should repair the harm caused.[11] Remedies are woven into the fabric of various legal systems, each presenting its nuanced approach to redress and relief. In tort law, remedies primarily focus on compensating the aggrieved party for harm due to another's wrongful act. For instance, under the common law principle, the English tort system emphasises compensatory remedies, often monetary, to place the injured party in a position they would have been without the tortious act.[12] Similarly, in the US, the Restatement (Second) of Torts provides for damages to be awarded for harm resulting from negligence, strict liability, or intentional wrongs.[13] On the other hand, constitutional remedies offer redress against violations of fundamental rights enshrined in national constitutions. In India, Article 32 of the Constitution provides the right to constitutional remedies, allowing individuals to approach the Supreme Court directly if their fundamental rights are infringed.[14]

Diving into administrative law, remedies are typically geared towards ensuring that administrative agencies and bodies operate within their legal bounds and prescribed mandates. In the European Union, for instance, the Treaty on the Functioning of the European Union under Article 263 provides for annulment, enabling parties to challenge the legality of an act of the institutions. Similarly, Australia's Administrative Decisions (Judicial Review) Act 1977 sets out grounds for reviewing administrative decisions, emphasising grounds like procedural fairness and jurisdictional error. Through these distinct yet interconnected avenues of tort, constitutional, and administrative law, remedies in comparative law manifest as the bedrock of effective justice, safeguarding rights and ensuring accountability across diverse global legal landscapes.

Since the remedies approach varies considerably from jurisdiction to jurisdiction, this section will focus on discussing remedial practice in public international law, chiefly because the essential traits of remedies lie in its consolidated doctrine, especially in international human rights law. Studying crucial remedial features in international law could also contribute to a general understanding and

[11] Shelton (n 1) 1–9.

[12] Giedre Kaminskaite-Salters, 'Climate Change Litigation in the UK: Its Feasibility and Prospects' in Michael Faure and Marjan Peeters (eds), *Climate Change Liability* (Edward Elgar 2011) 175.

[13] Roda Verheyen and Johannes Franke, 'Climate Change Litigation: A Reference Area for Liability' in Peter Gailhofer and others (eds), *Corporate Liability for Transboundary Environmental Harm: An International and Transnational Perspective* (Springer 2023) 384; Elena Kosolapova, 'Liability for Climate Change-Related Damage in Domestic Courts: Claims for Compensation in the USA' in Michael Faure and Marjan Peeters (eds), *Climate Change Liability* (Edward Elgar 2011) 202; Karen Sokol, 'Seeking (Some) Climate Justice in State Tort Law' (2020) 95 Washington Law Review 1383, 1417.

[14] Eeshan Chaturvedi, 'Climate Change Litigation: Indian Perspective' (2021) 22 German Law Journal 1459, 1463.

potential application of their logic and architecture at the national level. The essence of remedies, both nationally and internationally, seeks to prevent or repair harm, which, *mutatis mutandi*, is the final objective of any climate litigation case, irrespective of the jurisdiction and field of law. Therefore, the essential nature of remedies, which is to right a wrong, is an optimal legal notion for comparative purposes and analytical extrapolation, for example, from the international to the national and vice versa.

Public international law expressly includes the principle of full reparation in the *Factory at Chorzów* judgment of the Permanent Court of Justice in 1928 by establishing: 'The essential principle enshrined in the actual concept of a wrongful act is that reparation must, to the fullest extent possible, wipe out all the consequences of the unlawful act and re-establish the situation, which in all probability would have existed if the act had not been committed.'[15] Therefore, under public international law, the principle of full reparation constitutes the basic structure of the obligation of reparation.[16] This was recognised in the 'Draft Articles on Responsibility of States for Internationally Wrongful Acts' (Draft Articles), elaborated by the ILC.[17] The Draft Articles establish the general framework of the obligation to make reparation; it considers it as a new 'legal relationship' (secondary obligation) that arises after the commission of a wrongful act, that is, the breach of a primary duty contained in a source of international law (treaty or international custom). Thus, Article 32.1 provides that 'the responsible State is obliged to make full reparation for the injury caused by the internationally wrongful act'. The international obligation to make reparation is also customary law. Thus, it can be invoked even without the ratification of a treaty expressly containing it.[18]

For the ILC, and in line with the *Factory at Chorzów* case, the objective of full reparation is to eliminate all the consequences of the wrongful act and to re-establish the situation that, in all probability, would have existed if the act had not been committed.[19] The result expected after acting against a State for the breach of an international obligation is the substantive aspect of reparation.[20] According to the Draft Articles, integral reparation may consist of three measures, which may be applied individually or jointly: restitution, compensation, and satisfaction. Adopting

[15] *Case Concerning the Factory at Chorzów* (*Germany v Poland*) (Merits) PCIJ Rep Series A No 17 [68].
[16] Dinah Shelton, 'Righting Wrongs: Reparations in the Articles on State Responsibility' (2002) 96(4) AJIL 833, 835.
[17] ILC Draft Articles (n 8). The work carried out by the ILC involved a process of identification and systematisation of practices and usages of the international responsibility of States, which took place between 1957 and 2001.
[18] Brian D. Lepard, *Customary International Law: A New Theory with Practical Applications* (Cambridge University Press 2010) 166–167; Shelton (n 1) 238.
[19] ILC Draft Articles (n 8) art 33(3).
[20] Shelton (n 1) 7.

the measure will depend on the damage caused, which may be both pecuniary and non-pecuniary. Consequently, the Draft Articles make the principle of full reparation applicable to non-pecuniary damage.

Restitution consists of the restoration as far as possible of the situation before the commission of the international wrong.[21] It may take the form of a material return (territory, person, or property) or the revocation of a legal act (for example, the amendment of a constitutional provision, the revision of an administrative act, or the requirement to adopt a rule).[22] However, it admits exceptions: it must not be materially impossible and must not entail a burden wholly disproportionate to the cost that the responsible State would incur.[23]

Restitution is often inadequate, or insufficient to guarantee full reparation. Therefore, compensation emerges as a second form of redress for the harm caused. Its function is to fill possible gaps to achieve full reparation and to compensate for damage susceptible to financial assessment. As a rule, it is granted by a sum of money.[24]

Finally, satisfaction is the distinctive form of reparation granted to the extent that the damage cannot be remedied by restitution or compensation. It is often symbolic, reflecting the need for mechanisms in cases where the damage is of such magnitude that it must involve other actions. However, the measure adopted must not be disproportionate to the injury and must not be humiliating for the responsible State.[25]

Both the principle of integral reparation and the categories established in the Draft Articles have been incorporated in the jurisprudence of the international human rights courts as *lex specialis* in reparation.[26] The *lex specialis* character is supported by Article 33 of the Draft Articles, which recognises that the obligation of reparation may arise between States and may also be invoked by a person or entity other than a State.[27] Therefore, the primary rule determines how and to what extent individuals are entitled to activate international jurisdiction to obtain reparation from the State.

The extent to which the principle of integral reparation can or should be incorporated into international human rights law is debatable. The critical point of the debate revolves around cases in which restitution to the previous situation is unfeasible. In this regard, criticism points to the principle of integral reparation as

[21] ILC Draft Articles (n 8) art 35.
[22] ibid.
[23] ibid.
[24] ibid art 36.
[25] ibid art 37.
[26] Frederic Vanneste, *General International Law Before Human Rights Courts: Assessing the Specialty Claims of Human Rights Law* (Intersentia 2010) 505–508; *Velásquez Rodríguez v Honduras* Inter-American Court of Human Rights Series C No 4 (29 July 1998) [66].
[27] ILC Draft Articles (n 8) art 33.

a 'double-edged sword' since the promise of a comprehensive remedy under international standards can never be fulfilled, no matter how inclusive the justice or administrative reparation process may be.[28] Roht-Arriaza calls this the 'basic paradox at the heart of reparation', the trade-off between restoration to the status quo ante and recognition that such status could not be implemented.[29] However, the Inter-American Court of Human Rights (IACtHR) has established that the principle of integral reparation is intended to guide the Court's decisions to identify a measure of reparation that can come as close as possible to that ideal.[30] Therefore, in those cases where restitution is impossible, the consequences of the damage caused must be repaired through measures recognised by law.

The reparation measures set out in the Draft Articles have been adapted to the context and the type of human rights violations heard and resolved by the competent court. The process has included other measures such as rehabilitation, investigation, and punishment of those responsible and guarantees of non-repetition. Although this last category is considered another secondary obligation for the Draft Articles, the IACtHR[31] and United Nations Basic Principles and Guidelines on the Right to a Remedy and Reparation for Victims of Gross Violations of International Human Rights Law and Serious Violations of IHL ('Basic Principles')[32] have recognised it as a form of reparation.

In wrapping up this section, the international legal sources previously cited epitomise the quintessential principle that any breach of an obligation necessitates reparation in an appropriate form. It echoes a time-honoured doctrine mirrored in national litigation globally, where reparation serves as the cornerstone for addressing wrongs and ensuring justice. This principle's resonance across international and domestic terrains underscores the universal commitment to rectify, restore, and renew the legal and moral balance disrupted by breaches, further highlighting the indelible role of reparations in the quest for justice. The application or transplantation of these assumptions to climate change raises fundamental challenges given the particularities of the type of damage, the actors involved,

[28] Brandon Hamber, 'Repairing the Irreparable: Dealing with the Double-Binds of Making Reparations for Crimes of the Past' (2000) 5(3–4) Ethnicity and Health 215, 219.

[29] Naomi Roht-Arriaza, 'Reparations Decisions and Dilemmas' (2004) 27 Hastings International and Comparative Law Review 158.

[30] *Aloeboetoe et al v Suriname* (Merits) Inter-American Court of Human Rights Series C No 11 (4 December 1991); *Bámaca Velásquez v Guatemala* (Reparations and Costs, Concurring Vote of Sergio García Ramírez) Inter-American of Human Rights Series C No 70 (25 November 2000) [49].

[31] *Garrido and Baigorria v Argentina* (Reparations and Costs) Inter-American Court of Human Rights Series C No 39 (27 August 1998) [47]. The first indication of guarantees of non-repetition appears in the reasoned opinion of Judge Cançado Trindade, in *El Amparo v Venezuela* (Reparations and Costs) Inter-American Court of Human Rights Series C No 28 (14 September 1996) [6].

[32] Basic Principles and Guidelines on the Right to a Remedy and Reparation for Victims of Gross Violations of International Human Rights Law and Serious Violations of IHL, UNGA Res 60/147 (15 December 2005) (UNGA Res 60/147).

and the diversity of victims: Does the law adopt the categories sufficient to obtain a remedy for climate change? How do we interpret the remedies of public international law in line with the principles of climate change? What concrete actions should States and the international community take to guarantee the right to a remedy for climate change? Legal arguments, plaintiffs, defendants, petitions, and judgments vary significantly from case to case, as shown in the remainder of this chapter. However, what they all have in common is their remedial demands: plaintiffs ask courts to require mainly States, but increasingly also corporate actors, to create or strengthen policies/laws aimed at protecting the climate – via combating deforestation, for instance – or to suspend or reform projects that might harm the climate system.[33]

18.3 STATE OF AFFAIRS

For this chapter, remedies or climate remedies are defined as outcomes in climate cases that favour the party seeking a climate-aligned objective, including measures to mitigate, adapt to, and compensate for climate-related impacts.[34] According to the latest report on global trends in climate litigation (2023) of the Grantham Research Institute, 'around 55% of the 549 cases in which either an interim or final decision has so far been rendered have had outcomes that are favourable to climate action'.[35] Arguably, the approximately 300 climate litigation cases that have resulted in climate-positive decisions could be deemed cases that have generated climate remedies. Climate remedies take many legal forms, ranging from injunctive relief to writ of mandamus, quashing of administrative permits, and compensation awards.[36] These remedies aim to establish non-repetition, prevent further harm, and repair the damage incurred vis-à-vis

[33] Juan Auz, 'The Political Ecology of Climate Remedies in Latin America and the Caribbean: Comparing Compliance between Domestic and Inter-American Litigation' (2024) JHRP <https://academic.oup.com/jhrp/advance-article/doi/10.1093/jhuman/huad057/7571304> accessed 3 March 2024.

[34] Joana Setzer and Catherine Higham, 'Global Trends in Climate Change Litigation: 2021 Snapshot' (*LSE Grantham Research Institute on Climate Change and the Environment*, July 2021) 10 <www.lse.ac.uk/granthaminstitute/wp-content/uploads/2021/07/Global-trends-in-climate-change-litigation_2021-snapshot.pdf> accessed 24 February 2024.

[35] Joana Setzer and Catherine Higham, 'Global Trends in Climate Change Litigation: 2023 Snapshot' (*LSE Grantham Research Institute on Climate Change and the Environment*, June 2023) 28 <www.lse.ac.uk/granthaminstitute/wp-content/uploads/2023/06/Global_trends_in_climate_change_litigation_2023_snapshot.pdf> accessed 24 February 2024.

[36] Annalisa Savaresi and Joana Setzer, 'Rights-Based Litigation in the Climate Emergency: Mapping the Landscape and New Knowledge Frontiers' (2022) 13 JHRE 7, 17–18.

whole-of-government climate policies, corporate behaviour, and identified polluting projects.[37] Courts and tribunals have interpreted remedies in climate litigation quite plurally depending on a manifold of factors, including the remedial aspirations of applicants, the jurisdiction of the court, the court's approach and mandate to reparations, and the field of law.[38]

The Netherlands is where two of the most highly cited and studied climate litigation cases have occurred.[39] Both of these cases have resulted in climate remedies. The first case is *Urgenda Foundation v State of the Netherlands*, in which the plaintiffs contested the government's insufficient efforts to address climate change. Specifically, they criticised the Dutch government for lacking ambition in its domestic climate change strategy, which aimed to decrease greenhouse gas (GHG) emissions by 17 per cent. The plaintiffs achieved a favourable outcome: The Court ruled that the government's failure to achieve a minimum 25 per cent reduction in greenhouse gas emissions by the end of 2020 would breach Articles 2 and 8 of the European Convention on Human Rights (ECHR) and Article 21 of the Dutch Constitution.[40] As a result, the Court ordered the State to achieve more significant emissions reductions, thus exemplifying a climate remedy of guarantee of non-repetition and cessation through injunctive relief. A noteworthy aspect of the judgment that delineates the scope of the remedy is the Supreme Court's assertion that if 'the government is obliged to do something, it may be ordered to do so by the courts, as anyone may be, at the request of the entitled party'.[41] Although the Court averred that this power to obligate the government to 'do something' is a fundamental rule of constitutional democracy, the judicial remedial obligation in this case did not include an order to take specific legislative measures. As such, the State could choose the measures to comply with the judgment.[42] Following *Urgenda*, other *Urgenda*-style cases emerged in Belgium,[43]

[37] Fin-Jasper Langmack, 'Remedies for Climate Change – A Decisive Push Towards Paris?' in Daniëlla Dam-de Jong and Fabian Amtenbrink (eds), *Netherlands Yearbook of International Law 2021: A Greener International Law – International Legal Responses to the Global Environmental Crisis* (TMC Asser Press 2023).

[38] Margaretha Wewerinke-Singh, 'Remedies for Human Rights Violations Caused by Climate Change' (2019) 9 Climate Law 224, 228–229.

[39] Lucy Maxwell, Sarah Mead, and Dennis van Berkel, 'Standards for Adjudicating the next Generation of Urgenda-Style Climate Cases' (2022) 13(1) JHRE 35; Chiara Macchi and Josephine van Zeben, 'Business and Human Rights Implications of Climate Change Litigation: Milieudefensie et al v Royal Dutch Shell' (2021) 30 RECIEL 409.

[40] *State of the Netherlands v Stichting Urgenda* [2018] ECLI:NL:GHDHA:2018:2591 (Court of Appeal) (*Urgenda Court of Appeal*); *State of the Netherlands (Ministry of Economic Affairs and Climate Policy) v Stichting Urgenda* [2019] ECLI:NL:HR:2019:2007 (Supreme Court of the Netherlands) (*Urgenda Supreme Court*).

[41] ibid *Urgenda Supreme Court* [8.2.1].

[42] ibid [8.2.7].

[43] *VZW Klimaatzaak v l'État Belge* [2021] 2015/4585/A (Tribunal de première instance francophone de Bruxelles, Section Civile) (*VZW Klimaatzaak First Instance*).

France,[44] Canada,[45] the Czech Republic,[46] Germany,[47] Poland,[48] Ireland,[49] Italy,[50] South Korea,[51] the United Kingdom,[52] and the US.[53]

The other well-known Dutch climate case is *Milieudefensie et al v Royal Dutch Shell*, in which the plaintiffs contended that Shell's role in causing climate change constituted a breach of their responsibility according to Dutch law and obligations related to human rights.[54] They pursued an order from the Court that would require Shell to lower its CO_2 emissions by 45 per cent by 2030, relative to the levels seen in 2010. Furthermore, the claimants sought a complete elimination of emissions by the year 2050, aligning with the objectives of the Paris Agreement. The plaintiffs, although successful, did not get the precise remedy sought. As a matter of remedial award, the Court ordered Shell, directly and via its subsidiaries, to limit or cause to be limited the emissions related to its group's activities (scope 1 emissions), its business relationships (scope 2 emissions), and the sold products (scope 3 emissions) by at least 45 per cent at the end of 2030, relative to 2019 levels.[55] This overarching remedy is likely the most ambitious in corporate climate litigation because it entails fundamentally rethinking the energy corporation and its place in producing and potentially diminishing the climate crisis.[56] A similar case filed in France is worth mentioning. The plaintiff, the French NGO Notre Affaire à Tous, sought (unsuccessfully due to inadmissibility) to order the French oil major Total to undertake action to reduce the CO_2 emissions attached to its operations.[57]

[44] *Notre Affaire à Tous and Others v France* [2021] No 1904967, 1904968, 1904972 1904976/4-1.
[45] *La Rose v Her Majesty the Queen*, T-1750-19 [2019] (Federal Court of Canada).
[46] *Klimatická žaloba ČR v Czech Republic* [2022] 9 As 116/2022 – 166 (Supreme Administrative Court).
[47] *Neubauer and Others v Germany* [2021] 1 BvR 2656/18, 1 BvR 96/20, 1 BvR 78/20, 1 BvR 288/20, 1 BvR 96/20, 1 BvR 78/20 (German Federal Constitutional Court) (*Neubauer*).
[48] *ClientEarth v Poland (on Behalf of MG)* [2021] <https://climatecasechart.com/non-us-case/clientearth-v-poland-acting-on-behalf-of-mg/#:~:text=Summary%3A,worsening%20effects%20of%20climate%20change.> accessed 24 February 2024.
[49] *Friends of the Irish Environment CLG v The Government of Ireland, Ireland and the Attorney General* [2020] Appeal no 205/19 (Supreme Court of Ireland).
[50] A *SUD and others v Italy* [2021] (Civil Court of Rome) <https://climatecasechart.com/non-us-case/a-sud-et-al-v-italy/#:~:text=Summary%3A,a%20stable%20and%20safe%20climate> accessed 24 February 2024.
[51] *Do-Hyun Kim et al v South Korea* [2020] Constitutional Court of South Korea (pending).
[52] *Plan B Earth and Others v The Secretary of State for Business, Energy, and Industrial Strategy* [2019] C1/2018/1750 (Court of Appeal Civil Division).
[53] *Juliana v United States*, No 6:15-cv-01517-AA (District Court of Oregon 2023) (Opinion and Order).
[54] *Milieudefensie v Royal Dutch Shell* [2021] ECLR:NL: RBDHA:2021:5339 (District Court of the Hague).
[55] ibid [5.3].
[56] Phillip Paiement, 'Reimagining the Energy Corporation: Milieudefensie and Others v Royal Dutch Shell Plc' in Daniëlla Dam-de Jong and Fabian Amtenbrink (eds), *Netherlands Yearbook of International Law 2021: A Greener International Law – International Legal Responses to the Global Environmental Crisis* (TMC Asser Press 2023).
[57] *Notre Affaire à Tous and Others v Total* [2023] No RG 22/03403.

These legal actions pursue climate remedies that can guarantee non-repetition and cessation through injunctive relief.

Examples of *Urgenda*-like remedies, that is, judicial awards that tackle systemic issues that fundamentally influence GHG emissions, also exist in the Global South. One of the most well-known cases is *Future Generations v Ministry of the Environment and Others (Demanda Generaciones Futuras v Minambiente)*, where twenty-five young claimants from different parts of Colombia lodged a *tutela* (constitutional injunction) before the Supreme Court demanding human rights protection from climate change exacerbated by the Amazon's deforestation.[58] In April 2018, the Supreme Court favoured the plaintiffs and ordered the State to comply with a comprehensive remedy list that involves creating and implementing inter-institutional conservation policies. The Court ordered the President of Colombia and relevant ministerial agencies to liaise with the plaintiffs, affected communities, and interested populations to formulate an anti-deforestation action plan. It also ordered the construction of an 'Intergenerational Pact for the Life of the Colombian Amazon' to reduce deforestation and GHG emissions with multi-level implementation strategies.

Climate remedies designed to address economy-wide or structural frameworks are emerging in climate litigation. However, it is expected to encounter several remedies targeting a precise policy or project that intensifies climate change. For instance, plaintiffs in the 'Climate Fund' case in Brazil alleged that the government's decision to render the National Fund on Climate Change, which ensures the implementation of mitigation and adaptation action, was unconstitutional. The Federal Supreme Court agreed, finding the federal government breached its obligation to fully allocate the Fund's resources for 2019. It ordered the State defendant to abstain from omitting its responsibility and prohibiting the resources' undue retention.[59] Similarly, in Ecuador, young plaintiffs claimed that gas flaring is unlawful because it is a polluting practice that contributes to climate change and negatively impacts their constitutional rights. A provincial appeals court accepted the plaintiffs' arguments and ordered the State to eliminate the gas flaring towers in the plaintiffs' vicinity within eighteen months and to abolish such practice entirely by 2030.[60]

Awarding climate remedies is not only the prerogative of national courts. In the international realm, judicial and quasi-judicial bodies are also starting to delineate remedies in the context of climate change. For now, there is only one case in which an international human rights body has handed down a decision awarding a climate-related remedy. In *Billy et al v Australia*, eight indigenous authors from the

[58] *Future Generations v Ministry of the Environment and Others (Demanda Generaciones Futuras v Minambiente)* [2018] 11001 22 03 000 2018 00319 00 (Supreme Court of Justice of Colombia) (*Demanda Futuras Generaciones*).

[59] *PSB and others v Brazil* [2022] ADPF 708 (Federal Supreme Court of Brazil).

[60] *Appeals Judgement Herrera Carrión et al v Ecuador* [2021] 21201202000170 (Provincial Court of Justice of Sucumbíos).

Torres Strait Islands filed a complaint before the UN Human Rights Committee.[61] The authors claimed that Australia had violated their right to life by not taking sufficient climate mitigation and adaptation measures;[62] their right to enjoy their culture and traditional way of life due to their interdependence with their islands' ecological balance, which is being compromised by climate change, thus generating displacement and irreparable cultural harm;[63] and their right to privacy, family, and home life due to ongoing and prospective forced abandonment of their homes.[64]

Furthermore, the authors asserted that – by failing to adopt adequate climate action – Australia is making the climate inhospitable for future generations, thereby affecting the specific rights of minors as enshrined in Article 24(1) of the International Covenant on Civil and Political Rights.[65] The UN Human Rights Committee found that Australia was in breach of all of the rights invoked by the authors except for the right to life and the rights of minors. As a result, the Committee ordered Australia to provide adequate compensation, conduct consultations for needs assessments, continue implementing and monitoring adequate measures to secure islanders' existence and adopt non-repetition measures.[66] In line with its past practice, the UN Human Rights Committee refrained from specifying the precise amount of compensation or detailing non-repetition measures, thus leaving the State a degree of discretion.[67] The Committee did, however, remind Australia of its duty under the Optional Protocol to ensure an effective remedy when a violation has occurred and expressed its wishes to receive from the State party, within 180 days, information about the measures taken to give effect to the Committee's Views.[68]

Finally, it is essential to mention General Comment No 26 of the Committee on the Rights of the Child on children's rights and the environment, with particular attention to climate change, which includes a section on effective remedies.[69] To ensure effective remedies, the General Comment recognises that States must include restitution, adequate compensation, satisfaction, rehabilitation, and guarantees of non-repetition, both for the environment and the children concerned, as well as access to medical and psychological assistance. It also indicates that

[61] UNHR Committee, 'Views Adopted by the Committee under Article 5(4) of the Optional Protocol, concerning Communication No 3624/2019', 21 July 2022, UN Doc CCPR/C/135/D/3624/2019 (*Billy*).
[62] ibid [3.3].
[63] ibid [3.5].
[64] ibid [3.6].
[65] ibid [3.7].
[66] ibid [11].
[67] UNHR Committee, 'Views Adopted by the Committee under Article 5(4) of the Optional Protocol, concerning Communication No 2751/2016', 20 September 2019, UN Doc CCPR/C/126/D/2751/2016 *(Portillo Caceres)*; UNHR Committee, 'Views Adopted by the Committee under Article 5(4) of the Optional Protocol, concerning Communication No 2552/2015', 21 September 2022, UN Doc CCPR/C/132/D/2552/2015 (*Benito Oliveira Pereira*).
[68] *Billy* (n 61) [12].
[69] Committee on Rights of the Child, 'General Comment No 26 on Children's Rights and the Environment with a Special Focus on Climate Change' (22 August 2023) UN Doc CRC/C/GC/26.

States should consider the vulnerability of children affected by environmental degradation, particularly in the case of irreversible damage that may last a lifetime. To this end, the Committee recommends the creation of innovative forms of reparation, such as intergenerational committees, to develop and implement rapid reparation measures.[70]

The cases described in this section are salient instances of remedial approaches encompassing injunctive relief, project permit denials, and legislative reforms, all within the remit of the courts' mandates to award them. Some of them already incorporate emerging best practices, namely adopting a remedial design that merges adaptation and compensation orders in one single judgment while compelling the defendant to provide a reasonable level of specificity in the mandated new legal or policy act. In the next section, these emerging best practices will be further detailed and illustrated through other remedies from comparative case law.

18.4 EMERGING BEST PRACTICE

Emerging best practices in the judicial ambit of awarding climate remedies could be divided into five elements. The overarching principle – which we identify as the first element of emerging best practice, following Principles 10 and 13 of the Rio Declaration – concerns the importance of providing an effective redress and remedy in environmental matters.[71] The second element relates to the issuing of holistic orders. A holistic approach to remedies means that orders can encompass a diverse range of climate-related measures, for instance an order to reduce GHG emissions alongside a mandate to implement adaptation-related policies and design participatory processes for redressing loss and damage. The third element of emerging best practice is holding the State or private actor to at least the minimum standard of care recognised in law and/or science where awarding more holistic or far-reaching remedies is unfeasible. To help identify the standard of care for mitigation measures – and reflecting the fourth element of emerging best practice – courts can use the concept of 'fair shares' of a global carbon budget to determine the exact remedial order. This manoeuvre allows judges to use the most updated methodologies to ascertain the defendants' level of responsibility for their contribution to climate change and designate appropriate redress options. And finally, the fifth element of emerging best practice relates to compliance-based orders. These orders are characterised by specificity and straightforwardness, whereby the remedial order specifies what the defendant must do to provide redress, thereby enabling effective compliance follow-up.

[70] ibid [89].

[71] United Nations 'Declaration of the United Nations Conference on Environment and Development' (1992) 31 ILM 874 (Rio Declaration) principles 10 and 13.

18.4.1 *Providing Effective Redress and Remedy*

The Rio Declaration on Environment and Development is a conspicuous authoritative source of law in virtually every jurisdiction.[72] Principle 10 of the Rio Declaration develops the general framework of procedural environmental justice, including access to justice. A core tenet of access to justice is providing effective redress and remedy where an obligation is breached, which is now emerging best practice in comparative climate litigation. Several courts have elaborated on the importance of this principle of emerging best practice.

In *Urgenda*[73] the Dutch Supreme Court acknowledged that 'decision-making on the reduction of greenhouse gas emissions is a power of the government and parliament' and that they have a significant degree of discretion in this respect.[74] Nevertheless, the Supreme Court recognised that the judiciary has a role in determining whether the government has remained within the limits of the law by which it is bound. The Court emphasised that legal protection against the government is a vital aspect of a system governed by the rule of law:

> In the Dutch system of government, the decision-making on greenhouse gas emissions belongs to the government and parliament. They have a large degree of discretion to make the political considerations that are necessary in this regard. It is up to the courts to decide whether, in taking their decisions, the government and parliament have remained within the limits of the law by which they are bound. Those limits ensue from the ECHR, among other things. The Dutch Constitution requires the Dutch courts to apply the provisions of this convention, and they must do so in accordance with the ECtHR's interpretation of these provisions. This mandate to the courts to offer legal protection, even against the government, is an essential component of a democratic state under the rule of law.[75]

As noted earlier, the Supreme Court ordered the government to increase its climate mitigation efforts and achieve a reduction of at least 25 per cent by 2020 compared to 1990 levels.[76]

In *Notre Affaire à Tous*,[77] the Administrative Court of Paris recognised the need to afford the government considerable discretion in implementing a court order related to GHG emission targets. Nonetheless, it explicitly stated that this allowance does not preclude the judiciary from mandating the government to implement more robust climate mitigation measures. These measures are intended to prevent exacerbation of

[72] Jorge E. Viñuales, 'The Rio Declaration on Environment and Development' in Jorge E. Viñuales (ed), *The Rio Declaration on Environment and Development: A Commentary* (Oxford University Press 2015).
[73] *Urgenda Supreme Court* (n 40).
[74] ibid [8.3.2]. See also [6.2]–[6.3].
[75] ibid.
[76] ibid [8.3.5].
[77] *Notre Affaire à Tous* (n 44).

climate impacts and align with the legislative targets established by the government. Consequently, the Court mandated the French government to intensify its endeavours to decrease GHG emissions following the legislative framework:

> In the circumstances of this case, it is appropriate to order the Prime Minister and the competent ministers to take all the necessary sectoral measures to compensate for the damage up to the uncompensated share of greenhouse gas emissions under the first carbon budget […]. it is appropriate, as has been said, to order the enactment of such measures within a sufficiently short period of time in order to prevent any worsening of that damage. In the context of the present case, the specific measures to make reparation for the damage may take various forms and consequently express choices which are within the Government's discretion.[78]

Similarly, in *Neubauer*,[79] the German Constitutional Court highlighted that:

> It is not, in principle, for the courts to translate the open wording of Art 20a GG into quantifiable global warming limits and corresponding emission amounts or reduction targets. At the same time, however, Art 20a GG may not be drained of substance as an obligation to take climate action. In this respect too, it remains for the Federal Constitutional Court to review whether the boundaries of Art 20a GG are respected ([…]). There is nothing to indicate that Art 20a GG – as a singular exception among the provisions of the Basic Law – is beyond the scope of judicial review with regard to how its regulatory content is Interpreted and applied.[80]

Additionally, the Court emphasised the significance of upholding constitutional boundaries within environmental protection, specifically in the context of climate action. The Court asserted that judicial examination enables consideration of long-term interests, particularly those of future generations, safeguarding them from short-term interests influenced by election cycles:

> The Constitution sets limits here on the leeway enjoyed in the political decision-making process to determine whether environmental protection measures should be taken or not. In Art 20a GG, environmental protection is elevated to a matter of constitutional significance because the democratic political process is organised along more short-term lines based on election cycles, placing it at a structural risk of being less responsive to tackling the ecological issues that need to be pursued over the long term. It is also because future generations – those who will be most affected – naturally have no voice of their own in shaping the current political agenda. In view of these institutional conditions, Art 20a GG imposes substantive constraints on democratic decision-making ([…]). This binding of the political process as envisaged by Art 20a GG would be in danger of being lost if the material

[78] ibid [13].
[79] *Neubauer* (n 47).
[80] ibid [206].

> content of Art 20a GG were fully determined by the day-to-day political process with its more short-term approach and its orientation towards directly expressible interests.[81]

Finally, in the landmark ruling of *Held v Montana*,[82] a trial court decided in favour of sixteen youth plaintiffs, declaring that a provision in the Montana Environmental Policy Act (MEPA) – which barred the consideration of greenhouse gas emissions and related climate impacts in environmental assessments – unconstitutional.[83] Following a seven-day trial, the Court acknowledged that climate change significantly threatened public health. The plaintiffs showcased various damages they suffered due to the state's neglect of environmental concerns. The court confirmed that the plaintiffs were entitled to a 'clean and healthful environment', encompassing climate. It emphasised that Montana's activities in the fossil fuel sector contributed substantially to global warming, seriously harming the state's youth. As a remedy, the Court declared its judgment would influence the State's conduct by invalidating statutes prohibiting analysis and remedies based on GHG emissions and climate impacts.[84] By refusing to analyse GHG emissions and their corresponding impacts on the climate or being consistent with the Montana Constitution, the court declared the MEPA unconstitutional and permanently enjoined because it removes the only preventative, equitable relief available to the public.[85]

18.4.2 *A Holistic Approach to Remedies*

It is emerging best practice that the court adopt a holistic approach to remedies where possible.

An example is the Nepalese case of *Shrestha v Office of the Prime Minister et al*. On 23 August 2017, Padam Bahadur Shrestha filed a legal action before the Supreme Court of Nepal to compel the government to establish new legislation concerning climate change through a writ of mandamus or other appropriate directive to enact such a law.[86] The basis of the petition was that the existing Environmental Protection Act of 1997 needed to be revised to address climate change and that the Climate Change Policy 2011 had not been implemented. Consequently, due to climate change, Nepalese people and ecosystems have endured significant adverse

[81] ibid [205].
[82] *Held v Montana* No CDV-2020-307 (District Court of Montana 2023).
[83] Cf with the remedy sought in *Juliana* which was considered non-redressable. The case sought an injunction requiring the government to craft a 'comprehensive scheme to decrease fossil fuel emissions and combat climate change', which the Court doubted could be supervised or enforced by the Court. See also the preliminary decision in *Held* of 2021, in which the Court also found that injunctive relief would violate the political question doctrine.
[84] ibid [102].
[85] ibid.
[86] *Advocate Padam Bahadur Shrestha v Prime Minister and Office of Council of Ministers and Others* [2018] Order No 074-WO-0283 (2075/09/10 BS) (Supreme Court of Nepal).

impacts. The Court ordered the government, as a form of remedy, to introduce a new climate change law covering several critical areas of climate action. These included strategies to both mitigate and adapt to the impacts of climate change, the promotion of low-carbon technologies and a reduction in the consumption of fossil fuels, and the establishment of scientific and legal tools to offer compensation for individuals affected by pollution and environmental deterioration.[87] The Court instructed the government to draft and implement the new climate law by issuing a writ of mandamus. This action was deemed essential to uphold Nepal's commitments as outlined in the Paris Agreement and to fulfil obligations stated in the Constitution.

In *Leghari v Pakistan*, a law student and farmer from Rahim Yar Khan District in South Punjab, Pakistan, faced water shortages and temperature fluctuations on his family's 500-acre sugarcane plantation due to climate change.[88] To prompt action from relevant departments and ministries, he initiated a lawsuit against the Federation of Pakistan for not implementing the 2012 National Climate Change Policy and its Framework. He contended that climate change directly affected Pakistan, necessitating immediate government intervention for adaptation to erratic weather patterns. Leghari claimed that the government's inaction on climate change violated his constitutional rights, specifically the right to life (Article 9) and the protection of human dignity (Article 14). Following the petition, the Lahore High Court ordered the establishment of a Climate Change Commission to expedite measures combating the effects of climate change in Pakistan. Additionally, the Court specified deadlines for implementing actions ranging from urgent to long-term, maintaining oversight through its continuing mandamus authority to ensure the progression of these efforts. The holistic approach of this remedial order lies in the fact that the High Court of Lahore was tasked with overseeing the implementation of the entirety of the National Climate Change Policy and its Framework for Implementation. Also reflecting best practice was the Court's follow-up proceedings in 2018 to assess compliance with its initial order, whereby the Court constituted a 'standing committee' to create an ongoing link between the Court and the executive.[89]

In the *Josefina Huffington Archbold v Colombia* case, the plaintiff, a citizen from the islands of Providencia and Santa Catalina in Colombia, filed a constitutional injunction against the State for human rights violations. The case concerned the planning and executing of the action plan to aid the islands following Hurricane Iota in November 2020, which destroyed 98 per cent of the islands' infrastructure.[90] The Constitutional Court deemed that the State did not deploy a diligent response plan,

[87] ibid 13–14.
[88] *Asghar Leghari v Federation of Pakistan etc* PLD 2018 Lahore 364 [11].
[89] ibid [25].
[90] *Josefina Huffington Archbold v Colombia* [2022] T-8.298.253 (Constitutional Court of Colombia).

which is why it ordered, as a remedy, all the relevant ministries to mobilise resources and personnel to the islands. The Court continued to stress that the respondent State had to implement concrete measures to systematically alleviate the humanitarian emergency and rebuild the infrastructure to adequately provide all essential services guaranteed in the Constitution as fundamental rights. Additionally, the Court ordered the government to implement a participatory plan that considers local culture and languages to rebuild the islands in a way that strengthens resilience to future climate change impacts.[91] In its reasoning for designing this remedy, the Court asserted that the comprehensive reconstruction process must integrate Colombia's climate adaptation obligations and human rights. The case is, therefore, an illustration of how apex courts are awarding remedies in a holistic fashion, whereby orders of adaptation to climate impacts in extreme weather disasters cannot be deployed without including human rights in a contextualised way.

18.4.3 *A Minimum Standard*

If the court considers that it cannot issue a holistic remedy – whether because of the way the claim is framed or for other legal or procedural reasons – it is emerging best practice for the court to assess the minimum standard of conduct that the State or private actor must meet to discharge any relevant legal obligations.

A landmark judgment from the Brussels Court of Appeal in *Klimaatzaak*[92] exemplifies this. In contrast to the judgment in the first instance (limited to declaratory relief), the Court of Appeal issued an injunctive order requiring the governments to increase their reduction targets to at least 55 per cent of 1990 levels.[93] Notably, the Court asserted that utilising its injunctive power against public authorities does not necessarily violate the principle of separation of powers if the judge issues an order consistent with the 'minimum requirements laid down by norms of international law' or in the absence of such norms, the 'minimum requirements' 'on the basis of data on which there is scientific and political consensus'.[94]

Regarding the reduction order, the Court noted:

> Imposing such a reduction in order to prevent global warming does not, as the Brussels-Capital Region has argued, deprive the public authority of the choice of measures to adopt in order to achieve the objective of limiting global warming, nor does it 'petrify' public action, as the Walloon Region maintains (its conclusions on page 84), since it is indisputable (and moreover not seriously contested) that this is an absolutely essential measure (even if not necessarily sufficient) to

[91] ibid [123].
[92] *VZW Klimaatzaak v Kingdom of Belgium and Others* [2023] 2022/AR/891(Cour d'appel de Bruxelles) (*VZW Klimaatzaak Appeal*).
[93] ibid [286].
[94] ibid [227].

> achieve it, that the Court limits itself to defining a minimum threshold of reduction to be achieved in several years' time, below which there is fault or negligence (a threshold which the respondents in the main proceedings are therefore free to raise), and that there is a wide range of concrete measures available to these authorities to enable them to achieve this objective (as illustrated by the extensive discussion of measures already taken in the respondents' submissions in the main proceedings).[95]

The rationale for this judgment is grounded in the violation of human rights (specifically, Articles 2[96] and 8[97] of the ECHR) and civil liability principles (Articles 1382 and 1383 of the Civil Code). In its conclusions, the Court of Appeal confirmed that granting an injunction to reduce emissions was the 'best, if not the only' way to correct the shortcomings on the part of the State under the ECHR (which contains the right to an effective remedy under Article 13)[98] and the extracontractual liability provisions of the Civil Code.[99] It explained:[100]

> In view of the shortcomings noted in the past and which continue to this day, which can only be corrected by reductions to be planned for the future, in view of the threat posed to the right to life, private life and family life of the appellants, natural persons, by ongoing global warming, in view of the urgency of the measures to be taken during the present decade, in view of the importance of maintaining, at international level, the mutual trust of the States parties to the UNFCCC in the fact that each State will effectively contribute to the global fight against global warming, in view of the absence of any concrete sanction to date for failure to meet the European objectives, it is justified, both in terms of the violation of articles 2 and 8 of the ECHR and of articles 1382 and 1383 of the former Civil Code, to issue an express injunction to the Belgian State, the Brussels-Capital Region and the Flemish Region to take, in consultation with the Walloon Region, the appropriate measures to ensure that Belgium achieves by 2030 the target of a 55% reduction in GHG emissions from its territory compared with 1990.

In so doing, the Brussels Court of Appeal adopted an approach similar to that of the Supreme Court in *Urgenda*. The Supreme Court, in that case, focused on the 'absolute minimum' required by the State to discharge its obligations under the ECHR[101] – while leaving it to the government to determine the specific programme, law, or mechanism to reduce GHG emissions by that amount.

[95] ibid.
[96] ibid [121].
[97] ibid [124].
[98] ibid [277].
[99] ibid [283].
[100] ibid [285].
[101] *Urgenda Supreme Court* (n 40) [7.5.1].

18.4.4 *Drawing on a Global Carbon Budget*

Another element of emerging best practice in climate litigation to date concerns using a global carbon budget to determine the appropriate remedy. This is often linked to determining the 'minimum standard' discussed earlier and to the 'fair shares' concept.[102]

The most pertinent case in this respect is the famous German constitutional case of *Neubauer et al v Germany*. This case started with a cohort of young individuals from Germany filing a legal challenge against the Federal Climate Protection Act in the Federal Constitutional Court. They contended that the Act's objective of decreasing GHG emissions by 55 per cent by 2030 compared to 1990 levels was inadequate.[103] The plaintiffs claimed that this insufficiency consequently violated their human rights as safeguarded by Germany's Constitution. The Court ruled in the plaintiffs' favour. Given the risk of irreversible climate change manifested in the Climate Protection Act, the Constitutional Court based its rationale on the carbon budget estimates of the Intergovernmental Panel on Climate Change (IPCC) to limit warming to 1.75°C. In light of the technical insights from the IPCC and the German Advisory Council on the Environment, the Court ordered the legislature to set clear and specific provisions for reduction targets from 2031 onwards by the end of 2022 based on the size of the remaining global CO_2 budget under the Paris Agreement's temperature limits of well below 2°C and, if possible, to 1.5°C.[104] This injunctive relief is an example of a remedy designed to avoid overshooting a global carbon budget. The order also demands a significant level of specificity that the legislature must comply with in making the new climate legislation.

The Court based its decision on the principle of proportionality to underscore the need to manage the required emissions reductions for achieving climate neutrality equitably and proactively, ensuring that the curtailment of freedoms remains reasonable despite climate challenges. Specifically, it points out that the protective mandate of Article 20a of the German Basic Law emphasises preserving the natural foundations of life for both present and future generations, advocating for environmental stewardship that avoids imposing radical restraint on future generations.[105] Additionally, it underscores the importance of judiciously consuming the remaining CO_2 budget to buy critical time, enabling necessary transformations that alleviate freedom losses. The Court emphasises the significance of forward-looking legislation that respects fundamental rights.[106]

[102] Maria Antonia Tigre, 'The "Fair Share" of Climate Mitigation: Can Litigation Increase National Ambition for Brazil?' (2023) JHRP <https://academic.oup.com/jhrp/advance-article-abstract/doi/10.1093/jhuman/huad032/7261647> accessed 24 February 2024.
[103] *Neubauer* (n 47).
[104] ibid [229].
[105] ibid.
[106] ibid.

Another illustrative example of this practice of relying on a carbon budget to establish an appropriate remedy is the *Gloucester Resources Limited v Minister of Planning* in Australia. The mining company Gloucester Resources Limited filed a legal action against the Minister of Planning, contesting the rejection of the company's proposal to build an open-pit coal mine known as the Rocky Hill Coal Project in New South Wales. This project aimed to extract 21 million tons of coal over sixteen years.[107] The Land and Environment Court of New South Wales upheld the Minister's denial of Gloucester Resources' application, finding that the size of the mining project would be a significant source of GHG emissions. Therefore, the project's refusal could contribute to remaining within the global carbon budget and achieving the long-term temperature goal under the Paris Agreement.[108]

The Brussels Court of Appeal in *VZW Klimaatzaak v Kingdom of Belgium et al* also drew on the carbon budget concept to determine the appropriate remedial order in that case. The Court of Appeal assessed whether – in particular under tort law – it would be appropriate to seek an injunctive relief to prevent 'damage (so-called dangerous global warming and excessive damage to the residual carbon budget) [that] has not yet occurred'.[109] The Court affirmed that 'in the current state of positive law, an action to prevent future damage is admissible when the fault has already been committed, and the damage is sufficiently serious'.[110] To reach its remedial order, the Court relied upon climate science reports that introduce the notion of carbon budgets to determine what economy-wide GHG emission reduction goals would allow Belgium to contribute to keeping the 1.5°C long-term temperature limit within reach considering a residual global carbon budget of 400 $GtCO_2$, as noted by the IPCC's AR6.[111] On this basis, the Court determined that a reduction of 55 per cent in GHG emissions by 2030 (compared with 1990 levels) was the minimum required to discharge its legal obligations.[112]

18.4.5 *Compliance-oriented Remedies*

The final trend of emerging best practice concerning remedies in climate litigation is the inclusion of orders that provide for a specific and unambiguous behavioural route for the defendant and include follow-up action by the Court to facilitate compliance. This type of remedy clearly articulates why specific laws or policies are unlawful or unconstitutional and what the respondent needs to do to rectify their impacts.

For instance, in the *Friends of the Irish Environment v Ireland* case, applicants filed an appeal in the Supreme Court, arguing that the Irish government's approval of the

[107] *Gloucester Resources Limited v Minister for Planning* [2019] NSWLEC 7 (*Gloucester Resources*).
[108] ibid [554]–[556].
[109] *VZW Klimaatzaak Appeal* (n 92) [278].
[110] ibid [281].
[111] ibid [190], [193].
[112] ibid [199]–[202].

National Mitigation Plan in 2017 violated national climate law, the Constitution, and human rights obligations.[113] The Supreme Court issued a judgment quashing the National Mitigation Plan for falling short of the specificity required to provide transparency and comply with the provisions in domestic climate legislation.[114] In its decision, the Court elaborated on what minimum standards a new plan should contain, including a sufficient level of specificity so that anyone could judge whether the plan is realistic and reasonable.[115] In the Court's view, a compliant plan should cover the entire period remaining to 2050 and be sufficiently specific.[116]

It is also possible to see this emerging best practice in the French decisions in the cases of *Grande Synthe* (which concerned the State's compliance with its future emissions reduction targets) and *L'Affaire du Siecle* (which concerned the government's failure to comply with its past carbon budgets). In the latter case, the Administrative Court of Paris ordered the government to take immediate and concrete actions to comply with its carbon budgets – ultimately ordering the government to offset the amount that it exceeded its carbon budgets.[117]

These cases and their resulting remedies constitute emerging best practices because judges use their prerogatives in awarding remedies in a way that tends to catalyse a more efficient outcome for a just decarbonised society when the legal rationale favours the pro-climate claimant. Designing and ordering remedies is highly contingent upon the rationale the judge elaborates on and the mandate a court or tribunal was given by law. However, in some instances, judges have a significant level of leeway to decide the best way to guarantee that the source of harm does not repeatedly manifest, thereby having structural effects. These instances in which judges in different jurisdictions can act convergently towards awarding impactful remedies are determined by certain factors that will be elaborated on in the next section.

18.5 REPLICABILITY

This section delves into three specific legal opportunity structures that aim to replicate remedial measures for effective climate action across various legal jurisdictions. Legal opportunity structures refer to the institutional aspects and features of the legal system that can either facilitate or hinder the ability of applicants to leverage the law for change.[118] These structures may include the accessibility of courts, the

[113] *Friends of the Irish Environment CLG* (n 49).
[114] ibid [9.3].
[115] ibid [9.2].
[116] ibid.
[117] *Notre Affaire à Tous* (n 44). The Court refused to order the government to pay a fine if it does not achieve the necessary reductions, as requested by the plaintiffs.
[118] Chris Hilson, 'New Social Movements: The Role of Legal Opportunity' (2002) 9 Journal of European Public Policy 238.

judiciary's predisposition towards specific claims, and the presence of supportive legal precedents. This section frames and discusses three legal opportunity structures that can be replicable across jurisdictions and have already been used in climate litigation.

Firstly, each court or tribunal operates based on a unique mandate, as defined by the legal framework that established it. This foundation gives structure to the court's operations and empowers judges with the authority to provide remedies or reparations. This ensures that decisions align with the jurisdiction's rules and regulations. Secondly, there is the 'Duty to Cooperate'. Using this principle, judges can, independently or upon a plaintiff's request, create mechanisms for cooperation between jurisdictions. Such measures can result in wide-ranging remedies, from emission reductions to compensation for damage caused by climate change, even if such damage is outside their direct jurisdiction. Lastly, the universally accepted scientific consensus on climate change, mainly as presented in the IPCC reports, offers a solid foundation for climate-related judgments. By drawing on these reports, courts can ensure the accuracy and relevance of their judgments. These three legal opportunity structures might prompt replicability and thus make it more feasible for judges worldwide to implement the emerging best practices described in the previous section with the added value of contextual sensibility. For example, a remedy in a low-emitting, highly vulnerable country might not look like one in a high-emitting, more climate-resilient one. Additionally, the likelihood of compliance with the remedial order in a judgment should also be factored into its design, and some of these legal opportunities could help address potential non-compliance.

Constitutional and supreme courts globally hold mandates derived from foundational legal texts, granting them the authority to order remedies in varied cases. In Ireland, the power of the Supreme Court to provide remedies emanates from the Constitution of Ireland. Articles 34.3.2° and 34.3.3° of the Irish Constitution entrust the Supreme Court and the High Court with the authority to adjudicate constitutional matters. It could be argued that the Irish Constitution legitimised and premised the mandate that led to the Supreme Court's judgment in *Friends of the Irish Environment v Ireland*. Similarly, the Constitution of South Africa, under Chapter 8 on Courts and Administration of Justice, endows its High Courts with a broad mandate to decide a constitutional matter within its power by declaring that any law or conduct that is inconsistent with the Constitution is invalid to the extent of its inconsistency; and ordering a limitation to its retrospective effect. The power granted by the Constitution was invoked in *EarthLife Africa Johannesburg v Minister of Environmental Affairs et al*.[119] India's Constitution, through Article 32, authorises its Supreme Court to issue writs for enforcing fundamental rights. Through this, the

[119] Marjoné van der Bank and Jaco Karsten, 'Climate Change and South Africa: A Critical Analysis of the Earthlife Africa Johannesburg and Another v Minister of Energy and Others 65662/16 (2017) Case and the Drive for Concrete Climate Practices' (2020) 13 Air, Soil and Water Research 11786221988537.

Court devised a 'continuing mandamus', assuring consistent judicial monitoring. This approach was utilised in the *Vellore Citizens Welfare Forum vs Union of India and Ors* case to address industrial pollution.[120] Embedded in legal frameworks, these mandates underscore the pivotal role of constitutional and supreme courts in addressing rights violations, safeguarding the rule of law, and ensuring justice by ordering appropriate remedies.

Given that the practice of adjudication is moving to regional and international courts and tribunals, the courts' mandates to award remedies in these instances mirror the phenomenon at the domestic level. The United Nations General Assembly (UNGA) Resolution on 'Basic Principles and Guidelines on the Right to a Remedy and Reparation for Victims of Gross Violations of International Human Rights Law and Serious Violations of International Humanitarian Law' sets out the remedies available to international human rights courts and tribunals.[121] These include restitution, compensation, rehabilitation, satisfaction, and guarantees of non-repetition. These forms of remedy are present in the treaties that created these adjudicative bodies. Article 13 of the ECHR guarantees the right to effective redress. Article 41 authorises the European Court of Human Rights (ECtHR) to award and afford just satisfaction to the injured party when domestic legislation allows only partial reparation.[122]

In the Inter-American Human Rights System, Articles 51 and 63 of the American Convention on Human Rights establish how the Inter-American Commission on Human Rights (IACHR) and the IACtHR shall proceed to grant remedies, respectively. Article 51 states that the IACHR is mandated to transmit a report to the State defendant with pertinent recommendations and a deadline to take remedial measures, after which it shall decide whether they were complied with.[123] Article 63(1) recognises that the IACtHR shall grant victims appropriate remedies, including fair compensation.[124]

Similarly, Article 27(1) of the Protocol to the African Charter on Human and Peoples' Rights Establishing an African Court on Human and Peoples' Rights states that the Court shall issue specific instructions to correct the violation, including the payment of fair compensation.[125] Several United Nations human rights treaty bodies, arguably weaker in authority than regional mechanisms,[126] have jurisdic-

[120] *Vellore Citizens Welfare Forum v Union of India* AIR 1996 SC 2715.
[121] UNGA Res 60/147 (n 32).
[122] European Convention for the Protection of Human Rights and Fundamental Freedoms (entered into force 4 Nov 1950) 213 UNTS 222 (European Convention on Human Rights) art 13.
[123] American Convention on Human Rights (entered into force 18 July 1978) 1144 UNTS 123 art 51.
[124] ibid art 63.
[125] Protocol to the African Charter on Human and People's Rights on the Establishment of an African Court on Human and People's Rights (entered into force 1 July 2008) 48 ILM 314 art 27.
[126] Helen Keller and Geir Ulfstein, 'Introduction' in Helen Keller and Geir Ulfstein (eds), *UN Human Rights Treaty Bodies: Law and Legitimacy* (Cambridge University Press 2012) 3–4.

tion to receive individual and inter-State complaints. These are sometimes included in optional clauses within the treaty but are often contained in a separate protocol.[127] Despite no treaty bodies having explicit legal competence to order compensation or other remedies, they occasionally incorporate calls to give restitution, pay compensation, or afford other remedies through their observations on periodic State reports, in general comments, and their views on communications.[128] Concretely, the basis between different jurisdictions' mandate to award similar remedies could support the replicability of the emerging best practice identified earlier. For instance, something that the IACtHR might order in a climate case could be, to a certain extent, replicated by the African Court of Human Rights because both mandates have similar scope regarding remedy measures.

Moving on to the second legal opportunity, discussing the international duty to cooperate as a remedy is noteworthy. For remedies awarded in Global South jurisdictions, it could be essential to put the remedy in the context of global climate change. Since many countries in the Global South might face constraints in complying with a remedy that requires structural whole-of-economy decarbonisation measures, adopting a remedy sensitive to this reality might be appropriate and replicable. The main structural obstacle to compliance by developing countries with a potential climate-related remedy is the lack of expertise and resources – both financial and technical – serving as the primary rationale for an approach that integrates a duty to cooperate. In other words, courts could anticipate a potential non-compliance scenario due to systemic barriers and thus resort to interpretive techniques to design context-specific remedies. More concretely, courts could establish obligations requiring States to do their best to cooperate with other States or multilateral institutions to protect the rights of their citizens from climate-related harm.[129] Ultimately, the formulation of a remedy that integrates a duty to cooperate internationally indirectly addresses the climate justice question by requiring the defendant State to perform its best when it comes to finding international assistance and cooperation, particularly with those States that pollute the most or with financial institutions that might provide appropriate funding. Article 1(1) and (3) of the United Nations Charter[130] and Article 2(1) of the International Covenant on Economic, Social and Cultural Rights (ICESCR) offer essential doctrinal direction for replication. The ICESCR, more specifically, lays out the duty of States 'to take steps … through international assistance and co-operation, especially economic and technical, … with the view to achieving progressively

[127] Shelton (n 1) 191.
[128] ibid 193.
[129] Benoit Mayer, 'Obligations of Conduct in the International Law on Climate Change: A Defence' (2018) 27 RECIEL 130, 131.
[130] Charter of the United Nations (entered into force 24 October 1945) XV UNCIO 335, amendments in 557 UNTS 143, 638 UNTS 308, and 892 UNTS 119.

the full realisation of … rights'.[131] In connection with this, the ICESCR's treaty body specified in its General Comment No 3 that international cooperation is an obligation of all States,[132] an approach that resonates with Article 4 of the United Nations Framework Convention on Climate Change (UNFCCC) and Article 12 of the Paris Agreement.[133]

The IACtHR's 2021 case of *Julien Grisonas v Argentina* highlights international cooperation for human rights redress, exemplified by the establishment of an inter-State group to investigate Operation Condor violations.[134] The case involves an Argentine couple's disappearance during the dictatorship and the transfer of their children to Uruguay and Chile. Though Argentina was deemed responsible, the IACtHR emphasised regional collaboration against impunity based on the collective guarantee mechanism obligating States to cooperate. Similarly, the case of *Vélez Loor v Panama* (2020–2022) underscored shared responsibility amidst the pandemic's migration challenges, advocating synergy among States, international bodies, and civil society.[135] As a corollary, the Guiding Principles on Shared Responsibility (2019) offer a framework for collaborative efforts between States and organisations, including climate change cases.[136] In *Neubauer v Germany*, the Constitutional Court emphatically reminded the government that due to the genuinely global dimension of climate change, the State must respond to it through international cooperation.[137] These precedents and principles underscore the importance of international cooperation in addressing complex and cross-border human rights issues, which could be replicable across jurisdictions and integrated into the remedial award.

The last opportunity for replicability of impactful remedial design is using the IPCC reports. In particular, courts can draw upon the reports' findings to craft orders that require defendants to undertake specific actions to mitigate GHG emissions. By referring to the reports' projections and scientific assessments,[138] courts can establish the necessity of emission reduction measures and their corresponding

[131] United Nations, 'Official Documents United Nations Human Rights Covenants: International Covenant on Economic, Social and Cultural Rights, International Covenant on Civil and Political Rights, Optional Protocol to the International Covenant on Civil and Political Rights' (1967) 61 AJIL 861.

[132] UN Committee on Economic, Social and Cultural Rights, 'General Comment No 3 (1990) on The Nature of States Parties' Obligations' under the International Covenant on Economic, Social and Cultural Rights' (14 December 1990) UN Doc E/1991/23 (CESCR General Comment No 3) [13].

[133] United Nations Framework Convention on Climate Change (entered into force 19 June 1993) 1771 UNTS 107; Paris Agreement (entered into force 4 November 2016) 3156 UNTS 79 (Paris Agreement).

[134] *Julien Grisonas v Argentina* (Preliminary Objections, Merits, Reparations and Costs) Inter-American Court of Human Rights Series C No 437 (23 September 2021) [288].

[135] See Orders in *Vélez Loor v Panamá* (Provisional Measures) Inter-American Court of Human Rights.

[136] André Nollkaemper and others, 'Guiding Principles on Shared Responsibility in International Law' (2020) 31(1) EJIL 15 principle 2(1).

[137] *Neubauer* (n 47) [209].

[138] Priyadarshi R. Shukla and others (eds), *Climate Change 2022: Mitigation of Climate Change, Contribution of Working Group III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change* (Cambridge University Press 2022).

timelines, as in *Klimaatzaak*, *Neubauer*, and *Urgenda*. This alignment of remedies with authoritative scientific consensus enhances the credibility of such orders and lends legitimacy to the court's intervention. Moreover, incorporating the IPCC reports in crafting injunctive relief ensures that the remedies are not arbitrary but firmly rooted in expert assessment, reinforcing the acceptability of such orders among various stakeholders. This is also the case for remedies relating to adaptation since the IPCC has also published specific reports on that matter, even with a greater level of granularity from a regional perspective.[139] Courts can leverage this information to design adaptive measures that address specific risks affected parties face. Furthermore, the scientific assessments provided by the reports can aid courts in determining the causal link between specific actions and the resultant damages. This attribution is crucial in assessing liability and quantifying the losses suffered. By relying on the meticulous analysis of the IPCC, courts can arrive at a more accurate estimation of the damages incurred by affected parties, ensuring that the compensation awarded is commensurate with the harm endured. The scientific underpinning of these compensation orders enhances their legitimacy and promotes consistency and fairness in awarding reparations.

18.6 CONCLUSION

Throughout legal history, the right to a remedy has been transformed and shaped by national laws, public international law, and evolving concepts of justice. While most States initially defined repair as pecuniary compensation, the scope has broadened under international law to include integral reparation encompassing restitution, compensation, and satisfaction. This principle, rooted in the *Factory at Chorzów* judgment and codified in the Draft Articles, has been adapted by human rights courts, signifying a *lex specialis* in reparation but manifesting in domestic reparation orders. The principle of full reparation demands that remedies not only address the harm incurred but also strive to restore the status quo ante, ensuring that the consequences of wrongful acts are comprehensively addressed. The diverse range of remedies – from injunctive relief and compensation to more novel approaches like obligations of conduct – illustrates the legal system's adaptability in seeking to mitigate the impacts of climate change and prevent further harm.

The confluence of legal principles and climate imperatives marks the evolving landscape of climate remedies. Climate remedies, exemplified by over 300 climate-positive decisions globally, strive to mitigate, adapt, and compensate for climate impacts.

Looking ahead, some emerging practices signal a cautious optimism for the role of climate change litigation in shaping novel global environmental policy approaches

[139] Valerie Masson-Delmotte and others, 'Summary for Policy Makers' in Global Warming of 1.5°C (2018) <https://ipcc.ch/pdf/special-reports/sr15/sr15_spm_final.pdf> accessed 23 February 2024.

regarding loss and damage. For instance, the Administrative Court of Paris in *Notre Affaire a Tous v France* found that France's inaction had caused ecological damage and awarded compensation for moral prejudice. Also recently, the Zug Cantonal Court, in the case against *Holcim*, ruled that the plaintiffs from Indonesia are entitled to legal aid.

Incorporating climate remedies into legal discourse necessitates reconciling traditional principles with the complexities of climate change. While the principle of integral reparation serves as a guiding light, its application faces obstacles in cases of non-compliance. Despite this inherent paradox, courts, such as the IACtHR, advocate for creative measures to approximate comprehensive remedies. This approach underscores the essence of reparation as both symbolic and substantial, thus paving the way for innovative climate remedies.

As courts and jurisdictions grapple with climate remedies, the journey ahead requires reconciling legal doctrines with the urgencies of climate crises. The emerging best practices, rooted in holistic, detailed, and scientifically informed remedies, exemplify the adaptable nature of law. Translating these practices across jurisdictions underscores the role of legal structures, mandates, and global scientific consensus in advancing climate action.

In the words of the Philippines Human Rights Commission immortalised in *Greenpeace Southeast Asia and Others*,[140] courts should:

> embrace their power to influence and inspire government action. […] Thus, without favoring any particular party or going beyond their authority, courts should strive to inform, determine, explain and uphold, through their decisions, the rights and obligations of parties concerning particular climate laws, policies and issues. … courts should clarify the factual and legal bases that were found wanting or insufficient to provide guidance not only to the parties but also to future actions. It should be emphasized that even when courts do not rule in favor of the claimants, they still contribute to meaningful climate response through their elucidation of the law and the rights and obligations of the parties. Judicial contribution to the development of the law and jurisprudence on various climate issues is indispensable to the success of the global climate action.[141]

In conclusion, the evolution of climate remedies encapsulates the fusion of legal traditions, international obligations, and climate urgency. The journey toward comprehensive climate redress navigates the intricate path of balancing legal principles with transformative climate imperatives. The emerging trends in climate remedies unveil the potential of law as a catalyst for climate action, envisioning a future where reparative justice stands as a cornerstone of climate resilience.

[140] *In re Greenpeace Southeast Asia and Others* [2022] Case No CHR-NI-2016-0001 (Commission on Human Rights of the Philippines).

[141] ibid [142].