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Editorial

This is the maiden edition of the *African Journal of Climate Law and Justice* (*AJCLJ*). Before we proceed to the specificities of this edition, it is necessary to briefly highlight the gap the new journal is conceived and initiated to address. Africa experiences negative consequences of climate change, even though the continent contributes little to its cause. In general terms, established vulnerable sectors to the impact of climate change in Africa, actual and projected, are recognised as water resources, food security, natural resource management and biodiversity, human health, settlements, infrastructure and desertification. The response of law to climate change and its consequences in these sectors is increasingly emerging through the formulation of international, regional and national legal frameworks and resultant case law and jurisprudence. States in Africa are not left behind in this wave, which has produced domestic climate-related law on adaptation and mitigation at the national level. At the regional level, under the African Union (AU), climate policy and law are equally emerging amidst the regional architecture of accountability for state obligations and commitments. As this continues to take shape, the long-term debate on the differing responsibilities and accountability between the north and south for climate wrongs remains relevant and has present and future relevance in Africa. This is not surprising, considering that for its developmental drive, the continent remains largely dependent on fossils, although there are growing interests in renewable energy alternatives.

Balancing development aspirations with urgent climate actions raises concerns around mitigation and adaptation, the latter including climate losses and damages, and the just transition of economies that may either hinder or aid the realisation of climate objectives in Africa. At the core of these concerns are issues of fairness and equity that are of significance to law and justice as the continent struggles between the tension to develop economically and fulfil climate ambitions. As is the case elsewhere, an actual and potential offshoot of this trend in Africa is litigation relating to climate change, which is evident in a number of

African states. Emerging litigation features human rights approaches as part of a potpourri of approaches in public and private law for remedying climate wrongs. The foregoing overlapping themes are consistently stimulating research and analysis on climate law and justice, yet a journal that is devoted to the response and application of climate law and its justice for vulnerable communities in Africa is rare. The *AJCLJ* aims to contribute towards strengthening African scholarship and voices on climate change law and justice.

This maiden edition focuses on 'Loss and damage in Africa: Legal and policy aspects'. The term 'loss and damage' (L&D) is coined to refer to the political debate on losses and damages linked to climate change that has been ongoing for quite some time. Developing countries have always contended that developed countries have a historical responsibility for climate change given the fact that they have produced the lion's share of emissions and, consequently, called for compensation from developed countries to help address climate losses and damages that have already occurred, and to limit their future occurrence. At the 27th Conference of the Parties to the *United Nations Framework Convention on Climate Change* (UNFCCC), held in Sharm El Sheikh in 2022, a momentous decision was made to establish a dedicated fund to assist developing countries in responding to L&D. Also, forming part of the decision is the establishment of a 'transitional committee' to make recommendations on how to operationalise the funding arrangement. However, the elements of the new funding mechanism, including potential funding sources and the scope of its application, which should inform the work of the committee, are yet to be comprehensively clarified. Generally, gaps remain in relation to the operation of the L&D fund, the knowledge about the interface of L&D with the realities of vulnerable populations and appropriate legal and/or policy responses in Africa.

Articles in this maiden edition cover a wide range of issues of significance to the L&D debate. The commonalities in the contributions are that they all underscore the reality of losses and damages associated with climate change and the solution deficit in Africa. However, the articles do much more in that they also highlight possible considerations that should inform the L&D debate and the design and operationalisation of its related interventions in Africa.

The first three articles engage with the L&D fund. In the first article, Chikuruwo and Rautenbach boldly engage with the implementation of the L&D fund in Africa and underscore the importance of legal pluralism and customary international law in implementing the Sharm El Sheikh Funding Mechanism. In the authors' firm view, the integration of diverse legal systems is essential for a comprehensive and culturally-sensitive response to the losses and damages associated with the climate crisis in vulnerable regions of Africa.

In the second article, Ruppel and Murray acknowledge that while there has been a deluge of academic research that has greatly improved the general understanding of L&D, few writings address national responses thereto. In particular, there is

a deficit of scholarship on how national policy makers understand the concept, and what progress has been made to develop and implement L&D policies. With a focus on South Africa, their contribution critically examines the relationship between national climate change legislation and policies relevant to L&D. The authors recommend that to effectively benefit from the L&D fund, measures must be put in place to enhance and strengthen government budget tracking, reporting and verification systems.

In the third article, Adejonwo interrogates the question of what role the L&D fund can play in addressing climate-induced losses and damages and advancing gender equality and climate justice for women in African local communities. The article demonstrates the current state of L&D, the potential of the L&D fund, and the importance of a gender-responsive approach for achieving equitable climate resilience and ensuring climate justice in Africa.

The fourth article is conceptual. Kabaseke, Odaghara and Ashukem assess the intersectionality between vulnerability and the impact resulting from losses and damages related to climate change and human rights law in Africa. While acknowledging the inadequacy of climate change law in providing solutions, the article proposes a human rights-based approach to mitigate the losses and damages linked to climate change.

The subsequent three articles engage with the interfaces of climate losses and damages with migration in Africa. Akot emphasises the limited analysis on the interface of climate losses and damages with mobility and vulnerability. Besides demonstrating the interfaces, the author advocates the need for an integrated policy approach to address mobility induced by climate losses and damages in Africa. This approach calls for embedding cross-cutting policy issues across compartmentalised, fragmented and siloed policy systems already existing in the discourse around climate change.

Reflecting on the Omo-Turkana case study, the contribution of Porfido and Scissa deploys an interdisciplinary analysis, based on international human rights law and green criminology, to argue that some populations may be forced to leave their countries due to environmental concerns linked to severe human rights violations. While labelling such populations as environmental migrants fleeing natural hazards and disasters may be helpful, they cannot be effectively protected without first constructing the consequences of their migration as human rights violations.

Mohee and Gebeyehu assess the extent to which climate and disaster displacement is presently addressed as a form of loss and damage in law and policy. Their proposed suggestions for better integration include enhanced data collection and reporting on the economic and non-economic costs and impacts of climate and disaster displacement, and the adoption of a human rights-based approach to remedy displacement as a form of climate loss and damage.

This maiden edition also includes a review as a last contribution. Iwuamadi undertakes a brief review of a 2020 guest editorial on L&D debate in the journal *Climate Policy*. Building on the editorial, the review argues that many countries of the Global South, including Africa, are yet to harness the benefits of climate finance to address the effects of climate losses and damages, because of minimal efforts made towards reducing the risks and harms associated with climate change. To address this gap, the review underscores the need for consistent civic engagement and knowledge sharing on domestic policies and global instruments related to the L&D debate.

The editors wish to greatly thank the following independent reviewers who graciously assisted in the blind peer review process to ensure the quality of this maiden edition: Michael Addaney; Muyiwa Adigun; Dennis Agelebe; Krishnee Appadoo; Olaoluwatofunmi Bamgbose; Bonolo Dinokopila; Uzuazo Etemire; Michael Gyan; Charlene Kreuser; Brian Mantlana; Ngcimezile Mbano-Mweso; Melanie Murcott; Davina Murden; Satang Nabaneh; Temitope Obisanya; Collins Odote; Chairman Okoloise; Desmond Oriakhogba; Oliver Ruppel; Itumeleng Shale; and Natalia Urzola.

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RE Chikuruwo & C Rautenbach 'Navigating legal pluralism in climate change loss and damage: Implementing the Sharm El Sheikh Funding Mechanism in Africa – Insights from transboundary case studies' (2024) 1 *African Journal of Climate Law and Justice* 1-20
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Navigating legal pluralism in climate change loss and damage: Implementing the Sharm El Sheikh Funding Mechanism in Africa – Insights from transboundary case studies

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Abstract: This article delves into the complex challenge of climate change-induced loss and damage in Africa, highlighting the role of legal pluralism and customary international law in implementing the Sharm El Sheikh Funding Mechanism. It argues that the integration of diverse legal systems is crucial for effectively addressing the multifaceted impacts of climate change across the continent. Through an analysis of four case studies, the article showcases the potential of legal pluralism to enhance the implementation of the funding mechanism, thus suggesting a more inclusive approach to climate governance. This approach not only recognises the value of diverse legal frameworks but also proposes a pathway towards sustainable and resilient climate adaptation and mitigation strategies in Africa. The article advocates a collaborative legal strategy that incorporates the complexities of legal pluralism into international climate change policies, aiming for a comprehensive and culturally-sensitive response to the climate crisis in vulnerable regions.

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Key words: climate change; customary international law; legal pluralism; loss and damage; Sharm El Sheikh Funding Mechanism

1 Introduction

Climate change has become one of the most pressing problems of the twenty-first century, inflicting continuous and significant loss and damage on both the global environment and populations.[1] Loss and damage are particularly acute in Africa, where many countries face severe climate impacts, exacerbating existing social and economic disparities.[2] Loss and damage refer to 'the consequences of climate change that go beyond what people can adapt to, or avoid'.[3] Loss and damage is also described as the 'destructive impacts of climate change that cannot be or have not been avoided by mitigation or adaptation measures'.[4] Mitigation refers to measures that seek to reduce the emission of greenhouse gases, while adaptation involves building resilience against current and future climate change effects.[5]

The international community has devised several innovative strategies to address loss and damage. One notable strategy in this respect is the Sharm El Sheikh Funding Mechanism, established during the 27th Conference of the Parties (COP 27) to the United Nations Framework Convention on Climate Change (UNFCCC).[6] This mechanism acknowledges the need to provide financial resources to assist vulnerable countries, particularly the least developed countries and small island developing states facing climate change-induced loss and damage.[7]

It is notable that loss and damage is a consequence of extreme weather patterns such as droughts, cyclones and heat waves.[8] It also results from slow-onset weather events such as desertification, rising sea levels, salinisation, glacial retreat, ocean acidification and land degradation. These damages can result in either permanent

1 E Boyd and others 'Loss and damage from climate change: A new climate justice agenda' (2021) 4 *One Earth* 1365, 1366; NWP Bhandari and others 'What is loss and damage from climate change? 8 key questions, answered' 2022, https://www.wri.org/insights/loss-damage-climate-change (accessed 12 July 2023).

2 UNDP *Beyond income, beyond averages, beyond today: Inequalities in human development in the 21st century* (2019).

3 Bhandari and others (n 1); CS Boda and others 'Loss and damage from climate change and implicit assumptions of sustainable development' (2021) 164 *Climatic Change* 1, 2.

4 LM Mathew & S Akter 'Loss and damage associated with climate change impacts' in W-Y Chen, T Suzuki & M Lackner (eds) *Handbook of climate change mitigation and adaptation* (2014) 1-5; C House 'What is loss and damage?' 2022, https://www.chathamhouse.org/2022/08/what-loss-and-damage (accessed 22 May 2023).

5 Mathew & Akter (n 4) 1-5.

6 UNFCCC *Sharm el-Sheikh directive on responding to loss and damage associated with the adverse effects of climate change* (2022).

7 UNFCCC (n 6) paras 1, 2 & 12.

8 Intergovernmental Panel on Climate Change 'Climate change: A threat to human well-being and health of the planet: Taking action now can secure our future' (2022); Boyd and others (n 1) 1365-1368.

loss or repairable damage.[9] For instance, examples include the loss of lives, the damage to low-lying islands due to rising seas, and the conversion of once-productive farmland into barren land due to droughts.[10] Loss and damage may further be classified into economic and non-economic loss and damage, although the two often overlap.

On the one hand, economic loss and damage refers to climate change effects that affect services, goods and services regularly traded in markets.[11] For example, it may manifest as damage to essential national, local scale property, infrastructure or disrupt the supply chain.[12] On the other hand, non-economic losses usually is the most distressing, for example, the loss of family members, the trauma of being compelled to move from ancestral homes and the disappearance of ways of living and cultures.[13] Tragic events such as the Madagascar famine and Cyclone Idai are notable examples of climate change-induced loss and damage with economic and non-economic implications.[14]

Given Africa's unique vulnerability to climate change, innovative solutions are imperative to address this global problem. This article delves into the legal domain to explore potential solutions, focusing specifically on the principles of customary international law and legal plurality. Legal plurality refers to 'the coexistence of multiple legal systems within a geographical area or society'.[15] In the context of climate change, it denotes the interaction of international, national and traditional systems that can be harnessed to address loss and damage. Customary international law, by contrast, encompasses 'international obligations arising from established international practices' rather than 'formal written conventions and treaties'.[16] In the context of climate change, customary international law could inform state behaviour in addressing climate-induced loss and damage by applying principles such as equity, responsibility and no harm.[17]

9 TDP Watkiss, C Handley & R Butterfield 'The impacts and costs of climate change' (2005) *AEA Technology Environment* 3-17; Mathew & Akter (n 4) 1-5.

10 Mathew & Akter (n 4) 1-5; Intergovernmental Panel on Climate Change (n 8) 3-17.

11 RC Anzivino 'The economic loss doctrine: Distinguishing economic loss from non-economic loss' (2007) 91 *Marquette Law Review* 1081, 1082-1099; KE McNamara & G Jackson 'Loss and damage: A review of the literature and directions for future research' (2019) 10 *Wiley Interdisciplinary Reviews: Climate Change* 1, 4-6.

12 CJ Preston 'Challenges and opportunities for understanding non-economic loss and damage' (2017) 20 *Ethics, Policy and Environment* 143; Anzivino (n 11) 1081, 1082-1099.

13 S Fankhauser & S Dietz 'Non-economic losses in the context of the UNFCCC Work Programme on Loss and Damage' (2014) Centre for Climate Change Economics and Policy 3-7; KE McNamara and others 'Understanding and responding to climate-driven non-economic loss and damage in the Pacific Islands' (2021) 33 *Climate Risk Management* 5-8.

14 P Puri & V Puri 'The first climate change famine from 2017–2022? An analysis of the economics and geography of Great SUD drought of Madagascar (1901-2021)' (2022) 12 *Academicia* 100; L Chapungu 'Mitigating the impact of cyclone disasters: Lessons from Cyclone Idai' (2020) *Africa Portal* 1-9.

15 KB Beckmann & B Turner 'Legal pluralism, social theory, and the state' (2018) 50 *Journal of Legal Pluralism and Unofficial Law* 261-262.

16 BA Hanifa 'The legal basis of the legitimacy of Security Council Resolutions' (2022) *Journal of Politic and Law Volume* 575, 590.

17 M Fitzmaurice & AV Rydberg 'Using international law to address the effects of climate change: A matter for the International Court of Justice?' (2023) 4 *Yearbook of International Disaster Law Online* 296-298.

This article argues that legal plurality and customary international law intersect in the context of climate change-induced loss and damage in Africa. The intersection of these principles can be gleaned from how African countries are grappling with the impacts of climate change. From Madagascar's famine to the loss of life as a result of Cyclone Idai, one notes the urgent need for robust, culturally-informed and internationally-recognised legal means to address loss and damage. By viewing these challenges through the lens of international customary law and statutory law, African nations are offered a tool to negotiate their unique realities and needs within the realm of international climate policy, as legal plurality plays a crucial role.

This article particularly examines how legal plurality and customary international law can facilitate the implementation of the Sharm El Sheikh Funding Mechanism, a promising strategy for addressing climate change-induced loss and damage in Africa. Additionally, it presents four case studies, providing insights into how legal plurality and customary international can inform loss and damage strategies in the region, leading to a better understanding of rights, responsibilities and remedies in international climate change negotiations. Climate change-induced loss and damage poses significant challenges to Africa, necessitating innovative and multifaceted solutions. By leveraging legal plurality and customary international law, the continent can navigate its unique circumstances and requirements within the global efforts to combat climate change, ultimately contributing to a more sustainable and resilient future.

2 Conceptual framework

To comprehensively analyse the effects of climate change-induced loss and damage in Africa, this contribution examines key concepts and principles that underpin the discussion. Specifically, the focus lies on climate change-induced loss and damage in Africa, the Sharm El Sheikh Funding Mechanism, and the principles of legal pluralism and customary international law. Understanding these components is crucial for effectively addressing loss and damage in the context of climate change.

2.1 Climate change-induced loss and damage in Africa

Climate change-induced loss and damage has garnered significant attention and academic scrutiny in Africa due to the continent's vast diversity and heavy reliance on agriculture, making it one of the most vulnerable regions to climate change.[18] Consequently, Africa experiences both economic and non-economic loss and damage as a result.

18 See the works of L Atwoli and others 'COP27 Climate Change Conference: Urgent action needed for Africa and the world' (2022) 23 *The Lancet Oncology* 1486-1488; C Toulmin *Climate change in Africa* (2009); AO Jegede 'Africa versus climate change loss and damages:

This vulnerability translates into climate change-induced economic and non-economic loss and damage. On the one hand, economic loss and damage can be quantified, including loss of agricultural output, damage to property and loss of income.[19] Madagascar is an illustrative example, where a severe drought has led to what is now called 'the world's first climate change famine'.[20] The country has been experiencing a severe drought escapade, with over a million people affected by hunger.[21] The drought has immensely disrupted the country's agricultural activities, which employ approximately 80 per cent of the population and contribute close to a quarter of the country's gross domestic product (GDP).[22] As a result, the drought has contributed to food insecurity and widespread unemployment, thereby economically weakening the country, which was still dealing with the effects of the COVID-19 pandemic.[23]

On the other hand, non-economic loss and damage is more difficult to quantify or to place monetary value upon.[24] It affects an individual's life, mobility and health, society's loss of cultural heritage or territory, loss of cultural identity, or loss of indigenous knowledge, and the environment through loss of ecosystem services and loss of biodiversity.[25] Cyclone Idai is a poignant example, tragically claiming the lives of more than 1 300 people in south-eastern Africa.[26] In 2020, nearly a year after the cyclone's devastation, the aftermath remained starkly visible, with a staggering 8,7 million people grappling with severe hunger.[27] In Mozambique alone, over 100 000 individuals endured homelessness, their makeshift shelters serving as a reminder of the enduring impact of this natural disaster.[28]

In this light, climate change-induced loss and damage arguably has magnified Africa's pre-existing economic and social vulnerabilities. If not addressed, it could push an additional 130 million Africans into extreme poverty by 2030.[29] Therefore, it is paramount to implement prompt and adequate measures that mitigate climate change impacts and adapt to its changes. Responding effectively

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Exploring AU regional channels for influencing national policy' (2018) 5 *Journal of African Foreign Affairs* 207-226; R Mendelsohn and others 'Climate change impacts on African agriculture' (2000) 25 *Preliminary Analysis Prepared for the World Bank, Washington, District of Columbia* 1-25.

19 Anzivino (n 11) 1082-1099; McNamara & Jackson (n 11) 4-6.

20 Puri & Puri (n 14) 100-113; United Nations 'Madagascar: Severe drought could spur world's first climate change famine' 2021, https://news.un.org/en/story/2021/10/1103712 (accessed 29 May 2023).

21 United Nations (n 20); Puri & Puri (n 14) 100-113.

22 D Fayad 'Food insecurity and climate shocks in Madagascar: Republic of Madagascar' (2023) *Selected Issues Papers* 2 4; International Monetary Fund 'Informality and growth in Madagascar' (2023) 118 *International Monetary Fund Staff Country Reports* 31.

23 Fayad (n 22) 2-22; International Monetary Fund (n 22) 18-45.

24 Fankhauser & Dietz (n 13) 3-7; McNamara & Jackson (n 11) 5-8.

25 McNamara & Jackson (n 11) 5-8; Fankhauser & Dietz (n 13) 3-7.

26 Chapungu (n 14) 1-9; S Devi 'Cyclone Idai: 1 month later, devastation persists' (2019) 393 *The Lancet* 1585; BBC News 'Cyclone Idai: How the storm tore into Southern Africa' 2019, https://www.bbc.com/news/world-africa-47638696 (accessed 2 July 2023).

27 Devi (n 26) 1585; Chapungu (n 26) 1-9.

28 As above.

29 World Bank *The interlocking challenges of climate change and poverty* (2023).

to climate change-induced loss and damage requires a multifaceted approach that acknowledges Africa's unique context and needs. This calls for a nuanced understanding of Africa's diverse legal frameworks, with the notion of legal plurality and customary international law playing a central role in this endeavour.

2.2 Legal plurality and customary international law

Legal plurality acknowledges the coexistence and interaction of multiple legal systems within a socio-political environment.[30] This recognition becomes significant in the context of climate change, where the interplay between domestic, international and customary international laws uniquely addresses environmental concerns.[31] An important manifestation of legal pluralism is customary international law.

Customary international law arises from consistent and general practices that states follow out of a sense of legal obligation.[32] The concept of international customary law often materialises through the regular and common practices of states. These practices create obligations under international law, thus governing state behaviour in the absence of treaty law.[33] In the context of climate change, customary international law could guide state actions and address climate change-induced loss and damage through principles such as responsibility, no harm and equity. The responsibility principle obligates states to reduce, prevent and control environmental harm within their jurisdiction.[34] For instance, nations that rely heavily on fossil fuel energy production, such as oil, coal or gas, must move towards sustainable energy sources. Thus, countries such as South Africa, which rely heavily on coal for energy, could face international pressure to move towards more sustainable energy sources. Similarly, states could be held accountable for failing to take adequate measures to prevent damage caused by slow-onset climatic changes or extreme weather events if they had the knowledge and capacity to do so.

In addition to states having the responsibility to prevent harm to themselves, they bear an equally vital duty to avoid harm to other states. This 'responsibility' ushers in the crucial no-harm principle, dictating that no state should employ its resources in a way that inflicts damage upon others.[35] The no-harm principle

30 Beckmann & Turner (n 15) 261-262; B Dupret 'Legal pluralism, plurality of laws, and legal practices' (2007) *European Journal of Legal Studies* 1-26.
31 Beckmann & Turner (n 13) 261-262.
32 Hanifa (n 16) 590; M Wood 'Customary international law and the general principles of law recognized by civilized nations' (2019) 21 *International Community Law Review* 307-324.
33 Hanifa (n 16) 590.
34 C Voigt 'State responsibility for climate change damages' (2008) 77 *Nordic Journal of International Law* 1-22; RS Tol & R Verheyen 'State responsibility and compensation for climate change damages – A legal and economic assessment' (2004) 32 *Energy Policy* 1109-1111, 1129.
35 B Mayer 'The relevance of the no-harm principle to climate change law and politics' (2016) 19 *Asia Pacific Journal of Environmental Law* 79-81, 103, 104; J Gupta & S Schmeier 'Future

is common in international environmental law and could be applied to climate change-induced loss and damage. In the African context, the 'no-harm' principle assumes particular relevance for nations on the continent that endure the adverse consequences of climate change, ostensibly triggered primarily by emissions from emerging and developed economies. As an illustration, coastal nations such as Mozambique, confronted with rising sea levels and a heightened cyclone frequency, could argue that high-emitting countries are infringing upon the no-harm principle.

Such an argument holds significant potential when engaging in international climate negotiations, serving as a powerful impetus to demand more robust commitments and financial assistance from high-emitting nations. This aid would not only mitigate the far-reaching effects of climate change but also compensate for the loss and damage these vulnerable African nations have suffered. Through invoking the 'no-harm' principle, they can strive for a more equitable and effective collective effort to combat the challenges posed by climate change, fostering a sense of global responsibility and solidarity.

Equity, another critical principle of customary international law, entails fairness and justice based on the historical responsibilities and capabilities of states.[36] For instance, developed countries, historically contributing more to the global emission of greenhouse gases,[37] should bear a greater responsibility in combating climate change and supporting vulnerable states that would have suffered climate change loss and damage.[38] In the Paris Agreement, developed states have pledged to financially support developing states in their climate change loss and damage mitigation and adaptation efforts.[39]

Another key initiative to fulfil this commitment is the Green Climate Fund, wherein developed nations pledged to mobilise $100 billion annually by 2020 to assist developing nations, including African countries, in their climate change loss and damage mitigation and adaptation efforts.[40] The promise of such substantial financial assistance is a critical step towards fostering international cooperation

proofing the principle of no significant harm' (2020) 20 *International Environmental Agreements: Politics, Law and Economics* 731-733.

36 SK Chattopadhyay 'Equity in international law: Its growth and development' (1975) 5 *Georgia Journal of International and Comparative Law* 382-383; M Akehurst 'Equity and general principles of law' (1976) 25 *International and Comparative Law Quarterly* 801, 802.

37 As of 2023, countries such as China, the United States, India, the EU27, Russia and Brazil were responsible for 61,6% of global GHG emissions. M Crippa and others *GHG emissions of all world countries* (2021) 3-5, https://dx.doi.org/10.2760/173513 (accessed 7 December 2023).

38 M Banks 'Individual responsibility for climate change' (2013) 51 *Southern Journal of Philosophy* 42; United Nations Framework Convention on Climate Change (Treaty Doc 102-38, 1771 UNTS 107) (1992) 2, 42, 43; P Nadja & B Plumer 'Who has the most historical responsibility for climate change?' 2021, https://www.nytimes.com/interactive/2021/11/12/climate/cop26-emissions-compensation.html (accessed 22 July 2023).

39 United Nations Framework Convention on Climate Change (UNFCCC) (COP 21 Adoption of Paris Agreement) (2015) arts 3, 4, 6 & 7.

40 J Timperley 'The broken $100-billion promise of climate finance – and how to fix it' (2021) 598 *Nature* 400-402.

and solidarity in addressing the challenges posed by climate change, empowering developing nations to forge a more sustainable and secure future. While the Green Climate Fund signifies a noteworthy commitment from developed nations to mobilise $100 billion annually, the realisation of this pledge has been inconsistent since the Copenhagen conference. The Nairobi Declaration 2023,[41] echoing calls from African leaders, underscores the imperative for developed countries to fulfil their financial obligations. This emphasises the crucial necessity for tangible support in both mitigating and adapting to the impacts of climate change in developing nations.

While these principles are essential tools to manage the impacts of climate change, their efficacy in the African context could be constrained by various factors, such as the imbalance of bargaining power or influence in international climate change negotiations, the challenge in enforcing customary international law, and the challenge of reconciling different legal systems within a plural legal environment. It is, thus, important to enrich these principles with solid international measures and funding mechanisms. Such approach leads to a consideration of global efforts that have been put in place to address climate change-induced loss and damage. Global efforts that address climate change-induced loss and damage have been codified in international agreements such as the Paris Agreement and the Sharm El Sheikh Funding Mechanism.[42] These instruments are meant to implement the principles of responsibility, no-harm and equity and to translate these into practical support measures for countries undergoing climate change-induced loss and damage.[43]

2.3 The Paris Agreement and the Sharm El Sheikh Funding Mechanism

The global community's response to climate change is regulated by frameworks established under the UNFCCC.[44] The UNFCCC serves as the principal platform for climate change international cooperation.[45] It provides a comprehensive framework aimed at stabilising greenhouse gas concentrations in the atmosphere by reducing any dangerous human interference with the climate system.[46]

Building upon the foundation laid by the UNFCCC, the Paris Agreement, adopted in 2015, articulates specific goals and actions to address climate change.[47]

41 African Union 'The African Leaders Nairobi Declaration on Climate Change and Call to Action Preamble' (8 September 2023), https://au.int/en/decisions/african-leaders-nairobi-declaration-climate-change-and-call-action-preamble (accessed 7 December 2023).
42 Paris Agreement (n 39); UNFCCC (n 6).
43 BB Zardari 'The loss and damage facility: A step towards climate justice' 2022, https://www.un.org/en/un-chronicle/loss-and-damage-facility-step-towards-climate-justice (accessed 10 July 2023).
44 UNFCCC (n 39).
45 As above.
46 UNFCCC (n 39) 2, 4 & 6.
47 Paris Agreement (n 39) art 2.

Its primary objective is to reduce global warming to well below 2°C above pre-industrial levels.[48] Moreover, the agreement recognises loss and damage as a significant issue in article 8(4). While the Paris Agreement does not provide a compensation mechanism for loss and damage, it nonetheless urges countries to enhance loss and damage cooperation, facilitation, understanding, action and support through the Warsaw International Mechanism.[49]

Article 9(1) of the Paris Agreement also encourages developed countries to provide financial resources to assist developing countries with loss and damage mitigation and adaptation. In the context of Africa, the UNFCCC and the Paris Agreement play a pivotal role by providing the basis upon which African countries can demand action and support from the international community.[50] However, the effective implementation of the provisions of these agreements within domestic laws and customary practices in Africa's pluralistic legal systems is a complex challenge.

To address this complexity, the Sharm El Sheikh Funding Mechanism, established during the 27th United Nations Conference of Parties (COP27), offers a promising avenue for financial support to African nations affected by climate change.[51] The Sharm El Sheikh Funding Mechanism embodies a systematic strategy for financial assistance, guaranteeing the effective distribution of resources to the most vulnerable African countries.[52] At its essence, this mechanism is structured around pivotal areas of vulnerability, such as food security, water scarcity, and infrastructure resilience.[53]

The Sharm El Sheikh Funding Mechanism represents the commitment made by developed countries under the Paris Agreement to financially assist developing countries in their climate change mitigation and adaptation efforts.[54] It seeks to enhance the capacity of African countries to cope with climate change-induced loss and damage, funding various projects, including infrastructure development, technological innovation and capacity-building initiatives.[55] The dynamic nature of the Sharm El Sheikh Funding Mechanism allows for adaptive responses to the evolving impacts of climate change, thereby ensuring that funding is directed towards both immediate needs and long-term adaptation strategies.[56] This includes supporting projects that strengthen community resilience, foster technological innovation for climate adaptation, and enhance local capacities

48 As above.
49 United Nations Framework Convention on Climate Change (COP 19 Warsaw International Mechanism for Loss and Damage Associated with Climate Change Impacts) (2013).
50 UNFCCC (n 49) art 2 & 11; Paris Agreement (n 39) arts 2 & 25.
51 UNFCCC (n 6) 4, 6 & 7.
52 As above.
53 As above.
54 As above.
55 As above.
56 As above.

through educational and training initiatives.[57] The mechanism also emphasises transparency and accountability in fund allocation, involving a collaborative process with recipient countries to identify priority areas and track the impact of investments.[58]

However, the effectiveness of the Sharm El Sheikh Funding Mechanism hinges on its implementation, which is far from straightforward. For the mechanism to be successful, it must account for the specific climate vulnerabilities, economic situation and legal landscape of each recipient country. The funds should be directed strategically to initiatives that address not just the symptoms but the root causes of vulnerability to climate change.

Furthermore, the effectiveness of the Sharm El Sheikh Funding Mechanism is significantly influenced by the legal complexity within African nations, which is marked by the coexistence of multiple normative systems such as customary law, state law and international law. As such, while the Sharm El Sheikh Funding Mechanism is a promising initiative, it still presents the challenge of harmonising these legal systems to ensure the effective and equitable distribution of funds. The exploration of these challenges and the examination of how African nations can navigate the intricacies of this new funding mechanism are imperative. Equally vital is the investigation into how the interactions between legal plurality, customary international law and the Sharm El Sheikh Funding Mechanism could influence Africa's response to climate change-induced loss and damage. This article presents four compelling case studies to shed light on the transformative potential of the Sharm El Sheikh Funding Mechanism in advancing climate justice in Africa.

By delving into these specific four scenarios, we aim to unveil the mechanism's capacity to address the pressing climate-related issues faced by African countries. Through insightful analysis and a comprehensive understanding of the mechanism's dynamics, we hope to identify opportunities for collaboration and effective implementation. Ultimately, we endeavour to contribute to a more equitable and sustainable response to climate change in Africa, leveraging the potential of the Sharm El Sheikh Funding Mechanism as a powerful tool for positive change.

3 Case study 1: Cyclone Idai (Mozambique, Malawi and Zimbabwe)

In March 2019 Southeast Africa experienced one of the most devastating tropical cyclones recorded in the southern hemisphere.[59] On 14 March 2019 Cyclone

57 As above.
58 As above.
59 Devi (n 26) 1585; BBC News (n 26).

Idai struck near Beira, Mozambique, before moving inland into Malawi and Zimbabwe.[60] The devastating cyclone was accompanied by heavy rains, which resulted in severe flooding. The flooding caused massive destruction to homes, schools, hospitals and other essential infrastructure.[61] Cyclone Idai became a manifestation of climate change-induced extreme weather events, causing significant loss and damage to human life, property, infrastructure, economic disruption and agricultural land. It resulted in an estimated 1 300 deaths and affected more than 3 million people across Mozambique, Malawi and Zimbabwe.[62] The cyclone and its subsequent flooding also triggered large-scale displacement of people, with many losing their homes and means of livelihood, thereby deepening poverty and food insecurity in an already vulnerable region.[63]

In the aftermath of this catastrophe, the Sharm El Sheikh Funding Mechanism could play a crucial role in assisting these affected nations' recovery and resilience-building processes. In other words, the Sharm El Sheikh Funding Mechanism could be instrumental in climate action initiatives such as climate resilience. Climate resilience is described as 'the ability to prepare for, recover from, and adapt to' the impacts of climate change.[64] Investing in climate action initiatives such as climate resilience can aid these nations in rebuilding damaged infrastructure, supporting displaced communities, and implementing early warning systems and disaster risk reduction measures.

However, the application of these funds faces complexities due to the different legal systems within and across the affected countries. Mozambique, Malawi and Zimbabwe all possess a unique blend of laws, encompassing colonial era legislation, state law and customary law.[65] Since climate-induced disasters such as Cyclone Idai transcend national boundaries, effective regional coordination and cooperation have become necessary. Consideration must be given to customary land rights, which may not always align with formal property rights under national laws, while reconstructing infrastructure and rehousing displaced communities through the Sharm El Sheikh Funding Mechanism.

In addition, regional cooperation is also crucial when dealing with transboundary disasters such as Cyclone Idai. In this respect, principles of

60 BBC News (n 26); Chapungu (n 26) 1-3.
61 Chapungu (n 26) 1-5.
62 Devi (n 26) 1585; BBC News (n 26).
63 As above.
64 Centre for Climate and Energy Solutions 'What is climate resilience, and why does it matter?' (2019) 1, 2, https://www.c2es.org/document/what-is-climate-resilience-and-why-does-it-matter/ (accessed 7 December 2023).
65 See in general the works of L Madhuku *An introduction to Zimbabwean law* (2010) 13-35; JA Bennett 'The legal system of Zimbabwe' (1982) 22 *Zimbabwe Law Journal* 147-161; D Isser *Customary justice and the rule of law in war-torn societies* (2011) 13-76; A Gundersen 'Popular justice in Mozambique: Between state law and folk law' (1992) 1 *Social and Legal Studies* 257-282; M Mkandawire 'The Malawi legal system' (2003) 15 *Commonwealth Judicial Journal* 33-38; P Virtanen 'The politics of law in Mozambique: Customary authority and changing premises of legal reform' (2004) 17 *International Journal for the Semiotics of Law/ Revue internationale de Sémiotique juridique* 53-75.

customary international law, such as international cooperation and shared responsibility, should be applied to guide the fair and effective distribution and utilisation of the Sharm El Sheikh Funding Mechanism. Applying these principles could involve the development of a regional action plan that respects the legal plurality of the individual countries while establishing a common framework for action. In this light, the Sharm El Sheikh Funding Mechanism could bolster regional organisations' capacity, such as the Southern African Development Community (SADC), in coordinating cross-border climate change mitigation and adaptation efforts. The Sharm El Sheikh Funding Mechanism could also support initiatives that aim to harmonise the diverse legal systems within these countries to create a more conducive environment for climate change adaptation and mitigation. SADC, for example, could coordinate efforts to enhance early warning systems across member countries and spearhead regional initiatives on climate-resilient agriculture, flood control and reforestation. These initiatives need to respect the legal plurality of the individual countries while establishing a common framework for action.

Moreover, the rights and interests of local communities should be a central focus in the application of the funds. Participatory approaches, informed by customary laws and practices, can help ensure that the measures taken are culturally appropriate and effective. Furthermore, the rights of displaced communities, particularly their right to return to their ancestral/cultural places, housing and property, should be respected and protected. In conclusion, the success of the Sharm El Sheikh Funding Mechanism in the context of Cyclone Idai will largely depend on how effectively it navigates the challenges posed by legal plurality and transboundary climate disasters. Its ability to incorporate customary international law principles, particularly in the area of regional cooperation and shared responsibility, will be crucial in this regard.

4 Case study 2: Lake Chad basin (Chad, Cameroon, Niger and Nigeria)

Once the 'sixth-largest lake in the world', Lake Chad has been dramatically shrinking since the 1960s.[66] The lake has shrunk by approximately 90 per cent since the 1960s due to climate change, changes in rainfall patterns, and the overuse of water resources.[67] Lake Chad spans Chad, Cameroon, Niger and Nigeria, and its reduction in size has caused severe socio-economic loss, ecological loss and

66 Earth Resources Observation and Science Centre 'Lake Chad, West Africa', https://eros.usgs.gov/media-gallery/earthshot/lake-chad-west-africa (accessed 1 July 2023).

67 European Space Agency 'Lake Chad's shrinking waters' 2019, https://www.esa.int/ESA_Multimedia/Images/2019/03/Lake_Chad_s_shrinking_waters#:~:text=Once%20one%20of%20Africa's%20largest,increasing%20human%20demand%20for%20freshwater (accessed 30 June 2023).

damage, affecting over 30 million people who depend on the lake for survival.[68] Lake Chad's shrinkage due to climate change has caused substantial climate change-induced loss and damage. It has, for example, affected fishing, agriculture and livestock farming, the primary livelihood sources for the local communities.[69] The reduced availability of water has also heightened competition among local communities and nations, leading to conflicts and the displacement of people.[70] The desertification caused by the receding lake has further compounded these problems by reducing arable land and causing biodiversity loss.[71] As a result, this desertification has led to massive displacement of people, with approximately 2,5 million individuals internally displaced or living as refugees across the four countries.[72]

Established as a tool to provide financial support to nations affected by climate change, the Sharm El Sheikh Funding Mechanism could be a significant source of funds for restoration and adaptation projects in the Lake Chad basin. The funds can be used for a wide range of projects, including the rehabilitation of the lake's ecosystem, the promotion of sustainable water and land management practices, renewable energy projects, ecosystem-based adaptation strategies, and the development of climate-resilient agriculture and fisheries.

However, applying this mechanism effectively in the Lake Chad context is complex. The lake's transboundary nature and the differing legal systems in Chad, Cameroon, Niger and Nigeria present a significant challenge. Each of the four countries has a unique blend of legal influences, including French civil law in Chad and Cameroon, English common law in Nigeria, and Islamic law in Niger.[73] In addition to this, a myriad of customary laws is practised by local communities.[74] The result is a complex, pluralistic legal landscape. Implementing

68 European Space Agency (n 67); SJR Mahmood, T Mahmood & A Mehmood 'Predicted and projected water resources changes in the Chari catchment, the Lake Chad Basin, Africa' (2020) *Journal of Hydrometeorology* 73, 74.

69 Mahmood and others (n 68) 73-91; KRA Mohanty, S Ngueping & SS Nanda 'Climate change, conflict: What is fuelling the Lake Chad crisis' 2021, https://www.downtoearth.org.in/blog/climate-change/climate-change-conflict-what-is-fuelling-the-lake-chad-crisis-75639 (accessed 27 June 2023).

70 UT Okpara, LC Stringer & AJ Dougill 'Lake drying and livelihood dynamics in Lake Chad: Unravelling the mechanisms, contexts and responses' (2016) *National Library of Medicine* 781-795; Mohanty and others (n 69).

71 Mohanty and others (n 69).

72 As above.

73 N Ngarhodjim 'An introduction to the legal system and legal research in Chad' in GlobaLex, Hauser School of Law Programme 2019, https://www.nyulawglobal.org/globalex/Chad1.html (accessed 28 November 2023); United States Department of States 'Chad' Diplomacy in Action 2014, https://2009-2017.state.gov/documents/organization/228170.pdf (accessed 28 November 2023); EM Koumassol 'The legal system and language policy of Cameroon' in EM Koumassol (ed) *Language and legal proceedings: Analysing courtroom discourse in Cameroon* (2021) 9-18; EN Ngwafor 'Cameroon: The law across the bridge: Twenty years (1972-1992) of confusion' (1995) 26 *Revue générale de droit* 66-77; R Zahn 'Human rights in the plural legal system of Nigeria' (2009) 1 *Edinburgh Student Law Review* 66-89; C Mwalimu *The Nigerian legal system* (2005) 29-40.

74 Ngwafor (n 73) 66-77; Zahn (n 73) 66-89; A Ponce 'The rule of law in Niger' (2020) 1-40, https://worldjusticeproject.org/sites/default/files/documents/WJP_ROL%20in%20Niger_Jun2020.pdf (accessed 28 November 2023).

projects funded by the Sharm El Sheikh mechanism in this setting would require one to acknowledge these different legal systems. For example, a project aimed at promoting sustainable fishing practices should consider both formal fishing regulations and local customary fishing rights and practices.

Furthermore, the equitable and efficient use of the mechanism's funds requires improved transboundary cooperation. Principles of customary international law, such as the duty to prevent harm to other states, and the equitable and reasonable utilisation of shared resources can provide a framework for this cooperation. A shared management body for the Lake Chad basin could be established to facilitate the joint planning and implementation of projects. This body, guided by these principles, could facilitate project collaborative planning and implementation and include representation from all stakeholder groups, including national and local governments, non-governmental organisations (NGOs) and local communities. This inclusivity is crucial for resolving legal conflicts and ensuring the effective and efficient use of funds. For instance, with their intimate knowledge of the lake and its ecosystem, local communities can provide invaluable input on project planning and implementation.

In addition, engaging local communities in this way can help ensure that the funded projects respect and enhance traditional livelihoods and practices. By involving local communities, the projects can be tailored to support traditional water-saving techniques or invest in community-led initiatives for conflict resolution and livelihood diversification, among other aspects. Consequently, the Sharm El Sheikh Funding Mechanism holds considerable promise for addressing climate change-induced loss and damage in the Lake Chad basin. However, realising this promise requires navigating a complex, pluralistic legal landscape, promoting transboundary cooperation, and actively engaging local communities in decision-making processes. Although this could be a challenging task, it could significantly restore Lake Chad basin's health and its dependent communities' livelihoods.

5 Case study 3: The Nile basin (Egypt, Sudan, Ethiopia and other countries)

The Nile basin case study is a further typical example of the complexity of managing climate change-induced loss and damage in a transboundary context, where different legal systems, cultural practices and historical precedents coexist. The Nile river is one of the world's longest rivers.[75] It spans 11 countries, namely, Egypt, Sudan, Ethiopia, Uganda, Kenya, Tanzania, Rwanda, Burundi, the

75 SCG Magdi & HH Edwin 'Nile river' 2023, https://www.britannica.com/place/Nile-River (accessed 1 July 2023.); M Kimenyi & J Mbaku *Governing the Nile river basin: The search for a new legal regime* (2015) 5-23.

Democratic Republic of the Congo (DRC), Eritrea and South Sudan.[76] Each of these countries has a unique legal and governance framework currently facing the mounting pressures of climate change.[77]

The effects of climate change are many and devastating. Unpredictable rainfall patterns and prolonged droughts have disrupted traditional farming practices and diminished agricultural output.[78] For example, in Ethiopia, where approximately 85 per cent of the population relies on rain-fed agriculture, irregular weather patterns have resulted in droughts and floods, causing substantial crop losses.[79] On the other hand, increased temperatures have led to increased evaporation rates, which have caused significant water shortages in countries such as Egypt, which is highly dependent on the Nile for its freshwater supplies.[80]

The Sharm El Sheikh Funding Mechanism has the potential to provide much-needed financial resources to mitigate these climate-related impacts and strengthen the resilience of Nile basin countries. The funding could support various initiatives, such as improving water irrigation and storage systems in Sudan, implementing climate-resilient agricultural practices in Ethiopia, or developing early warning systems and coastal protection measures in Egypt.

However, effectively applying the Sharm El Sheikh Funding Mechanism poses a significant challenge due to the diverse legal landscapes of the Nile basin countries. These legal differences range from civil law systems in countries such as Egypt and Sudan to common law systems in Kenya and Tanzania.[81] Simultaneously, numerous customary laws within the countries and Islamic

76 KD Rizzolio 'Water sharing in the Nile river valley' (2000) 1-85; Magdi & Edwin (n 75).

77 SB Awulachew and others *The Nile river basin: Water, agriculture, governance and livelihoods* (2012) 5-30; AM Melesse and others *Nile river basin: Ecohydrological challenges, climate change and hydropolitics* (2014) 7-22, 339-476; TB Tariku and others 'Impact of climate change on hydrology and hydrologic extremes of upper blue Nile river basin' (2021) 147 *Journal of Water Resources Planning and Management* 1-12.

78 Melesse and others (n 77) 7-22, 339-476; U Kim & JJ Kaluarachchi 'Climate Change Impacts on Water Resources in the Upper Blue Nile River Basin, Ethiopia 1' (2009) 45 (6) *Journal of the American Water Resources Association* 1361-1378.

79 Kim & Kaluarachchi (n 78) 1361-1378; D Mengistu and others 'Climate change impacts on water resources in the Upper Blue Nile (Abay) river basin, Ethiopia' (2021) 592 *Journal of Hydrology* 1-13; B Getachew & BR Manjunatha 'Potential climate change impact assessment on the hydrology of the Lake Tana basin, Upper Blue Nile river basin, Ethiopia' (2022) 127 *Physics and Chemistry of the Earth* 1-16.

80 MEDM Omar and others 'Impacts of climate change on water quantity, water salinity, food security, and socioeconomy in Egypt' (2021) 14 *Water Science and Engineering* 17-27; TA Gado & DE El-Agha 'Climate change impacts on water balance in Egypt and opportunities for adaptations' (2021) *Agro-environmental Sustainability in MENA Regions* 13-47.

81 M Raffa 'The Egyptian legal system an inside look' (2014) 2; MI Khalil 'The legal system of the Sudan' (1971) 20 *International and Comparative Law Quarterly* 624-626; G Munoru 'The development of the Kenya legal system, legal education and legal profession' (1973) 9 *East African Law Journal* 1-10; F DuBow 'Language, law, and change: Problems in the development of a national legal system in Tanzania' (1976) *Language and Politics* 85-99; J Vanderlinden 'Civil law and common law influences on the developing law of Ethiopia' (1966) 16 *Buffalo Law Review* 250-266; B Muhire 'Legal pluralism, customary authority and conflict in Masisi, (Eastern) Democratic Republic of Congo' (2017) 1 *Journal of Sociology and Development* 1-21; H Dunn 'Emergent hybrid legality: A study of legal encounters in the DRC' (2021) 15 *Journal of Intervention and Statebuilding* 201-220.

law influences in countries such as Sudan and Egypt make the application of the Sharm El Sheikh Funding Mechanism all the more complex.[82] Navigating this legal pluralism to implement climate mitigation and adaptation projects effectively demands a careful balance and integration of various legal principles and norms.

Existing water allocation disputes, particularly between Egypt, Sudan and Ethiopia, further complicate matters. The ongoing disagreement over Ethiopia's Grand Ethiopian Renaissance Dam (GERD) highlights the clash of national interests and differing interpretations of the principles of customary international law, such as equitable and reasonable utilisation of shared resources and the obligation not to cause significant harm to other states.[83] Ethiopia's GERD was constructed to produce hydro-electric power for its rapidly-growing economy.[84] The construction of GERD has raised concerns in Egypt and Sudan about potential decreases in the Nile's water flow and ushers in the principles of customary international law.[85] The principle of equitable and reasonable utilisation of shared resources posits that countries that share transboundary waters should utilise these in an equitable and reasonable manner to all basin states. However, what is considered 'equitable' or 'reasonable' often is subjective and a matter of intense disputes and negotiations.

The principle of equitable and reasonable utilisation of shared resources also states that no country should cause significant harm to other countries while utilising shared resources. Applying this principle again is a contentious point in the Nile basin case, particularly concerning Ethiopia's dam project. There is, therefore, a need to enhance transboundary cooperation and governance. A potential solution could be the formation of a comprehensive, basin-wide management and cooperation body, including representation from all basin countries and key stakeholders. This body could coordinate efforts, mediate disputes, and ensure the Sharm El Sheikh Funding Mechanism's funds are utilised effectively and equitably, following the principles of both local and international laws. The Nile basin highlights the critical role of cooperation, respect for multiple legal systems, and the strategic use of funds such as the Sharm El Sheikh Mechanism in mitigating climate change impacts in Africa. Its unique challenges underscore the urgent need for integrated and mutually-respectful approaches to addressing shared climate crises.

82 Khalil (n 81) 624-644; A Swain 'Ethiopia, the Sudan, and Egypt: The Nile river dispute' (1997) 35 *Journal of Modern African Studies* 675-695; Raffa (n 81) 4.

83 NV Pemunta and others 'The Grand Ethiopian Renaissance dam, Egyptian national security, and human and food security in the Nile river basin' (2021) 7 *Cogent Social Sciences* 1-18; Y Yihdego and others 'Nile river's basin dispute: Perspectives of the Grand Ethiopian Renaissance dam (GERD)' (2017) 17 *Global Journal of Human-Social Science* 1.

84 Pemunta and others (n 83) 1-18; Yihdego and others (n 83) 1.

85 As above.

6 Case study 4: The Congo basin (Congo, DRC, Cameroon, Central African Republic, Gabon and Equatorial Guinea)

The Congo basin has been classified as the world's second-largest tropical rainforest.[86] It is an essential life support system for six nations, namely, the Republic of Congo, DRC, Cameroon, the Central African Republic (CAR), Gabon and Equatorial Guinea.[87] The forest has been labelled as the 'the lungs of Africa' because it acts as a vast carbon sink that stores an estimated 29 billion tons of carbon.[88] The Congo basin is also home to an incredible range of biodiversity, including endangered species such as forest elephants and lowland gorillas.[89]

However, climate change, deforestation and illegal logging have threatened this vital ecosystem.[90] Deforestation rates have surged in the DRC, a country with over 60 per cent of the Congo basin's forests,[91] leading to significant biodiversity loss, increased carbon emissions, and disruption of livelihoods of forest-dependent communities. For example, in 2018 alone, over one million hectares of primary forest were lost.[92] The loss of access to the forest's resources has notably impacted the people's food security and income generation. For example, many indigenous communities in Cameroon, such as the Baka and Bagyeli, rely heavily on the forest's resources for hunting, gathering and small-scale farming.[93] The degradation of the forest's ecosystem directly threatens their traditional way of life.

On this note, the Sharm El Sheikh Funding Mechanism presents a crucial opportunity to finance measures to address these issues. The mechanism's funds could support many initiatives, such as sustainable forestry practices, community-based conservation projects and the promotion of alternative livelihoods. For instance, in Gabon, a country which has managed to maintain a high forest

86 TC Resende & AG Meikengang 'Regional cooperation for the conservation of biodiversity in the Congo basin forests: Feedback on actions carried out in the TRIDOM-TNS landscapes' (2023) *Managing Transnational UNESCO World Heritage Sites in Africa* 135.

87 KT Nsah 'Conserving Africa's Eden? Green colonialism, neoliberal capitalism, and sustainable development in Congo basin literature' (2023) 12 *Humanities* 1; Resende & Meikengang (n 86) 63.

88 EL Molua 'Global warming and carbon sequestration in Africa's forests: Potential rewards for new policy directions in the Congo basin' (2019) *New Frontiers in Natural Resources Management in Africa* 55-77; Nsah (n 87) 1; United Nations Environment Programme 'Critical ecosystems: Congo basin peatlands' 2023, https://www.unep.org/news-and-stories/story/critical-ecosystems-congo-basin-peatlands (accessed 22 June 2023).

89 A Pyhälä and others 'Protected areas in the Congo basin: Failing both people and biodiversity' (2016) *WRM Bulletin* 6, 91, 133.

90 As above.

91 International Monetary Fund (n 22) 7-9.

92 V Schneider 'Poor governance fuels "horrible dynamic" of deforestation in DRC' 2020, https://news.mongabay.com/2020/12/poor-governance-fuels-horrible-dynamic-of-deforestation-in-drc/ (accessed 19 June 2023); International Monetary Fund (n 22) 8.

93 R Few and others 'Trade-offs in linking adaptation and mitigation in the forests of the Congo basin' (2017) 17 *Regional Environmental Change* 851-863; JN Nkem and others 'Profiling climate change vulnerability of forest indigenous communities in the Congo basin' (2013) 18 *Mitigation and Adaptation Strategies for Global Change* 513-533.

cover,[94] funding could be utilised to strengthen its existing network of national parks. The Sharm El Sheikh Funding Mechanism could also bolster sustainable tourism initiatives.

However, like the case studies above, it is a challenge to effectively apply the Sharm El Sheikh Funding Mechanism given the diverse legal landscapes of the Congo basin countries. Each of these nations operates under a distinct legal system. For instance, the Republic of Congo and Gabon have French civil law; Cameroon has dual French civil law and English common law; and there are various customary laws among indigenous and local communities.[95] Moreover, property rights, land tenure systems and natural resource management regulations differ widely across these countries, creating potential conflicts and obstacles in implementing conservation and adaptation projects.[96]

To make the best use of the Sharm El Sheikh Funding Mechanism's resources, harmonising these laws and respecting the rights and traditions of local communities are essential. Recognising and strengthening community forest rights, a form of customary law, can be a powerful tool for forest conservation and improving local livelihoods. Moreover, given the transboundary nature of the Congo basin, enhanced cooperation between the six nations is paramount, guided by principles of customary international law. Establishing a shared management body for the Congo basin, akin to the Nile basin initiative, with representatives from all stakeholder groups, can ensure a coordinated, inclusive approach to managing the basin's resources and implementing funded projects.

In conclusion, the Congo basin case illustrates the complexities of addressing climate change in shared ecosystems, necessitating legal pluralism, customary international law, and the effective use of funds such as the Sharm El Sheikh Mechanism. By skilfully blending these elements, we can safeguard critical ecosystems such as the Congo basin and secure a sustainable future for the communities that rely on them.

7 Conclusion and recommendations

As the case studies above demonstrate, climate change-induced loss and damage presents significant challenges to Africa. Each case study illustrates the complex nature of climate change effects, intensified by unique geographical,

94 F James 'Gabon leads Africa in the preservation and conservation of forests' 2021, https://www.undp.org/fr/gabon/news/gabon-leads-africa-preservation-and-conservation-forests#:~:text=Gabon%20is%20one%20of%20the,km%20%C2%B2)%20covered%20by%20rainforests. (accessed 1 July 2023).

95 Muhire (n 81) 1-21; Dunn (n 81) 201-220; Koumassol (n 73) 9-18; JF Barnes 'The Republic of Gabon' (2004) *Southwestern Journal of International Studies* 67-102.

96 Barnes (n 95) 67-102; HCP Brown and others 'Institutional perceptions of opportunities and challenges of REDD in the Congo basin' (2011) 20 *Journal of Environment and Development* 381-404.

socio-economic and political contexts. Addressing these challenges requires a multifaceted approach that includes transboundary cooperation, recognising the importance and application of legal pluralism and customary international law, and the effective use of international funding mechanisms such as the Sharm El Sheikh Funding Mechanism. By examining the four case studies, valuable insights can be deduced, leading to potential strategies that can be applied across the continent to mitigate climate change-induced loss and damage. Although each country faces unique legal circumstances, overarching themes underscore the approach needed to tackle climate change loss and damage challenges effectively. Accordingly, this article proposes the following key recommendations as pathways to resilience.

The first recommendation is enhanced transboundary cooperation. The Lake Chad, Nile and Congo basin cases highlight the critical role of transboundary cooperation in managing shared resources. Countries sharing ecosystems should enhance collaboration, creating shared management bodies to plan and implement climate change adaptation and mitigation initiatives. By working together, they can better address the interconnected challenges posed by climate change and ensure sustainable resource management.

The second recommendation is the recognition and integration of local customary laws. Each case study underscored the importance of respecting and integrating customary laws and traditional practices into formal legal frameworks. Governments, particularly in Africa, should work to harmonise customary law with state and international law to ensure an inclusive, bottom-up approach to climate change policies. By acknowledging and integrating customary practices, policies can be more contextually relevant and better embraced by local communities.

Third, the article recommends the effective use of international funding mechanisms such as the Sharm El Sheikh Funding Mechanism, which provides an essential source of support for African countries combating climate change. However, its effective implementation depends on navigating the complex legal plurality and customary international law landscape. As suggested in the Lake Chad and Nile basin case studies, a multi-stakeholder dialogue platform can facilitate this process and ensure transparent and equitable distribution of funds.

In the fourth place, the article submits climate resilience and community empowerment as essential strategies. The case of Cyclone Idai emphasises the need for building local climate resilience and empowering communities to adapt to climate change. Strategies can include community-based early warning systems, sustainable agriculture practices and renewable energy programmes. Strengthening communities' capacity to respond to climate impacts enhances their ability to recover and thrive in the face of adversity.

Finally, one should not underestimate the importance of conflict resolution mechanisms. The Nile basin case illustrates that conflicts over shared resources can escalate due to climate change impacts. Establishing robust conflict resolution mechanisms based on principles of customary international law is crucial to prevent and manage such conflicts. By fostering dialogue and cooperation, disputes can be resolved peacefully, and shared resources can be managed more effectively.

In conclusion, the complexity of climate change-induced loss and damage in Africa demands a multidimensional response that recognises and navigates the intricate interplay of legal systems. The effective utilisation of international funding mechanisms, such as the Sharm El Sheikh Funding Mechanism, must be coupled with an understanding of and respect for customary international and local laws. By embracing these recommendations, African nations can work together to build resilience, protect their natural resources, and foster sustainable development in the face of climate change.

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Transparency and accountability in the loss and damage debate? A critical analysis of South Africa's position

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Abstract: The 27th United Nations Climate Change Conference (COP27) in Sharm el-Sheikh, Egypt, in 2022 ended with an agreement to establish a loss and damage (L&D) fund to aid climate-vulnerable developing countries. During COP28, in Dubai, the United Arab Emirates, in 2023, the highly anticipated Loss and Damage Fund was operationalised. Yet, several lingering questions and concerns remained, on the way to COP29. Over the past few years, there has been a deluge of academic research that has greatly improved the general understanding of L&D. Still, few address national responses thereto. These include how national policymakers understand the concept, and what progress has been made to develop and implement L&D policies. As an expected beneficiary of the Loss and Damage Fund, this article, accordingly, critically examines the

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relationship between South Africa's national climate change legislation and policy relevant to L&D. This contribution found that South Africa addresses the impacts of climate change through its disaster management framework, albeit with limited policy coherence between the two. Until recently, the concept of L&D has been foreign. Reactive instead of proactive disaster management approaches were favoured, with allocated public funding frequently misplaced. To benefit from the Loss and Damage Fund, measures should be taken to enhance and strengthen government budget tracking, reporting , and verification systems in South Africa.

Key words: climate law; disaster management; loss and damage; UNFCCC

1 Introduction

The 27th United Nations Climate Change Conference (COP27), held in Sharm el-Sheikh, Egypt, in 2022, was described as a 'breakthrough', 'historic', 'landmark', 'important step', and 'milestone', which ended with an agreement to establish a Loss and Damage Fund to assist climate-vulnerable developing countries.[1] During COP28, Dubai, the United Arab Emirates, in 2023, the highly-anticipated fund was operationalised.[2] On the occasion, South Africa's President remarked that the country 'applauds the landmark decision ... and welcomes the pledges that have already been made', and 'would like to see the fund growing along with the implementation of all other commitments that have been made thus far'.[3]

South Africa, however, to this point, for the most part, had remained silent on the topic. This is despite the country having played a key role in advancing the 'African Agenda' in continental and international affairs and having also been at the forefront of global efforts to address climate change.[4] The only notable, pre-COP28, remark on the subject came in response to the commentary received on the country's Climate Bill of 2022 (now Act 22 of 2024). Commentators had

1 United Nations Framework Convention on Climate Change (COP27) FCCC/CP/2022/10/Add.1 17 March 2023 Report of the Conference of the Parties on its 27th session, held in Sharm el-Sheikh from 6 to 20 November 2022 Decision 2/CP.27; United Nations Framework Convention on Climate Change 'Establishing a dedicated fund for loss and damage' December 2022, https://unfccc.int/establishing-a-dedicated-fund-for-loss-and-damage (accessed 3 October 2023); N Alayza and others 'COP27: Key takeaways and what's next' 8 December 2022, https://www.wri.org/insights/cop27-key-outcomes-un-climate-talks-sharm-el-sheikh (accessed 3 October 2023).

2 United Nations Framework Convention on Climate Change (COP28) FCCC/CP/2023/L.1-FCCC/PA/CMA/2023/L.1 29 November 2023 held in United Arab Emirates from 30 November to 12 December 2023 Draft decision-/CP.28-/CMA.5 Operationalisation of the new funding arrangements, including a fund, for responding to loss and damage referred to in paragraphs 2-3 of decisions 2/CP.27 and 2/CMA.4.

3 Department of International Relations and Cooperation 'Media statement: President Cyril Ramaphosa pleased with milestones reached as he concludes visit to COP28, in Dubai' 3 December 2023, https://www.dirco.gov.za/president-cyril-ramaphosa-pleased-with-milestones-reached-as-he-concludes-visit-to-cop28-in-dubai/ (accessed 26 December 2023).

4 A Averchenkova, KE Gannon and P Curran 'Governance of climate change policy: A case study of South Africa' Policy Report (2019); African Union 'Agenda 2063: The Africa we want' (2013).

critiqued South Africa's climate bills from 2018 to 2022 for, among other issues, failing to provide for loss and damage (L&D) or, at the very least, acknowledge it, to which the Department of Forestry, Fisheries, and the Environment (DFFE) replied that '[L&D] issues are dealt with through the Disaster Management Act 57 of 2002 [DMA] where once a disaster happens there is a legal process to respond to the disaster. At current there is no information system agreed upon to deal with and submit [L&D] in the international space.'[5]

In contrast, Kenya's Climate Change Act 11 of 2016, read with the Amendment Act 9 of 2023, provides a climate change fund (section 25), which is a financing mechanism for priority climate change actions and interventions.[6] They have also implemented a county climate change fund, which is designed to finance local adaptation measures and is managed at the discretion of the county government.[7] Similarly, Nigeria's Climate Change Act of 2021 in section 15 establishes a Climate Change Fund, which also allows for international contributions.[8] Section 21 of Uganda's Climate Change Act of 2021 provides for a similar financing mechanism, while section 26 permits an individual to claim L&D from the government, an individual, or a private entity in line with the polluter-pays principle.[9]

As Van der Bank and Karsten point out, not only has South Africa agreed to and ratified several vital international instruments, but it has also implemented diverse national climate programmes and policies.[10] However, South Africa, as noted, has remained a silent bystander to the L&D debate, compared to, for example, outspoken Kenya.[11]

Accordingly, this article critically discusses the relationship between South Africa's climate change laws and policies with L&D, considering the country's role in promoting the 'African Agenda' and global efforts to address climate change. A special focus lies on the need for transparency and accountability in the L&D debate. As McNamara and Jackson demonstrate, the majority of

5 Department of Forestry, Fisheries and the Environment 'Comments and responses on the Climate Bill' (2023) 2.

6 C Wambua 'The Kenya Climate Change Act 2016: Emerging lessons from a pioneer law' (2019) 4 *Carbon and Climate Law Review* 257, 262-263, 267-268.

7 F Crick and others 'Delivering climate finance at the local level to support adaptation: Experiences of county climate change funds in Kenya' (2019).

8 F Barrio and others 'Nigeria's climate change response: Analysis of the 2021 Nigeria Climate Change Act' (2022).

9 C Higham and others 'Innovations in climate change acts: Kenya, Uganda and Nigeria in focus' 2023, https://www.cpahq.org/knowledge-centre/blogs/climate-change-acts-in-kenya-uganda-and-nigeria/ (accessed 5 October 2023).

10 M van der Bank & J 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* 1, 2.

11 Republic of Kenya 'Kenya's submission on the Santiago Network for Loss and Damage UNFCCC' (2022); Republic of Kenya 'Kenya's Statement at the Opening Plenary of COP26, CMP16, CMA3, SBSTA 52-55 AND SBI 52-55' (2021) 3.

L&D-related literature concentrates on the general international landscape.[12] Recently, Calliari and Vanhala have called for a 'national turn' in the study of L&D governance, urging researchers to help identify knowledge gaps to support L&D policymaking from the global to the local level, as well as identify potential tensions and impediments within L&D policy-making processes.[13] While progress is being made at the global level, addressing L&D must also take place from the 'national level of determining policies and strategies to the local scale, where communities and households must confront changing conditions'.[14] As Vanhala and others stipulate, the way L&D is 'constructed by different actors across levels of governance will shape whether and how it is understood, prioritised, institutionalised and operationalised in research and policy-making'.[15]

Therefore, the purpose of this article is to turn the focus to South Africa. Our contribution aims to build on existing knowledge and offer a 'helicopter view' of South Africa's legal and policy framework concerning climate change to determine if and how it relates to L&D. This contribution will first provide an overview of the definitions and meanings that have been attributed to L&D in ongoing research. It will then note South Africa's vulnerability to climate change-induced impacts and demonstrate the country's mitigation and adaptation focus, to the omission of L&D. Challenges hindering the implementation of South Africa's relevant climate change policies will then be discussed. This contribution will thereafter examine South Africa's approach to climate change-induced disasters. Lastly, a few aspects of the Loss and Damage Fund will be addressed, along with a few of the remaining questions. This part will be followed by the conclusion.

2 Understanding loss and damage

2.1 Finding a definition

Currently, there is no universally accepted definition of L&D.[16] In the context of climate change, it may be defined as 'the actual and potential manifestation of

12 KE McNamara & G Jackson 'Loss and damage: A review of the literature and directions for future research' (2019) *Wiley Interdisciplinary Reviews: Climate Change* 1, 26.

13 E Calliari & L Vanhala 'The national turn in climate change loss and damage governance research: Constructing the L&D policy landscape in Tuvalu' (2022) 22 *Climate Policy* 184-186.

14 A Thomas & L Benjamin 'Management of loss and damage in small island developing states: Implications for a 1.5 °C or warmer world' (2018) 18 *Regional Environmental Change* 2369, 2370; S Surminski & A Lopez 'Concept of loss and damage of climate change – A new challenge for climate decision-making? A climate science perspective' (2015) 7 *Climate and Development* 267.

15 L Vanhala and others 'The knowledge politics of climate change loss and damage across scales of governance' (2021) 30 *Environmental Politics* 141, 143.

16 MM Nand & DK Bardsley 'Climate change loss and damage policy implications for Pacific Island countries' (2020) 25 *Local Environment* 725, 726.

climate change impacts that negatively affect human and natural systems'.[17] As Roberts and Pelling explain, 'loss and damage' (lower case) refers 'to the impacts of climate change not avoided by mitigation and adaptation efforts', whereas 'Loss and Damage' (upper case) refers 'to the broader policy frameworks at all levels within which these impacts are being addressed'.[18] Van der Geest and Warner refer to L&D as the 'negative effects of climate variability and climate change that people have not been able to cope with or adapt to'.[19]

Thus, L&D is often referred to as the 'third pillar of international climate change law', that complements mitigation and adaptation.[20] As Broberg summarises, there are three common approaches to understanding this relationship. The first concerns the interpretation of L&D as going 'beyond adaptation', L&D including actions that address the impacts of climate change that are 'residual' to mitigation and adaptation.[21] The second focuses on 'tolerable risk', where adaptation is about 'keeping risks within the range of what is perceived as tolerable', and L&D 'is a response to risks that cannot be kept within that range'.[22] The third distinguishes between 'avoidable, unavoidable, or unavoided impacts'.[23] If it is 'impossible to adapt to an impact so that it becomes unavoidable, it will fall in the L&D category'.[24] Martyr-Koller and others concur that L&D denotes the impacts of climate change that '(a) can be avoided by mitigation and adaptation efforts, (b) have not been avoided (unavoided) through adequate mitigation and adaptation efforts, or (c) cannot be avoided (unavoidable)'.[25]

Displacement is also connected to L&D – people who are facing intolerable levels of risk, and who do not have the ability or the resources to cope with hazards while remaining where they are, have no other options but to either flee their country or relocate internally.[26] Therefore, Bhandari and others argue that L&D actions 'must also be understood to go beyond relief, rehabilitation and recovery from disasters to include safe migration and resettlement and long-term

17 United Nations Framework Convention on Climate Change SBI FCCC/SBI/2012/INF.14 15 November 2012 A literature review on the topics in the context of thematic area 2 of the work programme on loss and damage 4.
18 E Roberts & M Pelling 'Loss and damage: An opportunity for transformation?' (2019) *Climate Policy* 1, 2.
19 K Warner & K van der Geest 'Loss and damage from climate change: Local-level evidence from nine vulnerable countries' (2013) 5 *International Journal of Global Warming* 367, 369.
20 G Jackson and others 'An emerging governmentality of climate change loss and damage' (2023) 2 *Progress in Environmental Geography* 33; M Broberg 'The third pillar of international climate change law: Explaining loss and damage after the Paris agreement' (2020) 10 *Climate Law* 211.
21 Broberg (n 20) 218.
22 As above.
23 CS Bahinipati 'Assessing the costs of droughts in rural India: A comparison of economic and non-economic loss and damage' (2020) *Current Science* 1832.
24 Broberg (n 20) 218.
25 R Martyr-Koller and others 'Loss and damage implications of sea-level rise on small island developing states' (2021) 50 *Current Opinion in Environmental Sustainability* 245.
26 Loss and Damage Collaboration and Researching Internal Displacement 'Loss and damage and displacement: Key messages for the road to COP28' (2023) 3. See also P Meth and others 'Not entirely displacement: Conceptualising relocation in Ethiopia and South Africa as "disruptive re-placement"' (2023) 44 *Urban Geography* 824.

security to re-establish lives and livelihoods'.[27] To clarify, L&D is said to have two components: pro-action and reaction. The first, which precedes L&D, includes climate change adaptation, disaster risk reduction and management, training, and long-term partnerships, while the second, which comes afterwards, includes disaster relief and long-term recovery, grants through government programmes, insurance pools, humanitarian aid, and potential compensation.[28]

There also is a distinction between economic L&Ds that 'are traded in markets and quantified', including harms to property and infrastructure, and non-economic L&Ds that are 'intangible or are not traded in markets', including loss of life, loss of biodiversity, and loss of cultural heritage.[29] Thus, Kreienkamp and Vanhala explain that while one can simply define L&D as referring 'to the residual effects of climate change that cannot (or will not) be avoided through mitigation and adaptation', it still has many facets thereto.[30] This includes impacts related to extreme weather events, such as flooding, droughts, or cyclones, and slow-onset events, such as sea level rises, desertification, or melting glaciers.[31]

As Boyd and others note, most of the concerns surrounding L&D could have been resolved by now, had there not been so many different perspectives on it.[32] While an unclear definition of L&D is constructive for diplomatic negotiations and engages researchers in debate, it could, as Toussaint warns, pose a significant obstacle for potential litigants seeking to base their arguments on the international policy response and for judges looking for clear guidance on state obligations regarding climate damages.[33] Thus, it is critical that a precise, universally-accepted definition, including the meaning and scope, of L&D, be established.

2.2 Practical examples

Climate change causes monetary and non-monetary losses and damages, particularly in vulnerable countries. Between 2000 and 2019, 6 681 climate-related disasters were recorded worldwide, affecting 3,9 billion people.[34] In 2023 alone, nearly 15 700 people were killed in extreme weather disasters in Africa,

27 P Bhandari and others 'The current state of play on financing loss and damage' 28 December 2022, https://www.wri.org/technical-perspectives/current-state-play-financing-loss-and-damage (accessed 5 October 2023).
28 L Jensen & P Jabczyńska 'Understanding loss and damage: Addressing the unavoidable impacts of climate change' (2022) 6.
29 Martyr-Koller and others (n 25) 245; E Boyd and others 'Loss and damage from climate change: A new climate justice agenda' (2021) 4 *One Earth* 1365, 1366.
30 J Kreienkamp & L Vanhala 'Climate change loss and damage' Policy Brief for the Global Governance Institute March (2017) 4.
31 As above.
32 Boyd and others (n 29) 1366.
33 P Toussaint 'Loss and damage and climate litigation: The case for greater interlinkage' (2021) 30 *Review of European, Comparative and International Environmental Law* 16, 19.
34 United Nations Office for Disaster Risk Reduction 'Human cost of disasters 2000 – 2019 Report' (2019) 6.

while a further 34 million were affected.[35] In Southern Africa, over 10 million people are displaced due to climate-related disasters, economic pressures, and human insecurity.[36] By 2050, over 85 million people could be forced to migrate throughout Africa if concrete climate and development actions are not taken.[37] It is estimated that up to 600 million more people in Africa could be affected by food insecurity and malnutrition as agricultural systems break down due to climate change impacts, and another 1,8 billion people could be affected by water scarcity.[38] In addition, nearly 200 heritage sites in Africa could be exposed to extreme events by 2050 if climate emissions remain unchecked.[39]

Many of the world's most climate-vulnerable countries and peoples, such as the least-developed countries (LDCs), which account for only 4 per cent of global greenhouse gas (GHG) emissions, have contributed little to climate change. Africa, for example, accounts for the smallest share of GHG emissions, at nearly 3,8 per cent.[40] Yet, they are being heavily exposed to extreme climate-related disasters.[41] A report by the Vulnerable Twenty Group, which consists of 68 countries including 28 from Africa, estimated that they had lost one-fifth of their gross domestic product (GDP) over the past two decades and would have been 20 per cent wealthier today without climate change.[42] It is reported further that annually African countries lose 3 to 5 per cent of their GDP, responding to climate change vulnerability costs and, in some cases, more than 15 per cent. According to an analysis of the nationally determined contributions (NDCs) of 51 African countries, an estimated €548 billion in adaptation funding is needed.[43]

35 D Dunne 'Analysis: Africa's extreme weather has killed at least 15 000 people in 2023' 25 October 2023, https://www.carbonbrief.org/analysis-africas-extreme-weather-have-killed-at-least-15000-people-in-2023/#:~:text=The%20investigation%20shows%20that%20at,Congo%20and%20Rwanda%20in%20May. (accessed 26 December 2023).

36 AN Mbiyozo 'While the world focuses on Ukraine, unprecedented funding shortages and shrinking migration pathways leave Africans stranded' 15 February 2023, https://issafrica.org/iss-today/record-numbers-of-displaced-africans-face-worsening-prospects (accessed 7 October 2023).

37 World Bank Group 'Groundswell policy note 1: Preparing for internal climate change migration' (2018) 1.

38 Action Aid 'Climate change and poverty' 9 February 2023, https://www.actionaid.org.uk/our-work/emergencies-disasters-humanitarian-response/climate-change-and-poverty (accessed 3 October 2023); United Nations Environment Programme 'Mainstreaming environment and climate for poverty reduction and sustainable development' (2015) 9.

39 MI Vousdoukas and others 'African heritage sites threatened as sea-level rise accelerates' (2022) 12 *Nature Climate Change* 256, 257.

40 CDP Worldwide (Europe) 'Africa report: Benchmarking progress towards climate safe cities, states, and regions' (2020) 3.

41 United Nations Conference on Trade and Development 'The least developed countries report' (2022) xv; B Tietjen 'Loss and damage: Who is responsible when climate change harms the world's poorest countries?' 3 November 2022, https://theconversation.com/loss-and-damage-who-is-responsible-when-climate-change-harms-the-worlds-poorest-countries-192070 (accessed 3 October 2023).

42 Vulnerable Twenty Group and Climate Vulnerable Forum 'Report: Climate vulnerable economies loss (2000-2019)' (2022) 3.

43 Global Centre on Adaptation 'State and trends in adaptation: Adaptation finance flows in Africa' (2022) 96.

While the war continues to wage in Ukraine, an urgent and sizeable funding gap continues to widen in humanitarian aid for displaced persons in Africa.[44]

3 South Africa and loss and damage

3.1 Vulnerability to climate change-induced impacts

As part of the continent most vulnerable to climate change-induced natural disasters, South Africa is experiencing severe droughts, floods and storms.[45] This has resulted in over 40 000 displacements in 2022.[46] Over the last several decades, warming in the Southern African interior has occurred at about twice the average rate of global warming.[47] Systematic increases in extreme temperature events, such as heat waves and high fire danger, have also been recorded.[48] By 2100, marine heat waves will increase around Africa, with a hotspot of around 2°C along the 24 coastlines of South Africa.[49] During the 2023 festive season, Simon's Town, in the Western Cape province of South Africa, was faced with a raging mountain fire.[50] This follows floods in September that resulted in damages estimated at R500 million (€24,51 million) for provincial infrastructure and a further R154 million (€7,55 million) for municipal damages.[51]

During 2016 to 2021, South Africa spent nearly R1 billion (€49 million) in drought relief fund allocations.[52] Between 1952 and 2019, the country experienced total economic losses of over €8 billion in responding to natural

44 Transitional Committee TC4/2023/8 Fourth meeting synthesis report on the outcomes of the activities and deliverables referred to in paragraphs 7(b), 11, 12 and 14 of decisions 2/CP.27 and 2/CMA.4 (15 October 2023) 2; United Nations Human Rights Council Refugee Agency 'Underfunded report' (2022).

45 World Bank Group 'Country, climate, and development report of South Africa' (2022) 1, 5; World Bank Group 'Climate risk country profile: South Africa' (2021) 3, 5, 10; Department of the National Treasury 'Financing a sustainable economy: Technical Paper' (2021) 1-2.

46 Global Report on Internal Displacement 'Internal displacement and food security' (2023) 20.

47 R Scholes & F Engelbrecht 'Climate impacts in Southern Africa during the 21st century: Report for the Centre for Environmental Rights' (2021) 1; F Engelbrecht and others 'Projections of rapidly rising surface temperatures over Africa under low mitigation' (2015) 10 *Environmental Research Letters* 1.

48 World Bank Group 'Disaster risk finance diagnostic: South Africa' (2022) 23-24.

49 African Union 'Climate change and resilient development strategy and action plan' (2022-2032) 11.

50 K Wilkinson & V O'Regan 'Simon's Town firefighting efforts continue after an intense night and evacuations after midnight' 20 December 2023, https://www.dailymaverick.co.za/article/2023-12-20-simons-town-firefighting-efforts-continue-into-the-night-as-evacuations-start-after-midnight/ (accessed 26 December 2023).

51 'National state of disaster declared for Western and Eastern Cape after September floods' *Times Live* 7 November 2023, https://www.timeslive.co.za/news/south-africa/2023-11-07-national-state-of-disaster-declared-for-western-and-eastern-cape-after-september-floods/ (accessed 26 December 2023); G Serra 'Damage to provincial roads due to floods reaches R500 million' 14 October 2023, https://www.iol.co.za/weekend-argus/news/damage-to-provincial-roads-due-to-floods-reaches-r500-million-8b39b011-7a62-4fa1-810e-2e01ef9a8de6 (accessed 26 December 2023).

52 N King 'Climate change implications for SA's youth: Report commissioned by CER' (2021) 7.

disasters,[53] less than 16 per cent of which was insured.[54] It is anticipated that these disasters will continue to grow in their severity, while relief costs and rebuilding will become increasingly unaffordable for a country with an already weak economy, massive unemployment, and growing social support demands. By 2100, the country could lose up to 13,5 per cent of its GDP if climate change continues unabated.[55]

Since 1980, 'noticeable weather-related disasters' have caused over R113 billion (€5,54 billion) 'in economic losses'.[56] These costs have diverted resources from both long-term developmental objectives, such as education, health and poverty reduction, and from short-term much-needed repair of nationwide failing infrastructure.[57] For example, it will cost the government of South Africa an estimated R4,5 billion (approximately €220,62 million) to repair and replace infrastructure damaged by flooding in 2023.[58]

Although L&D debates are taking place internationally, it 'is mostly a local problem' that is increasingly difficult for vulnerable communities to address.[59] As Khine and Langkulsen discuss, climate change has a significant impact on South Africa's vulnerable populations, by further exacerbating their losses and damages, which is only expected to worsen as climate change persists.[60] Gray and others specifically note the significant impact of climate change on worker welfare and employment rates in South Africa.[61] Although the economic losses suffered are often cited, Bouchard and others rightfully encourage not to forget about the psychological harm incurred by the victims of climate change-induced events.[62]

In South Africa, cumulatively, drought has affected nearly 22 million people; every year on average, disasters result in 63 deaths and affect more than 500 000 people.[63] Approximately 300 000 people, per year, are anticipated to be vulnerable

53 World Bank Group (n 48) 18.
54 World Bank Group (n 48) 19.
55 G20 Climate Risk Atlas 'South Africa' (2021) 20.
56 South African government 'First nationally determined contribution under the Paris Agreement' (2021) 6-7.
57 J Mambo & K Faccer (eds) *South African risk and vulnerability atlas: Understanding the social and environmental implications of global change* (2017) 32, 106.
58 Reliefweb 'Eastern Cape floods cause R4,5 billion road, bridge infrastructure damage' 20 February 2023, https://reliefweb.int/report/south-africa/eastern-cape-floods-cause-r45-billion-road-bridge-infrastructure-damage (accessed 3 October 2023).
59 K Warner and others 'Framing the loss and damage debate: A thought starter by the loss and damage in vulnerable countries initiative' in OC Ruppel and others (eds) *Climate change: International law and global governance* (2013) 829.
60 MM Khine & U Langkulsen 'The implications of climate change on health among vulnerable populations in South Africa: A systematic review' (2023) 20 *International Journal of Environmental Research and Public Health* 3425.
61 HB Gray and others 'The impact of weather shocks on employment outcomes: Evidence from South Africa' (2023) 28 *Environment and Development Economics* 285.
62 JP Bouchard and others 'Réchauffement climatique et psychotraumatologie des catastrophes naturelles: le cas des pluies et inondations meurtrières d'avril 2022 en Afrique du Sud' (2023) 181 *Annales Médico-psychologiques, revue psychiatrique* 234.
63 World Bank Group (n 48) 20.

to malaria by 2050, under a high-emissions scenario.[64] It is also projected that, by 2030, an additional 8 500 people may be at risk of river floods annually as a result of climate change, and an annual average of 13 900 people are projected to be affected by flooding due to sea level rise between 2070 and 2100.[65] It, therefore, is domestically 'crucial' for South Africa to both articulate and clarify its position on L&D.[66]

3.2 Obligations under the Paris Agreement

3.2.1 Relevant domestic policies on climate change

At COP21, held in Paris, France, in 2015, the Paris Agreement emerged, which highlights the 'importance of averting, minimising, and addressing' L&D 'associated with the adverse effects of climate change, including extreme weather events and slow onset events, and the role of sustainable development in reducing the risk of' L&D (article 8(1)).[67] Under the Paris Agreement, South Africa has the following main obligations: to pursue efforts to keep the global average temperature rise to well below 2°C (article 2); to prepare and periodically submit nationally determined contributions (NDCs) (article 3); to submit an NDC with a mitigation focus and to pursue steps to achieve the communicated contribution, with subsequent NDCs every five years representing an increase in ambition targets (article 4); and to implement its adaptation contribution (article 7); as well as reporting obligations under article 13.

South Africa's National Development Plan (NDP) and the National Climate Change Response White Paper together provide the strategy for the country's transition to a lower carbon and climate-resilient society. The overarching aim of the NDP is to eliminate poverty and reduce inequality by ensuring, among others, a transition to an environmentally sustainable, climate change-resilient, low-carbon economy, and just society.[68] The NDP does stipulate that climate change impacts have caused 'losses' in the form of human life and economic and 'damage' to the environment, such as soil loss due to erosion, loss of soil fertility, salination, and other forms of degradation, but makes no other mention thereof. The White Paper has two main objectives: to manage expected climate change impacts through interventions that build and sustain South Africa's social, economic, and environmental resilience, and emergency response capacity; and to make a fair contribution to the global effort to stabilise GHG concentrations

64 World Health Organisation 'Climate and health country profile: South Africa' (2015) 3.
65 As above.
66 *Cf*, among others, A Gilder & O Rumble 'An African perspective on loss and damage' (2022) 130 *Policy Insights* 11.
67 United Nations Framework Convention on Climate Change CP/2015/10/Add.1 29 January 2016 Decision 1/CP.21 adoption of the Paris Agreement.
68 Department of the Presidency 'National development plan 2030: Our future – Make it work' (2012).

in the atmosphere at a level that avoids dangerous anthropogenic interference with the climate system within a timeframe that enables economic, social, and environmental development to proceed sustainably.[69]

The national priorities highlighted in the White Paper and NDP are the basis from which other programmes, plans, and reports are developed on a national, provincial, and municipal level. Planning and reporting documents are prepared both on a national level and as part of international reporting commitments. The national planning and reporting documents cover both adaptation and mitigation. The key document on adaptation is the Long-Term Adaptation Scenarios, which details national and sub-national adaptation scenarios for South Africa under future climate conditions and development pathways.[70] The scenarios summarise climate change impacts and potential response options for water, agriculture and forestry, human health, marine fisheries, and biodiversity. The key document on mitigation is the Mitigation Potential Analysis, which identifies and analyses further mitigation options in strategic economic sectors, including energy, industry, transport, waste and agriculture, forestry, and other land use.[71]

The National Climate Change Response Green Paper presents the government's vision for an effective climate change response and the long-term transition to a climate-resilient and low-carbon economy and society, based on the government's commitment to sustainable development. The Green Paper outlines several methods for achieving the government's climate objectives, such as giving adaptation and mitigation measures top priority; mainstreaming climate change responses into all national, provincial, and local planning processes; and acknowledging the efforts made by developed nations to combat climate change. Given its energy-intensive, fossil fuel-powered economy and high vulnerability to the effects of climate variability and change, the Green Paper characterises South Africa as 'both a contributor to and a potential victim of global climate change'.[72]

As required by article 12 of the United Nations Framework Convention on Climate Change (UNFCCC), South Africa's Third National Communication reports on national circumstances; provides an GHG inventory; sets out trends and projected changes in the country due to climate change; sets out measures to mitigate and adapt to climate change; and other relevant information. The Communication discloses that monitoring of vulnerability and the evaluation of adaptation measures in the country are 'considerably challenging' due to 'a lack of consensus regarding the appropriate frameworks and best methodologies

69 Department of Environmental Affairs 'National climate change response white paper' (2011).
70 Department of Environmental Affairs 'Long-Term Adaptation Scenarios Flagship Research Programme (LTAS) for South Africa: Summary for Policy Makers' (2013).
71 Department of Environmental Affairs 'South Africa's greenhouse gas (GHG) mitigation potential analysis' (2014).
72 National climate change response green paper Notice: GN R1083 in GG 33801 of 25 November 2010 4.

for assessing vulnerability'.[73] This might explain the lack of attention given to displacement resulting from climate change. As Jegede and others discuss, South Africa's climate-related policies and laws are centred around the prioritisation of the economy and the environment, to perhaps the omission of human rights and climate justice.[74] An additional hindrance is the country's reluctance to sign or ratify the Convention for the Protection and Assistance of Internally Displaced Persons in Africa (Kampala Convention), which was adopted by the African Union (AU) in 2009 and entered into force in 2012 and which aims to prevent internal displacement, to protect internally-displaced persons, and to provide for durable solutions.[75]

The National Climate Change Adaptation Strategy is a ten-year plan describing key strategic areas with measurable outcomes. It seeks to ensure that different levels of government and the private sector integrate and reflect climate change adaptation. The Strategy acknowledges that, currently, there is a lack of clarity and coordination in different spheres of government and sectors regarding responsibilities and mandates for climate action.[76]

South Africa's Climate Change Bill B9B-2022 was finally approved and on 23 July 2023, President Cyril Ramaphosa signed it (Act 22 of 2024) into law, setting out a national climate change response, including mitigation and adaptation actions, which also constitutes South Africa's fair contribution to the global climate change response.[77] No mention is made of L&D. As stated, this was a point of contention during public hearings. 'Losses' are also not mentioned, the distinction being that L&D encompasses all adverse effects of climate change that cannot be mitigated or adapted to, including both reversible and irreversible impacts, whereas 'losses' specifically refer to the irreversible impacts of climate change that cannot be restored or recovered.

As King and others observe, one need not discuss all of South Africa's achievements as regards climate change to be able to deduce that the focus is on mitigation and adaptation.[78] Mitigation efforts include reducing or preventing

73 Department of Environmental Affairs 'South Africa's Third National Communication under the United Nations Framework Convention on Climate Change' (2018) 13.

74 See AO Jegede and others 'Climate displacement and the relevance of climate justice: A trend analysis of South Africa, Zimbabwe, South Sudan and Liberia' (2022) 6 *Global Campus Human Rights Journal* 51-52, 58-59.

75 African Union Convention for the Protection and Assistance of Internally Displaced Persons in Africa, adopted in 2009 and entered into force in 2012, Status list (2022) 1.

76 Department of Forestry, Fisheries and the Environment 'National climate change adaptation strategy' (2020) 49.

77 Applied Law and Technology Advisory 'South Africa: National Assembly passes the Climate Change Bill' 27 October 2023, https://altadvisory.africa/2023/10/27/south-africa-national-assembly-passes-the-climate-change-bill/; cf. https://www.gov.za/news/media-statements/president-cyril-ramaphosa-assents-climate-change-bill-23-jul-2024#:~:text=The%20Climate%20Change%20Act%20sets,resilient%20and%20low%2Dcarbon%20economy (accessed 31 July 2024).

78 ND King and others *Fuggle and Rabie's environmental management in South Africa* (2018) 760-761. See also Department of Forestry, Fisheries and the Environment 'South Africa's 4th biennial update report to the United Nations Framework Convention on Climate Change'

GHG emissions by utilising new technologies and renewable energies.[79] Adaptation denotes altering our behaviour, economies, infrastructure, and so forth, to reduce our vulnerability to the effects of climate change.[80] South Africa made a firm commitment in its statement to the COP13 Plenary to 'take ambitious mitigation action' and 'contribute its fair share towards our common responsibility for the future', with the assertion that 'inaction by any country' is 'inexcusable'.[81] However, 17 years later, South Africa faces several diverse challenges in achieving its international commitments: 'Timely and full implementation of' the country's climate change-related policies 'remain uncertain' with a 'lack of progress in recent years and missing political leadership to take the required measures'.[82]

3.2.2 Challenges in the public sector

Government officials have confirmed that there 'are not enough funds to implement all climate change plans and projects' and, although 'we receive external funding from donors, it is never enough'.[83] A recent report found that the country's current public and private climate investments, at an average of R131 billion (€6,42 billion) a year for the 2019 to 2021 period, must increase to an average of R334 billion (€16,37 billion) per year to meet its net zero goal by 2050, and R535 billion (€26,22 billion) per year to meet its NDC target by 2030.[84] Yet, the paradox remains: South Africa continuously receives climate finance, which mostly remains either unallocated or is said to fund renewable energy solutions, funding, policy reforms, and capacity building – all measures, the implementation of which is said to be hindered by funding constraints.[85]

The Southern African region is said to bear the largest financing gap as regards climate change investment funding, but South Africa continues to receive the

(2021) 82; Presidential Climate Commission 'The State of Climate Action in South Africa: Priorities for Action for the Government of National Unity' (2024).

79 WY Chen and others (eds) *Handbook of climate change mitigation and adaptation* (2017) v.

80 As above.

81 M van Schalkwyk 'United Nations climate change conference' 12 December 2007, https://www.gov.za/m-van-schalkwyk-united-nations-climate-change-conference-0 (accessed 4 October 2023); also, refer to South African government 'Statement on the cabinet meeting of 27 September 2023' 28 September 2023, https://www.gov.za/speeches/statement-cabinet-meeting-wednesday-27-september-2023-28-sep-2023-0000 (accessed 5 October 2023).

82 E Seyisi and others 'Indicators for monitoring and evaluating climate change adaptation efforts in South Africa' (2023) 15 *Journal of Disaster Risk Studies* 5; Climate Action Tracker 'South Africa' 23 November 2023, https://climateactiontracker.org/countries/south-africa/policies-action/ (accessed 21 December 2023).

83 NP Sibiya and others 'Overcoming bureaucratic resistance: An analysis of barriers to climate change adaptation in South Africa' (2023) 11 *Climate* 9.

84 C Meattle and others 'The South African climate finance landscape: A technical report prepared for the Presidential Climate Commission' (2023) 2.

85 C Meattle and others 'Landscape of climate finance in Africa' (2022) 16; A Sguazzin & L Prinsloo 'Billions in climate funds face uncertain future in South Africa' 18 February 2022, https://www.bloomberg.com/news/articles/2022-02-18/south-africa-s-8-5-billion-climate-funds-sparks-battle#xj4y7vzkg (accessed 5 October 2023). See also Department of Forestry, Fisheries and the Environment (n 78) 178.

most.[86] Yet, South Africa is not even listed as one of the countries and regions most affected by impacts from climate-related extreme weather events.[87] Therefore, in their proposed Climate Justice Charter (2020), the Climate Justice Charter Movement – a South African collaborative movement that engages with grassroots inputs from various communities, climate scientists, and academics – emphasises the necessity for transparent and accountable spending of funds related to climate change.[88] They had even launched petitions requesting that international funders and investors stop contributing to South Africa's just transition until the government begins fulfilling its promises, claiming that the 'government is engaging in doublespeak'.[89]

According to a 2021 survey, roughly 49 per cent of South Africans have heard of climate change, while the other half are unfamiliar with the concept.[90] Of the 34 African countries surveyed, South Africa ranked among the bottom ten in citizen awareness of climate change.[91] Researchers also looked at how farmers in South Africa perceived and dealt with adaptation and mitigation and found that they faced institutional, political, economic, and biophysical barriers.[92] For example, they experience a lack of governmental support, due to political tensions regarding land rights, and a lack of reliable and long-term information regarding climate change.[93]

According to government officials, the following are key challenges to developing and implementing climate change adaptation policies: outdated

86 African Development Bank Group 'Southern Africa economic outlook' (2023) 47, 50; Meattle and others (n 84) vi, 7; Department of Forestry, Fisheries and the Environment (n 78) 166, 170; WaterAid 'Short-changed on climate change' (2020) 8.

87 D Eckstein and others 'Global climate risk index' (2021).

88 Climate Justice Charter 'Information' 2023, https://cjcm.org.za/ (accessed 7 October 2023); T Myeni 'Climate justice coalition files criminal complaint against South Africa' 15 April 2022, https://www.aljazeera.com/news/2022/4/15/s-africa-climate-justice-orgs-file-criminal-complaints-agai-govt (accessed 5 October 2023).

89 O Ngcuka 'Protestors demand the end of profits over people' 25 March 2022, https://www.dailymaverick.co.za/article/2022-03-25-protestors-demand-the-end-of-profits-over-people/ (accessed 5 October 2023); The Climate Justice Charter Movement 'Make ending coal, gas and oil investment a condition for financial support to South Africa' 15 February 2022, https://www.change.org/p/unfccc-and-ippcc-ch-make-ending-coal-gas-and-oil-investment-a-condition-for-financial-support-to-south-africa-cop27-climatechange-climatereport-frenchembassyza-germanembassysa-usembassysa-ukinsouthafrica-climateza-presidencyza-cyrilramaphosa (accessed 5 October 2023); see also H Müllerová and others 'Building the concept of just transition in law: Reflections on its conceptual framing, structure and content' (2023) pre-press *Environmental Policy and Law* 1.

90 A Mpako & P Govindasamy 'Despite growing evidence, climate change is still unknown to many South Africans' Afrobarometer Dispatch 615 (2023) 2.

91 Mpako & Govindasamy (n 90) 3.

92 K Talanow and others 'Farmers' perceptions of climate change and adaptation strategies in South Africa's Western Cape' (2021) 81 *Journal of Rural Studies* 208; KT Thinda and others 'Determinants of relevant constraints inhibiting farmers' adoption of climate change adaptation strategies in South Africa' (2021) 56 *Journal of Asian and African Studies* 611; MF Olabanji and others 'Assessment of smallholder farmers' perception and adaptation response to climate change in the Olifants catchment, South Africa' (2021) 12 *Journal of Water and Climate Change* 13.

93 Talanow and others (n 92) 208-209; see also OC Ruppel & LJH Houston 'The human right to public participation in environmental decision-making: Some legal reflections' (2023) 53 *Environmental Policy and Law* 125.

information used; not enough climate change plans in place; lack of knowledge by staff members; no climate change unit at district and local levels; no legal mandate at the local level; inadequate coordination across government levels; limited understanding by communities; limited political will at local level; lack of human capacity at provincial and local level; and inadequate financial resources.[94]

As Averchenkova and others discuss, there is a pervasive tendency for municipalities and regional authorities to operate in 'silos'.[95] As Leck and Simon deliberate, in South Africa, tackling climate change involves processes and institutions operating at multiple interlinked scales, but meaningful and sustained cross-scale climate change governance has been lacking.[96] By its admission, the South African government notes the challenges faced 'on enhancing institutional relations between governmental departments ... to fast-track the implementation of mitigation actions', which has resulted in 'silo approaches'.[97]

Exemplifying their argument, Leck and Simon examined the eThekwini Metropolitan Municipality, which has substantial financial resources with considerable infrastructure and capacity, and Ugu District Municipality, which is financially under-resourced and under-skilled, both located in the KwaZulu-Natal province.[98] Leck and Simon found that while both municipalities face similar challenges of high spatial segregation and social exclusion, extreme poverty, inadequate living facilities, unemployment, and water, sanitation and electricity backlogs, eThekwini is regarded as a world-leading municipality for its anticipatory climate change actions, specifically its explicit focus on adaptation at the municipal and community scales.[99] Ugu, on the other hand, is comparatively understaffed, with weaker expertise and resource capacities for developing climate strategies, which is 'a secondary priority' for the district, 'competing with other short-term critical issues'.[100]

While historical inequitable political-economic and social ordering can be blamed, which has resulted in municipalities with disparate resource capacities and development trajectories, Leck and Simon identified enduring constraints, such as a lack of harmonised and sectoral planning for climate change.[101] They

94 Sibiya and others (n 83) 7.
95 Averchenkova and others (n 4) 24.
96 H Leck & D Simon 'Local authority responses to climate change in South Africa: The challenges of transboundary governance' (2018) 10 *Sustainability* 8.
97 Department of Forestry, Fisheries and the Environment (n 78) 113.
98 Leck & Simon (n 96) 8-9. For a similar study, see L Pasquini and others 'What enables local governments to mainstream climate change adaptation? Lessons learned from two municipal case studies in the Western Cape, South Africa' (2015) 7 *Climate and Development* 60.
99 Leck & Simon (n 96)9; see also D Roberts & S O'Donoghue 'Urban environmental challenges and climate change action in Durban, South Africa' (2013) 25 *Environment & Urbanisation* 299; D Roberts 'Prioritising climate change adaptation and local level resilience in Durban, South Africa' (2010) 22 *Environment and Urbanisation* 397.
100 D Ogier & D Brink 'Climate change response strategy for the Ugu District Municipality' April (2017) 7, 28-29.
101 Leck & Simon (n 96) 5, 9. See also RK Adom and others 'Enhancing climate change adaptation governance through transforming institutions in Kwa-Zulu Natal Province, South Africa' (2023) *International Journal of Climate Change Strategies and Management* 4.

interviewed officials from both municipalities, who cited poor meaningful interaction and guidance on climate change issues; weak vertical integration, collaboration and information sharing; and a prevalent lack of understanding at the provincial and national government scales about local-level realities and contextual considerations, as major stumbling blocks:[102] 'We are guiding them, unfortunately; that is the way it is. They are not in the same boat as us in addressing climate change ... We are all caught in the middle of political games here; the politicians play us off.'

Adom and others concur, contending that ensuring a coherent policy formulation and implementation, both vertically and horizontally, remains a severe challenge for South Africa, highlighting a lack of clarity among government structures, which has led to poor coordination on how the policies should be aligned and implemented.[103] These constraints are said to be more severe at provincial and municipal levels.[104] While it is correct to state, as Sibiya and others do, that these issues have time and again been cited by researchers, for example, by Ziervogel and others, it is concerning that these issues remain unaddressed.[105]

Irrespective of the concerns, in its updated draft NDC, South Africa notes that its estimates are based on 'the assumption that support will be provided for' the country to achieve its targets and 'for mitigation, adaptation, and [L&D]',[106] explaining further that most of the climate finance that South Africa has received to date has supported mitigation projects. This contrasts with the findings of Serradinho and others, that 'due to its standing within the region as predominantly a provider rather than the receiver of' international disaster assistance, such assistance ought not to be 'a priority' for South Africa.[107] Critics have cautioned against this 'victim mentality'.[108] As one researcher contended, 'the most damaging unintended consequence of the ... [L&D] fund is what it does to the headspace of African countries ... Psychologically, it entrenches us as recipients of donor aid; victims.'[109] Unfortunately, as Adom and others discuss,

102 Leck & Simon (n 96) 11.
103 RK Adom and others 'The threats of climate change on water and food security in South Africa' (2022) 1 *American Journal of Environment and Climate* 80.
104 Averchenkova and others (n 4) 4.
105 Sibiya and others (n 83) 2-6; G Ziervogel and others 'Climate change impacts and adaptation in South Africa' (2014) 5 *WIREs Climate Change* 605.
106 South African government (n 56) 14, 28.
107 JADS Serradinho and others 'Legal preparedness for international disaster assistance in the SADC region' (2023) *Yearbook of International Disaster Law* 117-118.
108 See EB Onyekachi 'Foreign aid as mechanism for perpetuation of neo-colonialism and dependency: An interrogation of issues and way forward for developing economies' (2020) 6 *INOSR-Arts and Humanities* 101; T Ngwane & P Bond 'South Africa's shrinking sovereignty: Economic crises, ecological damage, sub-imperialism and social resistances' (2020) 20 *Vestnik RUDN International Relations* 67; VH Mlambo and others 'Rethinking foreign aid for socio-economic development in sub-Saharan Africa' (2019) 16*African Renaissance* 277; AA Durokifa & EC Ijeoma 'Neo-colonialism and millennium development goals (MDGs) in Africa: A blend of an old wine in a new bottle' (2018) 10 *African Journal of Science, Technology, Innovation and Development* 362.
109 J Evans 'Climate loss and damage fund entrenches Africa as beneficiaries – But some believe it's a wrong turn' 17 December 2023, https://www.dailymaverick.co.za/article/2023-12-

the reality is that the South African government alone cannot provide all the financial resources needed to address climate change effectively.[110]

Although the issues highlighted in this article are not exclusive to South Africa,[111] one would expect the country to present a better role model on the continent. As Schoeman and others discuss, South Africa frequently portrays itself as a 'bridge between the North, the Global South and Africa' and as a 'gateway into the continent', given its membership in the (growing) alliance of (among others by now) Brazil, Russia, India, China, and South Africa (BRICS) and the G20.[112] With numerous reports cautioning African countries about the steady increase in climate change impacts, it no longer is acceptable for South Africa to window-dress its policies with attractive long-term goals and nett zero emission targets while half-hearted implementation measures are being undertaken on the ground to alleviate its citizens of impacts being felt today.[113]

3.3 South Africa's approach to climate change-induced disasters

Despite its policies stating the contrary, South Africa has a persistent and enduring habit of focusing on relief and emergency support, rather than implementing a proactive policy.[114] This approach is not new to countries similarly forced to deal with more pressing issues.[115] Yet, it must be borne in mind that the country has been advised to adapt to climate change and warned of the consequences of failing to do so since the 1990s.[116] Disaster risk reduction and climate change adaptation are connected through their common goal of 'reducing the impacts of extreme events and increasing urban resilience to disasters'.[117] Many countries,

17-climate-loss-and-damage-fund-entrenches-africa-as-beneficiaries-but-some-believe-its-a-wrong-turn/ (accessed 26 December 2023).

110 Adom and others n 101), 20. See also Department of Forestry, Fisheries and the Environment 'South Africa's 5th biennial update report to United Nations Framework Convention on Climate Change' (2023) 195.

111 Refer to HM Tirivangasi and others 'Exploring humanitarian response strategies in the aftermath of disasters induced by climate change in Zimbabwe' (2021) *Development Southern Africa* 1.

112 M Schoeman and others 'It's time South Africa tuned into Africa's views about its role on the continent' 24 January 2017, https://theconversation.com/its-time-south-africa-tuned-into-africas-views-about-its-role-on-the-continent-71019 (accessed 5 October 2023).

113 World Bank Group (n 45) 6; Economic Commission for Africa 'Climate change and the rural economy in Southern Africa: Issues, challenges and opportunities' (2012) xi.

114 Intergovernmental Panel on Climate Change 'Climate change: Impacts, adaptation, and vulnerability – Part B: Africa' (2014) 1225-1226; C Vogel and others 'A persistent truth – Reflections on drought risk management in Southern Africa' (2010) 2 *Weather, Climate, and Society* 9.

115 P Mogano & N Mokoele 'South African climate change adaptation politics: Urban governance prospects' (2019) 11 *International Journal of Social Sciences and Humanity Studies* 69-70; L Pasquini and others 'Facing the heat: Barriers to mainstreaming climate change adaptation in local government in the Western Cape Province, South Africa' (2013) 40 *Habitat International* 225.

116 TE Downing and others 'Adapting to climate change in Africa' (1997) 2 *Mitigation and Adaptation Strategies for Global Change* 19; JB Smith 'Climate change adaptation policy options' (1996) 6 *Climate Research* 193.

117 W Solecki and others 'Climate change adaptation strategies and disaster risk reduction in cities: Connections, contentions, and synergies' (2011) 3 *Current Opinion in Environmental Sustainability* 135.

South Africa included, address the impacts of climate change through their disaster management frameworks, albeit with limited policy coherence between the two.[118]

Since 2018 the 'national state of disaster' was declared by the South African government several times, due to 'severe weather events'.[119] Such declaration enables the government to utilise emergency financial reserves through the Disaster Management Act 57 of 2002 (DMA) (sections 27(2) and 56).[120] Currently, there are two sets of overarching emergency funding, namely, the Provincial Disaster Relief Grant (PDRG) and the Municipal Disaster Relief Grant (MDRG), intended to fund emergency repairs to essential basic services infrastructure, the provision of temporary infrastructure, humanitarian relief, and other immediate essential services following a declared state of disaster. Both grants are administered by the National Disaster Management Centre (NDMC) in consultation with the National Treasury (chapter 3 of the DMA). These grants are allocated solely to respond to immediate needs, the so-called first phase response. Coupled with these funding streams, the government has implemented a Provincial Emergency Housing Grant (PEHG) and a Municipal Emergency Housing Grant (MEHG) for the provision of temporary shelter assistance to households affected by disasters. There is also the Municipal Disaster Recovery Grant, introduced to restore the functionality of municipal infrastructure following a disaster. Provinces and municipalities may further apply for post-disaster damages financing for the second phase of emergency response. However, according to the Policy Framework for Disaster Risk Management 2005 (Framework), this is contingent on the relevant state organs having earmarked money therefor.[121] Before any funding is released in either phase, verification processes must be followed.

In 2022, when severe floods hit parts of South Africa, massive unattended or inadequately-addressed needs were reported, notably, in the most remote and isolated affected areas.[122] The auditor-general commented that 'the overall response to' disasters is 'too slow and inadequate', indicating 'systemic failures'.[123]

118 A Zembe and others 'Policy coherence between food security, disaster risk reduction and climate change adaptation in South Africa: A summative content analysis approach' (2022) 14 *Journal of Disaster Risk Studies*, 2, 5.

119 GN R4035 in GG 49612 of 7 November 2023; GN R4034 in GG 49611 of 7 November 2023; GN R3036 in GG 48036 of 13 February 2023; GN R2029 in GG 46247 of 18 April 2022; GN R117 in GG 44184 of 24 February 2021; GN R243 in GG 43066 of 4 March 2020; GN R210 in GG 41493 of 13 March 2018.

120 Director: Policy Development and Regulatory Frameworks 'Guideline on classification of a disaster and the declaration of a state of disaster' (2019); see also the Disaster Management Amendment Act 16 of 2015, which explicitly references climate change-related impacts as a concern, which must be prepared for in disaster management plans, and mandates frequent reporting on the communities that are vulnerable to change-related disasters.

121 Confirmed in the updated National disaster management framework Notice: GN R3635 in GG 48874 of 30 June 2023.

122 Reliefweb 'South Africa – Flooding and landslides' 26 April 2022, https://reliefweb.int/report/south-africa/south-africa-flooding-and-landslides-dg-echo-government-ifrc-echo-daily-flash-26 (accessed 4 October 2023).

123 Parliamentary Budget Office 'Fiscal brief' (2022) 6.

For example, of the 4 799 temporary residential units, which had to be provided in 2022 for flood victims, only 45 were completed.[124] The Minister of Human Settlements has confirmed that several affected families had to wait two to three years after the disaster struck for adequate housing provisions.[125] In the eThekwini Metropolitan area, 57 per cent of victims had not received drinking water for more than three days following the flooding.[126]

Although disaster relief funding is available, only small amounts of it have been spent.[127] R1 billion (€49 million) were made available by the government for emergency relief in 2022.[128] However, the National Treasury reported that approximately R359 million (€17,60 million) had been spent in response to the disasters.[129] In August 2022, the KwaZulu-Natal and Eastern Cape provinces submitted requests for R2,9 billion (€142,17 million) and R50 million (€2,45 million), respectively, for reconstruction and rehabilitation interventions.[130] The auditor-general observed that this was due to a lack of effective oversight and monitoring of the original funding provided.[131] Community members affected by these events have voiced their distrust in the government when it comes to expecting disaster assistance.[132] This raises the question of why the money was not used to provide relief and, more importantly, whether the same would happen with L&D funds. Considering that the DMA contains limited provisions regarding international disaster assistance, let alone specific provisions on transparency and accountability mechanisms.[133]

In 2023, R372 million (€18,23 million) was added to the MDRG, while R1,2 billion (€58,83 million) was added to the Municipal Disaster Recovery

124 Auditor-General 'First special report on flood relief funding' (2022) 11.
125 Independent Online 'Human Settlements Minister unveils new emergency housing programme to respond to natural disasters' 3 April 2023, https://www.iol.co.za/mercury/news/human-settlements-minister-unveils-new-emergency-housing-programme-to-respond-to-natural-disasters-d4ca6b4e-6356-4701-9fa0-a33f222f9f08 (accessed 4 October 2023).
126 Auditor-General (n 124) 28.
127 Auditor-General (n 124) 12.
128 Reliefweb 'National Treasury allocates first phase R516m floods funding' 8 July 2022, https://reliefweb.int/report/south-africa/national-treasury-allocates-first-phase-r516m-floods-funding#:~:text=%E2%80%9CIn%202022%2F23%2C%20the,million%20and%20R175%20million%20respectively.%E2%80%9D (accessed 4 October 2023).
129 Parliamentary Budget Office (n 123) 6.
130 As above.
131 Auditor-General (n 124) 11.
132 ND Hendrik 'Public protector probes billions in unspent government funds meant for 2022 KZN flood relief efforts' 12 July 2023, https://www.dailymaverick.co.za/article/2023-07-12-public-protector-probes-billions-in-unspent-government-funds-meant-for-2022-kzn-flood-relief-efforts/ (accessed 4 October 2023); S Grootes 'No trust in SA government: KZN flood aid commitment met with cynicism and derision' 19 April 2022, https://www.dailymaverick.co.za/article/2022-04-19-no-trust-in-sa-government-kzn-flood-aid-commitment-met-with-cynicism-derision/ (accessed 4 October 2023); M Wiener 'We expect officials to steal flood disaster relief funds. We've been here before' 18 April 2022, https://www.news24.com/news24/xarchive/archive/mandy_wiener/mandy-wiener-we-expect-officials-to-steal-flood-disaster-relief-funds-weve-been-here-before-20220418 (accessed 4 October 2023).
133 Serradinho and others (n 107) 116-117; International Federation of Red Cross and Red Crescent Societies 'Legal preparedness for international disaster assistance in South Africa' (2021) 22; A Cassim and others 'South African climate finance landscape' (2021).

Grant for the repair and rehabilitation of infrastructure damaged by flooding.[134] Aiming to avoid the scrutiny faced in 2022, the government appointed an *Ad Hoc* Joint Committee on Flood Disaster Relief and Recovery in 2023 to oversee the flood disaster relief and recovery measures in the affected provinces. These two instruments, being the added funding and oversight committee, certainly illustrate improvement from the national government. Provincial and municipal governments, however, still 'appear to lack' sufficient budgets and political will to invest in effective preparedness strategies.[135] In their inspection of the affected areas, the *Ad Hoc* Joint Committee noted housing units being built for victims on flood plains, making them again susceptible to damage. The progress on implementing disaster relief and recovery measures 'has been very slow', with certain disaster management plans received being 'too broad' and lacking time frames, and certain municipalities did not even request funding, leaving the flood damage as is,[136] thereby, leaving reaction as the preferred approach.

The concerns listed could be attributed to numerous obstacles, including heavy bureaucracy, intergovernmental fragmentation, rigidity of existing institutions, and corruption due to a lack of transparency and accountability measures.[137] According to Bhandari and others, 'quickly accessing reliable climate funds has been a persistent challenge for developing countries due to factors', such as 'insufficient fundraising, difficulties and inconsistencies in fund allocation, delays in access channels, as well as the structural political and organisational complexities in each of the existing funds'.[138]

Therefore, Baudoin and others conclude that 'there is little evidence' in practice of 'disaster risk reduction, preparedness, mitigation, and rapid, effective response'.[139] Coupled therewith is South Africa's 'tardiness', to date, in committing to the Southern African Development Community (SADC) Humanitarian and Emergency Operations Centre (SHOC) in Mozambique. The SHOC will be responsible for coordinating regional disaster risk preparedness, response, and early recovery efforts to support member countries affected by disasters. The Centre facilitates the supply chain management of equipment and supplies that

134 O Ngcuka 'Godongwana boosts Municipal Disaster Response and Recovery grants as climate crisis takes its toll' 1 November 2023, https://www.dailymaverick.co.za/article/2023-11-01-godongwana-boosts-municipal-disaster-response-and-recovery-grants-as-climate-crisis-takes-its-toll/ (accessed 26 December 2023).

135 MA Baudoin and others 'Living with drought in South Africa: Lessons learnt from the recent El Niño drought period' (2017) 23 *International Journal of Disaster Risk Reduction* 134-135.

136 Parliament of South Africa 'Media Statement – Lack of skills contributes to slow progress of disaster relief and recovery Committee finds' 8 November 2023, https://allafrica.com/stories/202311090080.html (accessed 26 December 2023).

137 Baudoin and others (n 135) 129; Sibiya and others (n 83) 5-6; Averchenkova and others (n 4) 23-29; Pasquini and others (n 115) 228-230.

138 P Bhandari and others '3 Questions on loss and damage funding to tackle before COP28' 17 March 2023, https://www.wri.org/insights/loss-and-damage-funding-questions-transitional-committee (accessed 4 October 2023).

139 Baudoin and others (n 135) 135. See also Serradinho and others (n 107) 116; MF Chersich & CY Wright 'Climate change adaptation in South Africa: A case study on the role of the health sector' (2019) 15 *Globalisation and Health* 1.

SADC responders require during the deployment of humanitarian support to member states. This again highlights a lack of political will regarding emergency operations. As a country vulnerable to climate change and high-impact extreme climate events, South Africa has been urged to endorse the SHOC.[140]

Regarding proactive procedures, the DMA requires provinces and municipalities to implement relevant risk preparedness measures and to use early warning technologies to avoid or at least minimise the occurrence of disasters.[141] However, studies conducted on weather events in 2022 indicate that while South Africa's weather advisories predicted these events in advance, many people did not respond to the warnings or were not made aware of them.[142] In a study of some of the worst natural disasters recorded, De Perez and others found that disasters do not occur due to a lack of forecasts and early warning systems, but rather due to inadequate communication and response capability,[143] both issues that Mashao and others contend must be greatly improved in South Africa.[144]

Given that South Africa conflates L&D, and its disaster management processes, the purpose of the contribution thus far is to highlight the problems that have been apparent for several years now, to caution of a similar outcome for the Loss and Damage Fund, should South Africa become a beneficiary thereof. As Baudoin and Ziervogel warn, there currently is 'limited exploration of how international funding is landing on the ground and impacting on adaptation and the targeted vulnerable groups'.[145] Schultheiß and others further concede that it 'is already well established that most climate funds have struggled to reach the most vulnerable communities and groups, despite having ... policies in place'.[146]

140 Defence Web 'SA taken to task for not committing to SADC emergency ops centre' 19 September 2023, https://www.defenceweb.co.za/security/national-security/sa-taken-to-task-for-not-committing-to-sadc-emergency-ops-centre/ (accessed 26 December 2023).

141 Baudoin and others (n 135) 133.

142 B Ngcamu 'Climate change and disaster preparedness issues in Eastern Cape and KwaZulu-Natal, South Africa' (2022) 81 *Town and Regional Planning* 54; O Kunguma 'A South African disaster legislative perspective of information management and communication systems' (2022) 24 *South African Journal of Information Management* 1; L Andersson and others 'Local early warning systems for drought – Could they add value to nationally disseminated seasonal climate forecasts?' (2020) 28 *Weather and Climate Extremes* 1 2.

143 EC de Perez and others 'Learning from the past in moving to the future: Invest in communication and response to weather early warnings to reduce death and damage' (2022) 38 *Climate Risk Management* 1.

144 FM Mashao and others 'Extreme rainfall and flood risk prediction over the East Coast of South Africa' (2023) 15 *Water* 16.

145 MA Baudoin & G Ziervogel 'What role for local organisations in climate change adaptation? Insights from South Africa' (2017) 17 *Regional Environmental Change* 691.

146 L Schultheiß and others 'Report: Operationalising the loss and damage fund' (July 2023) 24.

3.4 COP28 and beyond

3.4.1 Loss and Damage Fund: Additional concerns

In 2024, the Loss and Damage Fund has made significant strides towards becoming fully operational.[147] South Africa holds a position on the Board and has been actively participating in meetings. Yet, several lingering questions and concerns remain. As can be expected, 'the political nature' of L&D has contributed to its lagged development, specifically, concerning the provision of international finance.[148] Vulnerable countries have traditionally advocated L&D finance to be provided by industrialised countries given their argued 'historical contribution' to climate change which, in turn, has continually been met with strong resistance by developed countries.[149] This has led to a serious stalemate in the discussions of the Transitional Committee, which was appointed in the lead-up to COP28 to make recommendations for consideration and adoption of the proposed fund, namely, who should pay and receive the L&D funding support.[150]

The Committee has vaguely remarked that the fund 'should target the particularly vulnerable people and communities ... in developing countries that are facing the adverse impacts of climate change and have limited capacity for adaptation'.[151] Other options include either limiting the fund to developing country parties to the UNFCCC and the Paris Agreement or LDCs and small island developing states (SIDs).[152] A representative of SIDs commented that 'all developing nations should be eligible to receive support'.[153]

147 A Rathi 'World Bank says loss and damage fund could start in three months' 1 December 2023, https://www.bloomberg.com/news/articles/2023-12-01/cop-28-climate-loss-and-damage-fund-could-start-early-next-year (accessed 26 December 2023); G Dickie & V Volcovici 'World Bank poised to host climate loss and damage fund, despite concerns' 4 November 2023, https://www.reuters.com/sustainability/sustainable-finance-reporting/world-bank-poised-host-climate-loss-damage-fund-despite-concerns-2023-11-04/ (accessed 26 December 2023).

148 E Calliari and others 'Making sense of the politics in the climate change loss and damage debate' (2020) 64 *Global Environmental Change* 1; J Taub and others 'From Paris to Marrakech: Global politics around loss and damage' (2016) 72 *India Quarterly* 317.

149 A Marke and others 'The development of a quasi-loss and damage compensatory system for developing countries through climate litigation' (2020) 1 *Carbon and Climate Law Review* 57; Toussaint (n 33) 18; L Benjamin and others 'An islands' COP? Loss and damage at COP23' (2018) 27 *Review of European, Comparative and International Environmental Law* 5.

150 M Civillini 'Ministerial shows fault lines on climate loss and damage fund' 25 September 2023, https://climatechangenews.com/2023/09/25/ministerial-shows-fault-lines-on-climate-loss-and-damage-fund/ (accessed 7 October 2023).

151 Transitional Committee TC3/2023/CCsInf.2 Funding arrangements: Non-exhaustive, indicative list of issues raised 2023 1.

152 Transitional Committee TC4/2023/6 4th meeting on the operationalisation of the new funding arrangements for responding to loss and damage and the fund established in paragraph 3 of decisions 2/CP.27 and 2/CMA.4 9 October 2023 4.

153 K Abnett 'Developing countries propose $100 billion climate damage fund' 6 September 2023,https://www.reuters.com/business/environment/developing-countries-propose-100bn-climate-damage-fund-2023-09-06/ (accessed 4 October 2023).

It has been confirmed during COP28 that the fund is open to all developing countries 'particularly vulnerable' to the effects of climate change.[154] However, the fear is that 'small, highly vulnerable communities' might be side-lined 'by the demands of bigger nations', such as, for example, South Africa.[155] South Africa is an attractive candidate for L&D funding, not only because it is part of the continent scientifically most vulnerable to the effects of climate change, but also because of its standing and relations in the international community, which has made it a favourite recipient of climate-related funding.[156] Moreover, as a negotiating partner has remarked, the (previous) 'minister of energy in South Africa called himself "minister of coal", just to tell you where the mentality is', thus, 'we need to work with South Africa', and that is 'why the finance is going in that direction'.[157] Therefore, a careful reconsideration of the meaning ascribed to 'particularly vulnerable country' might be imminently warranted[158] – the definition of which is not detailed in the approved text.

Boyd notes that in terms of eligibility for the Loss and Damage Fund, the question as to 'what extent should the country have been affected' remains unanswered.[159] This also raises the question as to whether the 'beyond adaptation' element is strictly required. There is room to argue that the damage caused by extreme weather events in South Africa over the last few years could have been lessened were infrastructure maintained and disaster fund spending strictly monitored.[160] For example, it is predicted that if adequate adaptation measures are implemented, South Africa could reduce climate-related road maintenance by 2050 by 43 per cent.[161] Furthermore, the University of Notre Dame Global Adaptation Initiative has ranked South Africa with a 'low vulnerability score' because 'its current vulnerabilities are manageable', albeit noting that 'improvements in readiness' are necessitated.[162] Ortega-Cisneros and others concur that scientific research is needed to determine whether present impacts

154 United Nations Framework Convention on Climate Change COP28 (n 2) 6.
155 Abnett (n 153).
156 Eg, compared to other African countries, South Africa still ranks relatively well on the 2022 Corruption Perceptions Index, https://www.transparency.org/en/cpi/2022 (accessed 7 October 2023). See also African Development Bank Group 'South Africa: African Development Bank approves $1 billion guarantee from the United Kingdom to support SA's Just Energy Transition' 9 December 2023, https://www.afdb.org/en/news-and-events/press-releases/south-africa-african-development-bank-approves-1-billion-guarantee-united-kingdom-support-sas-just-energy-transition-66885 (accessed 26 December 2023).
157 P Bond 'Climate-financing carrots and sticks in South Africa' 29 March 2023, https://www.cadtm.org/Climate-Financing-Carrots-and-Sticks-in-South-Africa#nh12 (accessed 5 October 2023).
158 G Jackson & Sakshi 'Political and legal implications of defining "particularly vulnerable" for the loss and damage fund' (2023) *OSF Preprints* 1; M Civillini 'Countries pledge $400m to set up loss and damage fund' 30 November 2023, https://www.climatechangenews.com/2023/11/30/countries-pledge-400m-to-set-up-loss-and-damage-fund/ (accessed 26 December 2023).
159 N Egan interview with E Boyd 'Many questions remain as new loss and damage fund is formally established at COP28' 6 December 2023, https://www.lucsus.lu.se/article/many-questions-remain-new-loss-and-damage-fund-formally-established-cop28 (accessed 26 December 2023).
160 Refer to the discussion in Intergovernmental Panel on Climate Change 'Climate change: The physical science basis – Sixth assessment report' (2021) 1611-1612.
161 African Union (n 49) 22.
162 ND-GAIN Country Index 'South Africa' 2021, https://gain.nd.edu/our-work/country-index/rankings/ (accessed 7 October 2023).

and longer-term impacts are reversible with adequate measures in place or beyond adaptation.[163] Additionally, with the extreme weather incidents that occurred in 2023, experts cautioned that while climate change has made South Africa more likely to experience such events, we cannot cry climate change after every episode, as more 'long-term data is required'.[164]

Currently, L&D falls within South Africa's existing disaster management realm. This highlights the complexity of deciding on the objective of the fund. Sherman, the co-chairperson for developing countries of the Transitional Committee on L&D finance, has stated that for South Africa, the fund could take the form of financial support to help respond to events, such as those seen in 2022 to 2023 or address slow-onset events, such as the economic costs of agricultural losses owing to a possible decline in pollinators, or economic losses because of a change in weather conditions that could destroy fisheries.[165]

Zero Carbon Analytics, an international research group, discusses that for African countries, the Loss and Damage Fund needs to function at multiple levels to cover unavoided, unavoidable, economic and non-economic L&D, and would require close cooperation and coordination among different levels of government, the multilateral system, and various sectors across society.[166] Using the flooding in South Africa in 2022 as an example, they discuss how ill-prepared the country was to respond to the event, given that there is no reliable disaster risk database; local, provincial, and national governments have not been proactive in planning and building resilience; and early-warning systems and flood mitigation measures are inadequate, thus, no rapid-response system is available. In addition, they point to uncontrolled urbanisation and a lack of land-use zoning enforcement, for example, prohibiting people from building below the flood line, and the poor education of many communities on the danger posed by such an event, as areas in need of improvement. Accordingly, for South Africa, they suggest that, in terms of disaster management, the Loss and Damage Fund be used to develop an advanced early-warning and rapid-response system; relocate at-risk communities; protect at-risk infrastructure; invest in projects that empower local government to educate communities regarding climate change; and provide mobile health facilities in anticipation of disaster events.[167] It is regrettable, however, that they

163 K Ortega-Cisneros and others 'Assessing South Africa's potential to address climate change impacts and adaptation in the fisheries sector' (2021) 8 *Marine Conservation and Sustainability* 14-16.

164 C Bhengu 'More data needed to link Western Cape flooding to climate change' 28 September 2023, https://www.news24.com/news24/southafrica/news/these-weather-systems-are-usual-more-data-needed-to-link-western-cape-flooding-to-climate-change-20230928 (accessed 5 October 2023); E van Diemen 'Why more than two months' worth of rain fell in Western Cape weekend storm' 26 September 2023, https://www.dailymaverick.co.za/article/2023-09-26-why-more-than-two-months-worth-of-rain-fell-in-western-cape-weekend-storm/ (accessed 5 October 2023); M Doelle & S Seck 'Loss and damage from climate change: From concept to remedy?' (2020) 20 *Climate Policy* 671.

165 Evans (n 109).

166 Zero Carbon Analytics 'Briefing: Exploring a comprehensive loss and damage facility for African countries' October (2022) 7.

167 Zero Carbon Analytics (n 166) 8-9.

suggest that if the fund were to be allocated to South Africa, priority should be given to addressing issues that should have already been tackled by now.

Boyd also points out that the question remains as to what types of losses and damages will be covered.[168] For example, humanitarian assistance is merely one component of L&D.[169] Indeed, it has been clarified that while humanitarian aid is related to L&D in terms of reacting to climate change-induced disasters and could enhance the response time of existing programmes, duplication of funding must be avoided.[170] Then there is also the issue of displacement, which can simultaneously be an indication of L&D incurred by people and communities, L&D in itself, and a cause thereof.[171] During COP28, it was confirmed that the Loss and Damage Fund could be utilised to support 'safe and dignified human mobility in the form of displacement, relocation and migration in cases of temporary and permanent loss and damage'.[172] In a country where timely relief for 'normal' weather disasters is severely lacking with mismanaged funds, a mechanism as vital and long fought for as climate change-induced L&D cannot merely be lumped under the existing pile of unimplemented policies or exposed to the 'black hole of public financing'. Thus, dedicated L&D policies in South Africa are necessary to not only set out its functioning and scope but also to harmonise it with disaster management, instead of merely making it ancillary thereto.

It was decided at COP28 that the fund will aid in addressing a variety of challenges associated with the adverse effects of climate change, such as climate-related emergencies, sea level rise, displacement, relocation, migration, insufficient climate information and data, and the need for climate-resilient reconstruction and recovery.[173] The focus is on providing complementary and additional support and improving the speed and adequacy of access to finance for responding to L&D.[174] The Transitional Committee concurred that the fund should be flexible enough 'to evolve in connection with evolving needs, priorities, and science'.[175] It was agreed during COP28 that the Loss and Damage Fund would be overseen

168 Egan (n 159).
169 H Slim 'Is it right to count humanitarian aid as loss and damage?' 29 August 2023, https://odihpn.org/publication/is-it-right-to-count-humanitarian-aid-as-loss-and-damage/ (accessed 5 October 2023); PK Clarke & D Hillier 'Addressing loss and damage: Insights from the humanitarian sector' (2023) 8; Bhandari and others (n 138).
170 United Nations Framework Convention on Climate Change COP28 (n 2) 6.
171 Platform on Disaster Displacement 'Advisory committee workshop' (2023) 26; A Baillat 'Seizing the opportunity to address disaster displacement in the loss and damage discussions' June 2023, https://www.internal-displacement.org/expert-opinion/seizing-the-opportunity-to-address-disaster-displacement-in-the-loss-damage (accessed 7 October 2023); Platform on Disaster Displacement '15 Observations on disaster displacement as loss and damage' (2022) 2.
172 United Nations Framework Convention on Climate Change COP28 (n 2) 6. See also Platform on Disaster Displacement 'Reporting back from the 2023 United Nations Climate Change Conference' 21 December 2023, https://disasterdisplacement.org/news-events/reporting-back-from-the-2023-united-nations-climate-change-conference-cop28/ (accessed 26 December 2023).
173 United Nations Framework Convention on Climate Change COP28 (n 2) 6-7.
174 As above.
175 Transitional Committee TC3/2023/CCsInf.5 3rd meeting on the scope of the fund (non-exhaustive, indicative list of issues raised during the discussion) 2023 1.

in a country-driven manner, given that applying a strict scope would fail to consider the needs and realities on the ground in different countries.[176] With this flexibility, countries could reallocate funding to other areas of addressing L&D.[177] This raises the question of nationally managing the fund.

It was agreed that the beneficiary developing countries may designate a national authority or national focal point to be responsible for the overall management and implementation of activities, projects and programmes supported by the fund.[178] These activities are expected to be regularly monitored for impact, efficiency and effectiveness.[179] Periodic independent evaluations of the performance of the fund will also be conducted to provide an objective assessment of the results of the fund, including the activities financed thereby.[180]

For countries such as South Africa, transparency is crucial for successful implementation.[181] Fair Finance, a civil society coalition that investigates government spending, reports that there is a lack of transparency as to how the South African government utilises its climate finance.[182] Fair Finance further expresses concern over the lack of public consultation undertaken in that regard.[183] According to a 2022 study, communities 'wish to be part of the just transition decision-making and implementation process and wish to be empowered to participate in and support the transition effectively'.[184] However, communities lose interest because climate-related issues are often, perhaps intentionally, conveyed in an overly technical manner.[185] The hope is that the Loss and Damage Fund will be different in 'truly involving and being centred

176 Z Shawoo and others 'Operationalising the loss and damage fund: Learning from funder and recipient perspectives, TC3 Submission' (2023) 2-3; United Nations Framework Convention on Climate Change COP28 (n 2) 12-13.

177 Transitional Committee TC2/2023/4 2nd meeting on the Report of the first workshop on addressing loss and damage in the context of decisions 2/CP.27 and 2/CMA.4 12 May 2023.

178 United Nations Framework Convention on Climate Change COP28 (n 2) 12.

179 United Nations Framework Convention on Climate Change COP28 (n 2) 14.

180 As above.

181 The national treasury has remarked on the worrying situation of corruption and irregular public spending. 'Medium-term budget policy statement' (2021) 43. Regulatory and oversight agencies are underfunded and poorly led: K Mokgonyana 'SA must do more to combat corruption if it wants to get climate finance' 10 November 2022, https://mg.co.za/thoughtleader/opinion/2022-11-10-sa-must-do-more-to-combat-corruption-if-it-wants-to-get-climate-finance/ (accessed 5 October 2023).

182 T Broughton 'Call for government to be transparent about R106-billion green energy loan' 22 February 2022, https://www.groundup.org.za/article/full-picture-what-government-will-do-r106-billion-international-development-loan-needed/ (accessed 26 December 2023). See also Y Pillay 'Public sector spending: Allow transparency to help stop corruption' 5 July 2021, https://www.bdo.co.za/en-za/insights/2021/advisory/public-sector-spending-allow-transparency-to-help-stop-corruption (accessed 26 December 2023).

183 Broughton (n 182); see also T Molelekwa 'Coal communities fear South Africa's clean energy transition' 2 February 2023, https://www.climatechangenews.com/2023/02/02/coal-communities-left-behind-fear-south-africa-green-energy-transition/ (accessed 26 December 2023); Institute for Economic Justice 'Secretly-negotiated South African "climate finance deal" a gift to private investors while choking local development' 10 November 2022, https://www.iej.org.za/statement-secretly-negotiated-south-african-climate-finance-deal-a-gift-to-private-investors-while-choking-local-development/ (accessed 26 December 2023).

184 Presidential Climate Commission 'Community and stakeholder engagement on a just transition in South Africa' May 2022 12.

185 BBC World Service Trust 'Research report: South Africa talks climate' (2010) 29.

around affected communities and groups who have traditionally been excluded and marginalised'.[186]

To achieve this, strict guidelines must be set out to 'ensure that adaptation and [L&D] finance is not conflated and that finance for [L&D] is not diverted or relabelled'.[187] This point must not be glossed over but considered carefully. As a South African government official remarked, 'different political parties have different priorities and oftentimes climate change is not prioritised'.[188] Strict guidelines on accountability and transparency are crucial to prevent governments from merely reprioritising L&D funding to other areas carefully window-dressed to meet the fund's criteria. Especially since in their report, the Transitional Committee noted difficulties in monitoring L&D finance.[189]

Further lingering questions concern how the money from the Loss and Damage Fund will be paid out, how the fund will be financed or replenished, as there is no firm obligation for developed countries to pay into the fund, and whether the World Bank should administer the fund in the long term.[190] There are concerns over the World Bank serving as the interim organisation to manage the Loss and Damage Fund because it 'would lack independence, fail to provide communities direct access to funds, and risk further indebting nations'.[191] Critique has also been raised regarding the current commitment of $700 million (€635,06 million), as it lags behind the estimated $150 to 300 billion (€136,08 to 272,17 billion) needed by developing countries by 2030.[192]

A last issue concerns the interlinkage of the Santiago Network for L&D and the Loss and Damage Fund.[193] While the Loss and Damage Fund establishes

186 L Walsh 'Will the new loss and damage fund replicate the same old exclusion of local voices and organisations?' 3 November 2023, https://reliefweb.int/report/world/will-new-loss-and-damage-fund-replicate-same-old-exclusion-local-voices-and-organisations (accessed 26 December 2023).

187 Bhandari and others (n 138); C Zenda 'What will loss and damage fund mean for Africa's most vulnerable?' 30 November 2022, https://www.fairplanet.org/story/cop27-loss-and-damage-fund-for-africa/ (accessed 7 October 2023).

188 Sibiya and others (n 83) 8.

189 United Nations Framework Convention on Climate Change COP28 FCCC/CP/2023/9–FCCC/PA/CMA/2023/9 28 November 2023 held in United Arab Emirates from 30 November to 12 December 2023 Report by the Transitional Committee on Operationalisation of the new funding arrangements for responding to loss and damage and the fund established in paragraph 3 of decisions 2/CP.27 and 2/CMA.4 5.

190 Egan (n 159).

191 Dickie & Volcovici (n 147); Walsh (n 186); I Walker 'World Bank should not host loss and damage fund, say critics' 31 October 2023, https://greencentralbanking.com/2023/10/31/world-bank-should-not-host-loss-and-damage-fund-say-critics/ (accessed 26 December 2023).

192 L Omarjee 'Pledges for loss and damage roll in, but billions needed – SA chief negotiator' 10 December 2023 https://www.news24.com/fin24/climate_future/news/cop28-pledges-for-loss-and-damage-roll-in-but-billions-needed-sa-chief-negotiator-20231210 (accessed 26 December 2023); Independent High-Level Expert Group on Climate Finance 'Report: Finance for climate action' November (2022) 5 & 7.

193 See H Niyitegeka 'Unpacking the link between the Santiago Network and funding arrangements and fund for loss and damage' Brief for the Loss and Damage Collaboration (2023).

new funding arrangements and a fund for assisting developing countries that are particularly vulnerable to the adverse effects of climate change, in responding to loss and damage, the Santiago Network emerged from COP25 in 2019 as part of the Warsaw International Mechanism for Loss and Damage, which serves both the UNFCCC and its Paris Agreement.[194] The Santiago Network is meant to catalyse technical assistance related to L&D directly to developing countries.[195] Parties at COP26 agreed to six functions for the Santiago Network, namely, assisting in identifying and communicating technical assistance needs and priorities; identifying relevant technical assistance; and actively connecting those seeking technical assistance with best-suited organisations, bodies, networks and experts that could provide that assistance.[196] The Santiago Network's governance arrangements and institutional structure were further agreed upon during COP27.[197] During COP28, the UN Office for Disaster Risk Reduction and the UN Office for Project Services were selected as the hosts of the Santiago Network secretariat.[198] Apart from mentions relating to the need for coherence between the two, more clarity on how the Santiago Network will fit into the L&D funding arrangements is needed.[199]

3.4.2 Beyond the Loss and Damage Fund

There are significant global developments underfoot, such as the pending advisory opinions from the International Court of Justice (ICJ) and the Inter-American

194 United Nations Framework Convention on Climate Change COP19 FCCC/CP/2013/10/Add.1 31 January 2014 held in Warsaw, Poland from 11 to 22 November 2013 Decision 2/CP.19 Warsaw international mechanism for loss and damage associated with climate change impacts.

195 United Nations Framework Convention on Climate Change COP25 FCCC/PA/CMA/2019/6/Add.1 16 March 2020 held in Madrid, Spain from 2 to 13 December 2019 Decision 2/CMA.2 Warsaw International Mechanism for Loss and Damage associated with Climate Change Impacts and its 2019 review 8.

196 United Nations Framework Convention on Climate Change COP26 FCCC/PA/CMA/2021/10/Add.3 8 March 2022 held in Glasgow, Scotland, United Kingdom from 3 1 October to 13 November 2021 Decision 19/CMA.3 Warsaw International Mechanism for Loss and Damage associated with Climate Change Impacts 29-30.

197 United Nations Framework Convention on Climate Change COP27 FCCC/PA/CMA/2022/10/Add.3 17 March 2023 held in Sharm El Sheikh, Egypt from 6 November to 20 November 2022 Decision 12/CMA.4 Santiago network for averting, minimising, and addressing loss and damage associated with the adverse effects of climate change under the Warsaw International Mechanism for Loss and Damage associated with Climate Change Impacts.

198 United Nations Framework Convention on Climate Change COP28 FCCC/PA/CMA/2023/L.9 12 December 2023 held in the United Arab Emirates from 30 November to 12 December 2023 Draft decision-/CMA.5 Santiago network for averting, minimising and addressing loss and damage under the Warsaw International Mechanism for Loss and Damage associated with Climate Change Impacts.

199 United Nations Framework Convention on Climate Change COP28 (n 2) 11, 16, 18; H Niyitegeka 'COP28 is finally here: What does a robust outcome on loss and damage look like for developing countries?' 27 November 2023, https://www.lossanddamagecollaboration.org/pages/cop-28-is-finally-here-what-does-a-robust-outcome-on-loss-and-damage-look-like-for-developing-countries (accessed 26 December 2023); N Warszawski and others '4 actions vulnerable countries need from COP28' 23 May 2023, https://www.wri.org/technical-perspectives/actions-vulnerable-countries-need-un-climate-summit (accessed 26 December 2023).

Court of Human Rights (IACHR) on the obligations of states concerning climate change.[200] The joint request for an advisory opinion on the climate emergency was submitted to the IACHR on 9 January 2023, by the Foreign Ministers of Chile and Colombia. This significant step aimed to clarify the scope of state obligations in addressing the climate crisis within the framework of international human rights law, particularly the American Convention on Human Rights. The request was prompted by the escalating impacts of climate change in the region, which disproportionately affect vulnerable populations and ecosystems. Recognising the urgent need for comprehensive and effective measures, Chile and Colombia sought to establish clear legal standards and guidelines for states to follow in their climate actions. This move highlights the growing recognition of the intrinsic link between environmental degradation and human rights violations, emphasising the need for robust legal frameworks to safeguard fundamental human rights in the face of climate change.

The European Court of Human Rights' (ECHR) recent ruling in *Verein KlimaSeniorinnen Schweiz and Others v Switzerland* (2024) marks a historic moment in climate change litigation, but it also highlights a missed opportunity to explore reparations for climate-related harm.[201] The case, involving four elderly women and a climate advocacy group, challenged Switzerland's climate policies under various ECHR articles, claiming health risks from climate-induced heatwaves. While the Court found violations, it did not address reparations. Instead, it emphasised general measures for Switzerland to achieve significant GHG reductions and carbon neutrality, reflecting its traditional cautious approach. Although the ruling did not delve into specific remedies, it sets important precedents for future climate litigation and guides for improving national climate policies. This decision might signal the start of a broader trend in addressing climate change through human rights frameworks.

On 21 May 2024, the International Tribunal for the Law of the Sea (ITLOS) issued its first advisory opinion, determining that GHG emissions caused by human activity are considered 'pollution of the marine environment' under the United Nations Convention on the Law of the Sea (UNCLOS). This decision establishes that states have specific obligations, including the responsibility to prevent, reduce, and control anthropogenic GHGs originating from both land and sea sources. The African Union (AU), in their written statement and during oral hearings, emphasised the vulnerability of the African continent to climate change, confirmed their position in favouring the grant of an advisory opinion

200 United Nations General Assembly Resolution 77/276 Request for an advisory opinion of the International Court of Justice on the obligation of states in respect of climate change UN Doc A/77/L.58 (1 March 2023).

201 M Cohen and others 'Reparation for Climate Change at the ECtHR' 10 May 2024, https://verfassungsblog.de/reparation-for-climate-change-at-the-ecthr/ (accessed 12 May 2024); J Reich 'KlimaSeniorinnen and the Choice Between Imperfect Options' 18 April 2024, https://blogs.law.columbia.edu/climatechange/2024/04/18/klimaseniorinnen-and-the-choice-between-imperfect-options/ (accessed 20 April 2024).

that bears in mind the principle of common but differentiated responsibility and, accordingly, urged ITLOS to take this 'unprecedented opportunity' to 'address this problem in a way that contribute[s] to ... the betterment of the majority of mankind'.[202]

As Torre-Schaub discusses, while advisory opinions 'do not have the same binding force as decisions in litigation cases', they can have 'important effects on the principles of international law' and on 'climate disputes in the regional and national context'.[203] As Nedeski and others conclude, even if the expected outcome is not as hoped for by those petitioning it, global collective action is required to combat the climate emergency, and legal insight from these international courts could play a significant role going forward in negotiations.[204] For example, they could guide whether and how reparations should be calculated for the L&D suffered by countries due to climate change which, in turn, could further bolster climate litigation.[205]

A study on 73 legal cases demonstrates that currently it remains very difficult to hold private actors liable because the scientific evidence needed to distinguish their contributions from the whole 'lags'.[206] Attribution science continues to develop, which helps us to understand 'whether, or to what degree, human influence may have contributed to extreme climate or weather events'.[207] As a matter of fact, the 'interplay between climate science and climate law becomes increasingly important when addressing L&D,' causation, and compensation, which mandates that 'science must enlighten the law'.[208]

202 International Tribunal for the Law of the Sea ITLOS/PV.23/C31/17 Public sitting African Union verbatim record on the Request for an advisory opinion submitted by the Commission of Small Island States on Climate Change and International Law (21 September 2023) 1 & 86; International Tribunal for the Law of the Sea Case No 31 African Union written statement on the Request for an advisory opinion submitted by the Commission of Small Island States on Climate Change and International Law vol 1 (16 June 2023) 1.

203 M Torre-Schaub 'International justice and the environment: Analysis of the request for an advisory opinion to the International Court of Justice' 11 May 2023, https://www.iddri.org/en/publications-and-events/blog-post/international-justice-and-environment-analysis-request-advisory (accessed 5 October 2023).

204 N Nedeski and others 'The world is burning, urgently and irreparably: A plea for interim protection against climatic change at the ICJ' Max Planck Institute Research Paper Series (2023) 32.

205 D Bodansky 'Advisory opinions on climate change: Some preliminary questions' (2023) 32 *Review of European, Comparative and International Environmental Law* 190.

206 FEL Otto and others 'Causality and the fate of climate litigation: The role of the social superstructure narrative' (2022) 13 *Global Policy* 736; RF Stuart-Smith and others 'Filling the evidentiary gap in climate litigation' (2021) 11 *Nature Climate Change* 651.

207 Congressional Research Service 'Is that climate change? The science of extreme event attribution' (2023) 2; KW Steininger 'Foreseeability of economic damages related to inadequate climate mitigation and adaptation' in E Schulev-Steindl and others (eds) *Climate change, responsibility and liability* (2022) 93.

208 OC Ruppel 'South Africa: Climate change, responsibility and liability – The legal system, public and private law considerations' in Schulev-Steindl and others (n 207) 240.

Few attribution studies have considered African events to date.[209] Developments in attribution science could support plaintiffs in satisfying legal tests for causation and, thus, provide a crucial step in successful litigation concerning adaptation and losses where no claims for remedies have been successful.[210] Were such data readily available, the current legal framework in South Africa for claiming damages could accommodate such claims.[211] However, first, the ambiguity, which still shrouds L&D, must be settled.[212] Once the concept has been adequately defined, its litigation could become a vital gap filler to understanding how its elements set it apart from mitigation or adaptation cases.[213]

Only 15 climate change-related cases have so far been heard by national courts on the African continent, consisting of 54 countries, out of over 2 180 cases globally, these being in Kenya (two cases), South Africa (nine cases), Nigeria (two cases) and Uganda (two cases).[214] Several factors hinder climate litigation on the continent, and beyond,[215] including the complexity of the judicial processes; the onerous evidential burden and standard of proof required; the complexity of environmental issues; the lack of capacity and resources of communities affected; and the difficulty in proving causation due to a lack of scientific data.[216] Moreover, it could be attributed to either a lack of legislative frameworks for litigants to rely on or the 'newness' of such frameworks.[217] Only from 2022 onwards has there been a steady increase in climate change framework laws being implemented across Africa. Therefore, it might still be too early to expect substantive climate litigation from the region.[218] Moreover, for countries such as South Africa, the focus first is on addressing poor enforcement of existing planning and environmental legislation before litigants tackle climate change matters.[219] As a government official confirmed, '[i]t is not because people are in

209 Refer to Z Liu and others 'The April 2021 Cape Town wildfire: Has anthropogenic climate change altered the likelihood of extreme fire weather?' (2023) 104 *American Meteorological Society* 1; FEL Otto and others 'Attribution of extreme weather events in Africa: A preliminary exploration of the science and policy implications' (2015) 132 *Climatic Change* 532.

210 M Burger and others 'The law and science of climate change attribution' (2020) 45 *Columbia Journal of Environmental Law* 148-155; RA James and others 'Attribution: How is it relevant for loss and damage policy and practice?' in R Mechler and others (eds) *Loss and damage from climate change: Concepts, methods and policy options* (2019) 123-124.

211 Ruppel (n 208) 241-250; see also OC Ruppel & R Murray 'Natural resources' in *Max Planck Encyclopedia of Comparative Constitutional Law* (June) 1 5; C Reddell 'Directors' liability and climate risk: South Africa – Country paper' (2018).

212 MA Tigre & M Wewerinke-Singh 'Beyond the north-south divide: Litigation's role in resolving climate change loss and damage claims' (2023) *Review of European, Comparative and International Environmental Law* 4.

213 Refer to A Kodiveri and others 'The significance of climate litigation for the political debate on loss and damage' (2023); Toussaint (n 33) 21.

214 M Burger & MA Tigre 'Global climate litigation report' (2023) 16-17.

215 See OC Ruppel and others 'Strategic climate litigation on the rise: An overview from a European perspective' (2023) 3 *Huxiang Law Review* 124-138.

216 *Cf* among others O Adejonwo & O Afinowi 'Human rights approach to climate justice in Africa: Experiences from other jurisdictions' in AO Jegede & O Adejonwo (eds) *Climate change justice and human rights: An African perspective* (2022) 35 55.

217 J Setzer & L Benjamin 'Climate litigation in the Global South: Constraints and innovations' (2019) *Transnational Environmental Law* 10, 25.

218 Intergovernmental Panel on Climate Change (n 114) 1312.

219 LJ Houston & OC Ruppel 'Just energy transitions in progress? The partnership between South Africa and the EU' (2022) 19 *Journal for European Environmental and Planning Law*

denial, but people are dealing with real-life issues'.[220] For example, less than 50 per cent of audiences surveyed in South Africa, Kenya and Nigeria are interested in climate change as a news topic, given the daily challenges they are facing.[221] In a recent survey, when citizens of 34 African countries were asked what they considered the most important problems that their government should address, fewer than 1 per cent of the participants listed climate change as a concern, while unemployment was at the top, followed by crime and housing.[222]

Since 2023, a notable shift has emerged in global climate litigation, characterised by increased efforts to hold major polluters accountable. This trend is particularly evident in the Global North, where jurisdictions are taking proactive steps to address climate change impacts. For instance, Multnomah County, Oregon, is seeking damages from corporations for the 2021 heat dome, while Vermont has enacted the Climate Superfund Act (S.259), imposing strict liability on major oil and gas companies for carbon pollution.[223] Similar legislative initiatives are underway in other US states.[224] This growing focus on climate liability underscores stark global disparities. While the Global North advances these measures, Global South communities often face significant barriers in pursuing comparable legal actions.

3.4.3 COP29

The 2024 UN Climate Change Conference (UNFCCC COP 29), set for 11-22 November 2024, in Baku, Azerbaijan, will advance the objectives of the UNFCCC and the Paris Agreement. The conference will focus on limiting global warming, enhancing adaptation efforts, and mobilising financial resources. Key sessions will include the 29th Conference of the Parties (COP 29), the 19th Meeting of the Parties to the Kyoto Protocol (CMP 19), and the sixth Meeting of the Parties to the Paris Agreement (CMA 6). Major agenda items will be finalising the enhanced transparency framework and setting a new collective quantified finance goal, alongside addressing other critical climate issues.

In the 2023 Global Stocktake, key findings from the Sixth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC) were brought to light. The report confirmed that human activities have driven global warming of approximately 1.1°C, with widespread impacts that disproportionately affect the

39; O Rumble & A Gilder 'Climate change litigation on the African continent' (2021) 3; Setzer & Benjamin (n 217) 3-4.

220 Sibiya and others (n 83) 8-9.

221 Reuters Institute 'Digital news report' (2022) 54.

222 Mpako & Govindasamy (n 90) 6.

223 J Setzer & C Higham 'Global trends in climate change litigation: 2024 snapshot' (2024) 46-47.

224 As above.

most vulnerable populations, who have contributed least to climate change.[225] It highlighted that current adaptation efforts are often fragmented and uneven, with significant gaps remaining. The Stocktake emphasised the need for integrated, multi-sectoral approaches such as sustainable land management and ecosystem conservation to bolster resilience and adaptation. It also called for continued financial support from developed countries and voluntary contributions to address L&D, following the Paris Agreement and the Warsaw International Mechanism. Progress under international mechanisms was acknowledged, yet the report noted persistent gaps in finance and support, stressing the urgency for enhanced action and coherence in managing climate impacts.

As the effects of climate change grow increasingly severe, COP29 faces immense pressure to produce actionable and impactful outcomes.

4 Concluding remarks

Thomas and Benjamin assessed the state of L&D management in both the Caribbean and Pacific Islands and found that a lack of data constrains it; gaps in financial assessments; and the absence of specific policies or mechanisms that holistically address L&D.[226] Vanhala and others investigated the type of knowledge and ideas national policymakers and civil servants in Antigua and Barbuda draw on when conceptualising L&D as a governance object.[227] They identified several barriers to policymaking, including a lack of shared understanding of what L&D entails and how to address it across government departments; a lack of relevant data; and political tensions around its collection and disclosure.

South Africa certainly qualifies for prospective L&D funding, on paper at least, ticking the vulnerability box.[228] However, as highlighted herein, and mirrored by similar research by Thomas and Benjamin and Vanhala and others, significant obstacles remain. South Africa has shown limited progress in implementing the adaptation and mitigation measures it set out in its policies.[229] The current reliance on disaster management is merely an insufficient reactive over proactive strategy, exacerbated by unmaintained infrastructure. The scale of vulnerability increasingly projected in Southern African cities is focused on a broad range of sectors, including business and tourism, air quality, health and food security,

225 United Nations Framework Convention on Climate Change FCCC/PA/CMA/2023/L.17 13 December 2023 Outcome of the first global stocktake, held in the United Arab Emirates 30 November to 12 December 2023 Draft decision -/CMA.5.

226 Thomas & Benjamin (n 14) 2369.

227 L Vanhala and others 'The knowledge politics of climate change loss and damage across scales of governance' (2021) 30 *Environmental Politics* 1.

228 United Nations Framework Convention on Climate Change COP28 (n 2) 12.

229 See S van Wyk 'Climate change law and policy in South Africa and Mauritius: Adaptation and mitigation strategies in terms of the Paris Agreement' (2022) 30 *African Journal of International and Comparative Law* 1; K Ross & H Winkler 'Effective tracking of nationally determined contributions: A case study on South Africa' (2021) 32 *Journal of Energy in Southern Africa* 11.

infrastructure and services, biodiversity and water resources.[230] While larger cities have the political will and capacity to ensure the implementation of key climate policies, smaller cities continue to struggle therewith.[231] While this could be argued as self-inflicted, they are reliant on national and provincial support and oversight.[232] Thus, despite its sophisticated legal framework, implementation is hindered by South Africa's complex and layered challenges.

At the beginning of 2024, President Ramaphosa introduced a new Climate Change Response Fund aimed at financing infrastructure projects to bolster South Africa's climate resilience.[233] This fund, a collaboration between the government and the private sector, is intended to address the growing impacts of the climate crisis. Unlike disaster response funds, it focuses on investments in sectors that enhance resilience to extreme weather events. The criteria for accessing the fund are still being finalised, and it is expected to become operational in the 2025/2026 financial year. It remains to be seen whether this fund will effectively address the issues highlighted or suffer from the same mismanagement as existing funds. Regardless, it will serve as a critical test of how climate resilience investments are managed and could provide insights into the management and benefits of L&D funding.

Awareness, capacity building, and policy alignment across the board must be the centre points for South Africa, should it become a beneficiary of the Loss and Damage Fund. Measures should be taken to enhance and strengthen government budget tracking, reporting, and verification systems.[234] As the saying goes, 'where there is bad governance, aid is ineffective, and where there is good governance, aid is unnecessary'.[235] It is important to note that potential donors must have an appreciation for the fact that 'achieving climate justice in South Africa demands global climate finance measures responsive to the problematic roots of the

230 I Niang and others 'Africa' in VR Barros and others (eds) *Climate change 2014: Impacts, adaptation, and vulnerability. Part B: Regional aspects* (2014) 1225.

231 G Ziervogel and others 'Climate change in South Africa: Risks and opportunities for climate-resilient development in the IPCC sixth assessment WGII report' (2022) 118 *South African Journal of Science* 2; HD Cole and others 'Managing city-scale slow-onset disasters: Learning from Cape Town's 2015-2018 drought disaster planning' (2021) 63 *International Journal of Disaster Risk Reduction* 1; T Hickmann & F Stehle 'The embeddedness of urban climate politics in multilevel governance: A case study of South Africa's major cities' (2019) 28 *Journal of Environment and Development* 54.

232 For a discussion, refer to S Hlahla and others 'Assessing municipal-level governance responses to climate change in KwaZulu-Natal, South Africa' (2019) 62 *Journal of Environmental Planning and Management* 1100; NW Tshamano & MA Shopola 'Local government and climate change: How are rural local municipalities in Limpopo Province coping with the effects of climate change?' (2021) *African Renaissance* Special Issue on Climate Change Strategy Management 149.

233 Parliament of South Africa 'Media Statement – Government establishes climate change response fund' 9 February 2024, https://www.parliament.gov.za/news/government-establishes-climate-change-response-fund (accessed 12 February 2024).

234 Meattle and others (n 84) 6.

235 Reliefweb 'International aid to Africa needs an overhaul' 18 May 2021, https://reliefweb.int/report/world/international-aid-africa-needs-overhaul-tips-what-needs-change (accessed 5 October 2023); JD Park *Re-inventing Africa's development* (2019) 37-38.

country's political economy'.[236] It is all well and good for a country to be able to boast that they have contributed toward the Loss and Damage Fund and call it a day, but that does little to advance the contours of climate justice and alleviate the harm suffered by vulnerable communities whose governments are not concerned with their climate adaptability or losses and damages suffered.[237] Accordingly, before the fund becomes fully operational, the funding commitments must be made more clear and detailed, subject to appropriate conditions that enhance transparency and accountability. Such an L&D fund can support those who bear the major brunt of the climate crisis, based on the polluter-pays principle in response to non-economic losses and damages.

Moreover, it could present an attempt to rectify prevailing Global North-Global South injustices in the spirit of common but differentiated responsibilities and capabilities. As Bhambra and Newell discuss, colonialism has left a lasting imprint on climate change, as historical exploitation and resource extraction continue to shape environmental inequalities. The legacies of colonial practices contribute to disparate vulnerabilities and hinder the global efforts needed to address the challenges of a changing climate.[238] Unfortunately, since L&D is both a political object and a scientific concept, countries will continue to struggle with how to develop policies and frameworks at the national level long after the fund's anticipated operation.[239] This is especially the case in South Africa, where competing socio-economic demands continue to outweigh the need for urgent climate change response. As has rightfully been pointed out, the current approach appears to be ensuring that South Africa attracts international investors with its ambitious policies and targets in the '(vain) belief that doing so will not only make [it] look more presentable but will somehow work its way down', rather than first and foremost laying a foundation of efficient proactive policies with capable well-financed institutions to ensure their implementation.[240]

This is exemplified in the country's Just Transition Framework, which aims to ensure that the shift to a low-carbon economy does not leave any communities or workers behind and considers the social and economic impacts of the transition towards a more sustainable and inclusive economy.[241] As Swilling and others discuss, the Just Transition Framework is ambitious but its execution suffers institutional weaknesses and corruption; they posit that a just transition

236 F Kiboori 'Africa has been short-changed by climate change, not climate action' 22 September 2023, https://www.confluencephilanthropy.org/Africa-Has-Been-Short-changed-By-Climate-Change (accessed 7 October 2023); MJ Murcott 'A just COP26 outcome for South Africa?' (2022) 13 *Transnational Legal Theory* 358-362.

237 Accountability is a two-way street: Schultheiß and others (n 146) 26-27.

238 GK Bhambra & P Newell 'More than a metaphor: "Climate colonialism" in perspective' (2023) 2 *Global Social Challenges Journal* 183.

239 S Huq and others 'Loss and damage' (2013) 3 *Nature Climate Change* 948.

240 DT McKinley 'The making of a myth: South Africa's neoliberal journey' (2007) 35 *Discourse* 15.

241 Presidential Climate Commission 'A framework for a just transition in South Africa' (2022).

requires a socio-political regime aligned with a sustainability paradigm.[242] While the policies are in place, contradictory government actions hinder a truly just transition.[243]

In discussing the potential for improved environmental policies under South Africa's new government, it is essential to highlight the role of the Executive Committee of the Warsaw International Mechanism for Loss and Damage (EXCOM) in guiding these efforts. The new government, viewed as a beacon of hope following years of perceived neglect, aims to spearhead a just energy transition, integrating EXCOM's insights to address climate change and protect vulnerable communities.[244] As the first new government in South Africa in 30 years, changing political dynamics might pave the way for better implementation and proactive measures. Should it become a beneficiary of the Loss and Damage Fund, this article encourages South Africa to uphold its 'African role model' mantle and utilise the fund's resources to greatly improve its disaster management processes, particularly turning the aim from reaction to pro-action, and urgently addressing the issues listed herein.

242 M Swilling and others 'Developmental states and sustainability transitions: Prospects of a just transition in South Africa' (2015) *Journal of Environmental Policy and Planning* 16.

243 Refer to M Otlhogile & R Shirley 'The evolving just transition: Definitions, context, and practical insights for Africa' (2023) 3 *Environmental Research: Infrastructure and Sustainability* 8-9; A Lenferna 'What went wrong with South Africa's once pioneering just transition plan?' 7 December 2023, https://africanarguments.org/2023/12/what-went-wrong-with-south-africa-once-pioneering-just-energy-transition-plan/ (accessed 26 December 2023); K Connolly '5 Lessons from South Africa's just transition journey' 1 September 2022, https://www.wri.org/technical-perspectives/5-lessons-south-africas-just-transition-journey (accessed 26 December 2023); V Satgar and others 'South Africa's framework for a just transition fails to recognise the climate emergency' 16 August 2022, https://www.dailymaverick.co.za/article/2022-08-16-framework-for-sas-just-transition-fails-recognise-the-climate-emergency/ (accessed 26 December 2023).

244 D Naidoo & Y Diko 'South Africa could build a united front on a just transition' 18 July 2024, https://issafrica.org/iss-today/south-africa-could-build-a-united-front-on-a-just-transition (accessed 20 July 2024).

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Loss and Damage Fund: Towards a gender-responsive approach and climate justice for women in local communities in Africa

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Abstract: This article examines the critical role of the Loss and Damage Fund (LDF) in addressing the challenges and advancing gender equality and climate justice for women in African local communities. It highlights the current state of climate-induced loss and damage, the potential of the LDF, and the importance of a gender-responsive approach that will achieve equitable climate resilience and ensure climate justice. The article concludes that gender equality and climate justice in the context of the LDF may be achieved through several strategies, including a purposeful implementation of women's rights as guaranteed in the African Women's Protocol, access to climate finance and funding targeted at women and women projects, improved women's participation in climate decision making, and access to climate finance through gender-transformative decision-making and delivery procedures that are people-centred and human rights-focused.

Key words: climate finance; gender and climate justice; loss and damage; Loss and Damage Fund

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1 Introduction

Climate change is one of the greatest challenges of our time, with devastating consequences for ecosystems, economies and societies worldwide. This is due to its interwoven complexity with science and other socio-economic issues, such as poverty, climate-induced conflict, violence, forced migration and food security, and it is a threat to the attainment of sustainable development.[1] Climate change has a devastating effect across the world, causing loss and damage that adversely affect livelihoods, human health, ecosystems and cultural heritage.[2] However, the effect and impact are disproportionate. Many of the countries and communities experiencing severe loss and damage are developing countries that have contributed the least to human-induced climate change, and typically have low technical and financial capacity to address the impacts and build resilience to it.[3] Several factors contribute to a lower adaptive capacity, including poverty, limited access to information, social inequality, weak governance and institutions, and lack of technology and infrastructure.

There is no formally-accepted definition of 'loss and damage'.[4] Loss and damage (non-capitalised) refer to the residual impact of climate change or the incurred impacts of anthropogenic climate change. Loss and Damage (capitalised) refer to the political debate on losses and damages and raises issues of responsibility and justice, and it refers to plans and policies focused on addressing loss and damage.[5] According to Åberg and Jeffs, 'loss and damage' refer to one of three scenarios: all negative impacts of climate change; harms that occur after limits to adaptation have been reached; or the most critical and irreversible negative impacts of climate change.[6] There is an emerging understanding that loss and damage relate to those impacts that cannot be avoided through mitigation and adaptation efforts. Loss is often understood as irreversible (for instance, loss of

1 O Adejonwo-Osho 'Effective fulfilment, implementation, and supervision of the validation and registration requirements for clean development mechanism (CDM) projects: A missing link in the achievement of the sustainable development objective of the CDM' PhD thesis, University of Dundee, 2012, http://discovery.dundee.ac.uk/portal/en/theses/effective-fulfilment-implementation-and-supervision-of-the-validation-and-registration-requirements-for-clean-development-mechanism-cdm-projects-a-missing-link-in-the-achievement-of-the-sustainable-development-objective-of-the-cdm%28e66677ef-3954-466d-829e-d46194e8e340%29.html (accessed 4 October 2023).

2 P Bhandari and others 'What is "loss and damage" from climate change? 8 key questions, answered', https://www.wri.org/insights/loss-damage-climate-change (accessed 4 October 2023).

3 As above.

4 L Vanhala, M Robertson & E Calliari 'The knowledge politics of climate change loss and damage across scales of governance' (2021) 30 *Environmental Politics* 141-160, https://doi.org/10.1080/09644016202018402227 (accessed 4 October 2023).

5 T Chakma and others 'Women confronting loss and damage in Africa: Feminist climate justice research from Kenya, Nigeria, Rwanda and Zambia', https://www.actionaid.org.uk/publications/women-confronting-loss-damage (accessed 4 October 2023).

6 A Åberg & N Jeffs 'Loss and damage finance in the climate negotiations: Key challenges and next steps' Chatham House Research Paper (4 November 2022), https://www.chathamhouse.org/2022/11/loss-and-damage-finance-climate-negotiations (accessed 4 October 2023); E Boyd and others 'A typology of loss and damage perspectives' (2017) 7 *Nature Climate Change* 723-729, https://doi.org/10.1038/nclimate3389 (accessed 4 October 2023).

lives, species or habitats) while damages can be repaired.[7] The most accepted use of the term 'loss and damage' is in reference to climate change impacts not avoided by climate change mitigation and adaptation.[8] It is estimated that major climate and weather events in developing countries in 2022 caused more than US $109 billion in losses.[9]

The article explores the role of the LDF in addressing the vulnerabilities of African communities, particularly women, to advance gender equality and climate justice. The article argues in favour of a gender-responsive approach to loss and damage as a means to achieve gender equality and climate justice for women in African local communities. The article highlights the climate disparity between developed and developing countries in Africa, the current state of climate-induced loss and damage in African communities, the potential of the fund, and the importance of a gender-responsive approach that will achieve equitable climate resilience and ensure climate justice. This article concludes that gender equality and climate justice in the context of the LDF and access to climate finance can be achieved through climate funding targeted at women and women projects, emphasising the need for gender-transformative decision-making and delivery procedures that are people-centred and human rights-focused.

2 Climate disparity between developed and developing countries and loss and damage[10]

The 2022 Intergovernmental Panel on Climate Change (IPCC)'s Sixth Assessment Report on climate impacts, adaptation and vulnerability estimates that the intensification of climate change is exceeding the capacity of human and natural systems to cope.[11] This results in unavoidable and, in some cases irreversible losses and damages. According to Chakma and others, many communities are close to reaching their adaptation limits and climate impacts can

7 Women and Gender Constituency 'Loss and damage' Issue Brief, 2021, https://womengenderclimate.org/wp-content/uploads/2021/10/WGC_IssueBrief_LossDamage_EN.pdf (accessed 4 October 2023) (accessed 4 October 2023).

8 Åberg & Jeffs (n 6); E Roberts & M Pelling 'Climate change-related loss and damage: Translating the global policy agenda for national policy processes' (2018) 10 *Climate and Development* 4-17, https://doi.org/10.1080/17565529.2016.1184608 (accessed 4 October 2023).

9 J Richards and others 'The loss and damage finance landscape', https://us.boell.org/sites/default/files/2023-05/the_loss_and_damage_finance_landscape_hbf_ldc_15052023.pdf (accessed 2 March 2024). The policy brief projects that the estimate might be higher than this stated figure because it does not take into account smaller events that may have been devastating for a local community, slow onset impacts, nor non-economic loss and damage. Therefore, the policy brief estimates that the real loss and damage faced by developing countries in 2022 was considerably greater than US $109 billion.

10 Climate disparity is used here to mean the unequal distribution of the impacts of climate change and the varying capacities of nations to adapt to and mitigate these effects. Several key factors contribute to this disparity, including historical responsibility, current emissions, access to clean energy, and loss and damage.

11 IPCC 'Climate Change 2022: Impacts, adaptation and vulnerability, contribution of Working Group II to the Sixth Assessment Report, Intergovernmental Panel on Climate Change (2022).

no longer be addressed through mitigation such as cutting down greenhouse gas emissions or managing through adaptation such as changing practices to adapt to the environmental changes caused by climate change.[12]

African countries have contributed the least to climate change and they are disproportionately vulnerable to the impacts of climate change.[13] The latest reports of the Intergovernmental Panel on Climate Change (AR6-IPCC)[14] indicate that, even if global warming is kept within the 1,5oC limit as set out in the Paris Agreement,[15] the impacts of climate change will become more pronounced in Africa and increase vulnerability across the continent. The contribution of countries to climate change and their capacity to prevent it and cope with its consequences vary enormously from developed to developing countries. There are significant disparities among countries in terms of their impact on climate change, their ability to mitigate it, and their capacity to deal with the consequences. The factors influencing these variations are often categorised into developed and developing countries. Developed countries, typically characterised by higher levels of industrialisation and technological advancement, have historically been major contributors to greenhouse gas emissions.[16] This is primarily due to their extensive use of fossil fuels and their industrial activities.

Developing countries, on the other hand, contribute less to overall emissions. Developing countries often face challenges in adopting cleaner technologies due to several factors, including capacity and financial constraints. The cost of mitigating and adapting to climate change, especially in developing countries, is enormous.[17] Developing countries often face challenges in adopting cleaner technologies due to financial constraints. They may prioritise economic development over environmental concerns, leading to a reliance on conventional, emission-intensive

12 Chakma and others (n 5).

13 J Hickel 'Quantifying national responsibility for climate breakdown: An equality-based attribution approach for carbon dioxide emissions in excess of the planetary boundary' (2020) 4 *The Lancet Planetary Health*, https://www.sciencedirect.com/science/article/pii/S2542519620301960 (accessed 4 October 2023); H Ritchie 'Who has contributed most to global CO2 emissions?' *Our World Data*, https://ourworldindata.org/contributed-most-global-co2 (accessed 4 October 2023); IPCC (n 11) 11.

14 The IPCC was established by the World Meteorological Organisation and the United Nations Environment programme in 1988, following UNGA Resolution 43/53, Protection of Global Climate for Present and Future Generations of Mankind Resolution 43/53, UNGA 70th Plenary Meeting, 6 December 1988. For its comprehensive report on Africa and climate change adverse effects, see M Boko and others 'Africa' in ML Parry and others (eds) *Climate change, impacts, adaptation and vulnerability: Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change* (2007) 433-467.

15 United Nations Framework Convention on Climate Change, 9 May 1992, S Treaty Doc 102-38, 1771 UNTS 107.

16 Hickel (n 13); Ritchie (n 9).

17 Climate change mitigation includes policies and programmes that reduce greenhouse gases that cause climate change. Adaptation refers to strategies, policies and programmes that reduce vulnerability to the adverse effects of climate change. See O Adejonwo-Osho 'Nigeria's commitment under the climate change Paris Agreement: Legislative and regulatory imperatives towards ensuring sustainable development' in P Kamari-Mbote and others *Law/Environment/Africa* (2019) 61.

practices. Furthermore, they may face challenges in providing adequate health care, ensuring food security, and protecting vulnerable populations.

Africa is highly vulnerable to climate change, although the impacts across the different geographical zones vary in extent, severity and intensity.[18] According to the Germanwatch 2021 Climate Change Vulnerability Index,[19] global warming affects developing countries the most and they are most vulnerable to climate change.[20] Germanwatch estimates that eight out of the ten countries most vulnerable to extreme weather impacts in 2019 were low to lower-middle income countries and they also have a lower adaptive capacity for such events.[21] The 2018 Global Climate Risk Index indicates that loss and damage from climate-related events is already having a significant impact on developing countries.[22] It is instructive to note that the ten countries ranked with the most exposure to climate risk were all developing countries, thereby indicating that the need for loss and damage financing is already significant.

African local communities are particularly susceptible to climate-induced loss and damage due to their reliance on rain-fed agriculture, weak and limited infrastructure, poverty, unequal access to resources, and weak social safety nets.[23] As climate change leads to more frequent and severe weather events

18 For example, according to Nigeria's First Nationally-Determined Contribution 2021(NDC), '[t]he relative vulnerability of the six geopolitical zones of Nigeria indicates a general south-north divide. The three northern zones show higher vulnerability than those in the south. This reflects the higher rainfall and socio-economic development of the south. The south-south shows the highest relative variability among the three southern zones, reflecting the challenges of coastal flooding and erosion, as well as the impact of petroleum exploration and exploitation in that part of the country.' See 'Nigeria's Nationally-Determined Contribution' 2021 Update, chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://climatechange.gov.ng/wp-content/uploads/2021/08/NDC_File-Amended-_11222.pdf (accessed 4 October 2023).

19 A Climate Change Vulnerability Index is an evaluation of vulnerability to climate change. It may measure human populations, or plant or animal species. Eg, the Climate Change Vulnerability Index may assess the likelihood of a country's exposure to extreme climate events and other environmental factors that raise global risks. This may be measured against the capacity of the country to adapt to the impacts (their adaptive capacity). The result is a ranking or rating combining these factors and providing an estimate of risks from future climate change, https://www.germanwatch.org/en/19777 (accessed 4 October 2023).

20 D Eckstein and others 'Global Climate Risk Index 2021' Germanwatch Briefing Paper (2021), https://www.germanwatch.org/en/19777 (accessed 4 October 2023). The report evaluates 42 social, economic and environmental factors to assess national vulnerabilities across three core areas. These include exposure to climate-related natural disasters and sea-level rise; human sensitivity, in terms of population patterns, development, natural resources, agricultural dependency and conflicts; and future vulnerability by considering the adaptive capacity of a country's government and infrastructure to combat climate change. See also S Kreft & D Eckstein 'Global Climate Risk Index 2014: Who suffers most from extreme weather events?' Germanwatch Briefing Paper, https://www.germanwatch.org/en/7659 (accessed 4 October 2023).

21 A lower adaptive capacity for climate change refers to the limited ability of a community, region or society to adjust to and cope with the impacts of climate change. It encompasses a range of factors, including social, economic, technological and institutional capabilities such as lack of technology and infrastructure, that enable communities to anticipate, prepare for, respond to, and recover from the adverse effects of climate change.

22 D Eckstein and others 'Global Climate Risk Index 2018: Who suffers most from extreme weather events? Weather-related loss events in 2016 and 1997 to 2016', https://www.germanwatch.org/sites/default/files/publication/20432.pdf (accessed 4 October 2023).

23 S Harmeling 'Climate loss and damage in Africa: Massive costs on the horizon' (2022), https://careclimatechange.org/climate-loss-and-damage-in-africa-massive-costs-on-the-

such as droughts, floods and storms, these communities face increased risks of food insecurity, displacements and economic loss.[24] Women being one of the most vulnerable groups are highly susceptible to these impacts.[25] Women often find themselves in the frontlines of climate-induced loss and damage, facing a multitude of challenges, including food insecurity, displacement and loss of income.[26] Agriculture is a primary source of income and nutrition in many African communities. Women are often responsible for farming and food production, making them particularly vulnerable to crop failures and reduced agricultural productivity caused by climate change.[27] Women in African communities are frequently engaged in informal and low-income sectors, making them more susceptible to economic losses resulting from climate impacts.

3 Gender-differentiated impact of loss and damage on women in African local communities[28]

Climate change-induced vulnerabilities and their impacts on livelihoods and well-being are gendered.[29] Research indicates that women experience climate change and its associated impacts differently from men. Women have unequal access to decision-making power, knowledge, skills, assets and networks, which translates into gender-differentiated exposure and sensitivity.[30] Furthermore, even among women, their experiences vary, depending on access, opportunities and rights to assets or capital that are defined by institutions and gender roles in the context of socio-cultural norms.[31]

In the context of climate change, women are often disproportionally affected by the consequences of climate change, including extreme weather events, food

horizon/ (accessed 6 October 2023); WMO 'Africa suffers disproportionately from climate change' (2023), public.wmo.int/en/media/press-release/africa-suffers-disproportionately-from-climate-change (accessed 6 October 2023); M Schaeffer 'Loss and damage in Africa' A UNECA/ACPC report prepared by Climate Analytics 2014, https://reliefweb.int/report/world/africa-suffers-disproportionately-climate-change (accessed 6 October 2023).

24 F Otto 'Attribution of extreme weather events in Africa: A preliminary exploration of the science and policy implications' (2015) 132 *Climatic Change* 531-543.

25 Women and Gender Constituency (n 7); B Osman-Elasha 'Women ... In the shadow of climate change', https://www.un.org/en/chronicle/article/womenin-shadow-climate-change (accessed 4 October 2023).

26 Women and Gender Constituency (n 7).

27 J Duru and others 'The effects of climate change on the livelihood of rural women: A case study of Ilorin South, Nigeria' Bulletin of the National Research Centre Vol 46 165 (2022).

28 This article recognises that gender also includes gender-expansive identities such as genderfluid, genderqueer, non-binary or agender. This article's consideration on gender is not limited to male and female categorisation of gender. One critic to the use of 'gender' in climate governance and action is that gender tends to equate to women, leading to responses solely focused on women. It is important to highlight the following with regard to gender in this article: 'Gender' in this article also includes gender non-conforming individuals; the range of complexities and the power dynamics of vulnerability includes factors such as age, wealth, class and ethnic affiliation are often crucial when discussing vulnerabilities.

29 A Awiti 'Climate change and gender in Africa: A review of impact and gender-responsive solutions' (2022) 4 *Frontiers in Climate* 6.

30 As above.

31 Awiti (n 29).

scarcity and displacement.[32] The unique challenges faced by women in the face of climate change include impact on agriculture and food security,[33] access to water resources,[34] access to clean energy,[35] migration patterns due to environmental degradation, and health in the context of climate change.[36]

Loss and damage exemplify climate injustice. Loss and is now considered the 'third pillar' of climate change, the first being mitigation and the second adaptation.[37] This part will trace the development and trajectory of the LDF and will highlight its role in contributing to gender equality and climate justice for disadvantaged women in African communities. The term 'loss and damage' first appeared in the United Nations (UN) Climate Change Conference (COP13) texts during the 2007 international climate negotiations in Bali.[38] Loss and damage subsequently gained momentum in 2013 when parties to the United Nations Framework Convention on Climate Change (UNFCCC) agreed to establish the Warsaw International Mechanism for Loss and Damage associated with Climate Change Impacts (WIM).[39] The Mechanism is meant to facilitate dialogue, fill knowledge gaps, enhance action, promote the implementation of approaches to address loss and damage associated with the adverse effects of climate change, and support including finance, technology and capacity building for those experiencing loss and damage.

32 UN Women 'Fact sheet: Women, gender equality and climate change' (2009), https://www.un.org/womenwatch/feature/climate_change/ downloads/Women_and_Climate_Change_Factsheet.pdf (accessed 4 October 2023). It is important to note that while women do experience climate impacts differently and disproportionately, women are also agents of change, often at the forefront of climate action.

33 OECD 'Gender equality in times of crisis' SIGI 2023 Global Report, Social Institutions and Gender Index, OECD Publishing, Paris, https://doi.org/10.1787/4607b7c7-en; T McKulka 'Women, gender equality and climate change', http://www.un.org/womenwatch/feature/climate_change/ (accessed 4 October 2023).

34 R Wahaj & A Lubbock 'Gender and water – Securing water for improved rural livelihoods: The multiple-uses system approach' (2012), http://www.ifad.org/gender/thematic/water/gender_water.pdf (accessed 4 October 2023); McKulka (n 33).

35 McKulka (n 33).

36 As above.

37 J Richards 'Climate and gender justice: What's needed to finance loss and damage?' (2018), https://www.rosalux.de/en/publication/id/39802/climate-and-gender%20justice/ (accessed 4 October 2023). Richards suggests three criteria, or guiding questions, to help determine whether an impact is loss and damage: Was the impact likely caused, or made worse or more pronounced, by climate change? One measure would be if some or all impacts fall outside of normal, historical parameters or if they can be attributed either wholly or partially to climate change based on established science; does it involve losses, including livelihood assets, loss of something the community values and depends on, such as loss of fishing resource, loss of ancestral land; does the impact require a significant change in traditional or existing livelihoods or way of life, going beyond adjustments that could be considered to be adaptation and instead require an altogether different reaction outside of the realm of traditional approaches?

38 See Bali Action Plan, Decision 1/CP.13, FCCC/CP/2007/6/Add.1, https://unfccc.int/resource/docs/2007/cop13/eng/06a01.pdf (accessed 4 October 2023).

39 Decision 3/CP.18, https://unfccc.int/documents/7643#beg (accessed 4 October 2023); Decision 2/CP.19, https://unfccc.int/documents/8106#beg (accessed 4 October 2023); UNFCCC 'Warsaw International Mechanism for Loss and Damage associated with Climate Change Impacts (WIM)', https://unfccc.int/topics/adaptation-and-resilience/workstreams/loss-and-damage/warsaw-international-mechanism#:~:text=The%20COP%20established%20the%20Warsaw,that%20are%20particularly%20vulnerable%20to (accessed 4 October 2023).

Loss and damage gained further prominence at the United Nations Climate Change Conference (COP21), in Paris, France in 2015. Article 8 of the Paris Agreement to the UNFCCC states that parties recognise the importance of averting, minimising and addressing loss and damage associated with the adverse effects of climate change, including extreme weather events and slow-onset events, and the role of sustainable development in reducing the risk of loss and damage.[40]

The loss and damage mechanism continued to gain prominence in subsequent UNFCCC climate negotiations. At COP25 in Madrid in 2019, countries agreed to establish the Santiago Network on Loss and Damage.[41] The Santiago Network aims to galvanise the technical assistance of relevant organisations, bodies, networks and experts, for the implementation of relevant approaches for averting, minimising and addressing loss and damage at the local, national and regional levels, in developing countries that are particularly vulnerable to the adverse effects of climate change.

The Glasgow Climate Pact is one of the significant outcomes of the UNFCCC Climate negotiations at COP26 in Glasgow in 2021.[42] It includes a dedicated section on loss and damage that urged developed-country governments and relevant organisations to provide 'enhanced and additional support' for activities addressing loss and damage.[43] The Group of 77 (G77) and China, a negotiating bloc for developing countries, jointly called for the establishment of a dedicated loss and damage finance facility.[44] The proposal for a dedicated fund did not gain adequate support and was not included in the Glasgow Climate Pact.[45] However, the parties agreed to establish a 'dialogue' to discuss the arrangements for the funding of activities to avert, minimise and address loss and damage associated with the adverse impacts of climate change.[46] The UNFCCC climate negotiations at COP27 were held in Egypt in 2022 and closed with a breakthrough agreement to establish funding arrangements, including a dedicated fund for loss and damage funding for vulnerable countries hard hit by climate disasters. Known as the Sharm el-Sheikh Implementation Plan, parties expressed deep concern regarding the significant financial costs associated with loss and damage for developing

40 Art 8 Paris Agreement, https://unfccc.int/files/adaptation/groups_committees/loss_and_damage_executive_committee/application/pdf/ref_8_decision_xcp.21.pdf (accessed 4 October 2023).

41 Decision 2/CMA.2 para 43, https://unfccc.int/documents/210477 (accessed 7 October 2023); Decision 19/CMA.3, https://unfccc.int/documents/460952 (accessed 4 October 2023); L Siegele and H White, 'Unpacking the Cop27 decision on the Santiago network' (2023), https://www.lossanddamagecollaboration.org/publication/unpacking-the-cop-27-decision-on-the-santiago-network (accessed 7 October 2023).

42 UNFCCC, https://unfccc.int/process-and-meetings/the-paris-agreement/the-glasgow-climate-pact-key-outcomes-from-cop26 (accessed 7 October 2023).

43 As above.

44 See the following: A Åberg 'The historic loss and damage fund: What enabled the agreement of a fund for loss and damage at COP27?' (2023), https://www.chathamhouse.org/2023/02/historic-loss-and-damage-fund (accessed 7 October 2023); S Sharma-Khushal and others 'The loss and damage finance facility: Why and how' (2022), https://us.boell.org/en/2022/05/31/loss-and-damage-finance-facility-why-and-how (accessed 7 October 2023).

45 Åberg & Jeffs (n 12).

46 As above. This 'Glasgow dialogue' will run until June 2024.

countries, resulting in a growing debt burden, and impairing the realisation of the Sustainable Development Goals (SDGs).[47] Parties also acknowledged the need for finance to respond to loss and damage associated with the adverse effects of climate change, and countries finally reached consensus to establish funding arrangements, including a dedicated fund for loss and damage.[48]

Finally, the UN climate change negotiations at COP28) held at the United Arab Emirates opened with a historic launch of the LDF[49] and Decision-/CP.28-/CMA.5 operationalised the LDF as an as entity entrusted with the operation of the financial mechanism of the Convention, which would also serve the Paris Agreement.[50] The new fund will be hosted by the World Bank for an initial period of four years, and it aims to allocate resources to address loss and damage, with a minimum percentage allocated to least-developed countries and small islands developing states.[51] Local communities in Africa are particularly susceptible to climate-induced loss and damage due to their reliance on rain-fed agriculture, limited infrastructure, and weak social safety nets. As climate change leads to more frequent and severe weather events such as droughts, floods and storms, these communities face increased risks of food insecurity, displacement, increased poverty and economic loss.

3.1 Impact of climate change on women in African communities

Decision -/CP.28-/CMA.5 acknowledges that, when taking action to address climate change, parties should respect, promote and consider their respective obligations on gender equality, empowerment of women and inter-generational equity.[52] Therefore, the LDF should play a pivotal role in advancing gender equality and climate justice across African local communities.[53] Patriarchy reinforces gender imbalance against women by preserving certain benefits in favour of men.[54] This is a major factor for the disproportionate effect of climate change on women because it exacerbates their vulnerability, and acts as a threat

47 The Sharm el-Sheikh Implementation Plan, https://unfccc.int/documents/624444 (accessed 5 October 2023).

48 As above; UNFCCC 'Warsaw International Mechanism for Loss and Damage associated with Climate Change Impacts' (n 16); Siegele & White (n 41).

49 The UAE Consensus, https://www.cop28.com/en/ (accessed 7 October 2023). On the first day of COP28, unprecedented early action was taken on loss and damage with a landmark adoption of an agreement on the operationalisation of loss and damage, and almost $792 million was pledged to the fund and funding arrangements.

50 https://unfccc.int/loss-and-damage-fund-joint-interim-secretariat (accessed 5 October 2023).

51 As above.

52 Decision -/CP.28 -/CMA.5 (n 50).

53 H Djoudi and others. 'Beyond dichotomies: Gender and intersecting inequalities in climate change studies' (2016) 45 *Ambio* 248-262; Richards (n 37).

54 See the following: I Dankelman 'Climate change, human security and gender' in I Dankelman (ed) *Gender and climate change: An introduction* (2010) 55-77; G Terry 'No climate justice without gender justice: An overview of the issues' (2009) 17 *Gender and Development, Climate Changes and Climate Justice* 5-18; P Alexander, A Nabalamba & M Mubila 'The link between

multiplier to already-existing issues associated with gender inequality.[55] Women generally face challenges that are common to women across the world. For example, women face challenges in accessing education, suffer disproportionately from the effects of poverty, and experience discrimination in many spheres, including at work and in accessing land.[56] Regrettably, climate change magnifies all these challenges, and its impacts are felt most acutely in vulnerable regions such as Africa, where women often bear the brunt of the consequences, including extreme weather events, food scarcity and displacement.[57]

Women in local communities in Africa are in a more vulnerable position to climate change as they depend on environmental resources for their sustenance such as water, fire wood and other forest products and agriculture. Women often are responsible for tasks such as collecting water and fire wood, tending to crops, and caring for their families.[58] These responsibilities become even more challenging as climate change leads to resource scarcity, forcing women to walk longer distances or find alternative resources, which can expose them to dangers, including sexual and gender-based violence (SGBV).[59] Women in African communities have restricted access to land ownership, credit and technology, hindering their ability to adapt to changing environmental conditions or engage in income-generating activities that can help them mitigate and adapt to climate-related challenges.[60] Climate change has the potential to disrupt agricultural activities, thereby undermining women's ability to provide a livelihood for themselves and their families.[61] Furthermore, women's lack of decision-making power and access to information often leave them more vulnerable to climate hazards.[62] For instance, they may not receive early warnings about extreme weather events or have the authority to decide when to evacuate.

climate change, gender and development in Africa' (2011) 12 *African Statistical Journal* 119-140; CJ Onwutuebe 'Patriarchy and women vulnerability to adverse climate change in Nigeria' (2019) 9 *Sage Open* 1.

55 Dankelman (n 54); Terry (n 54).

56 O Adejonwo & S Belemsobgo 'Towards an integrated gender-sensitive approach to climate change governance in pursuit of environmental sustainability in Africa' in J Ashukem & S Sama (eds) *Domestic and regional environmental laws and policies in Africa* (2023) 492.

57 Terry (n 54). It is also important to point out that men are also impacted (albeit differently), and so are gender non-conforming, and members of the LGBTQIA+ community.

58 World Meteorological Organisation 'State of the climate in Africa' 2019 (WMO-No 1253), (WMO 2020). See also World Meteorological Organisation 'State of the climate in Africa' 2021 (WMO-No 1300), (WMO 2022).

59 O Adejonwo 'Addressing sexual and gender-based violence against women and girls in the context of climate mobility in Africa' (2023) Insights Policy Brief 3/2023, https://www.cmarnetwork.com/insightsen (accessed 5 October 2023).

60 See the following: T Ajala 'Gender discrimination in land ownership and the alleviation of women's poverty in Nigeria: A call for new equities' (2017) 17 *International Journal of Discrimination and the Law* 51-66; Y Aluko 'Patriarchy and property rights among Yoruba women in Nigeria' (2015) 21 *Feminist Economics* 56-81; NN Chinwuba 'Ending inequality in Nigeria: A refreshing approach from the nation's judiciary' (2015) 29 *International Journal of Law, Policy and the Family* 341-350; Onwutuebe (n 54); *Ukeje v Ukeje* (2014) 11 NWLR (Pt 1418) 384.

61 UN Women (n 32).

62 As above.

The costs of climate losses and damage are estimated to rise to US $400 billion per year by 2030, rising to US $1 to $1,8 trillion a year by 2050 for low-income countries alone.[63] These costs may be classified as economic and physical losses and non-economic impacts such as gender-based violence and deteriorating mental health. It is estimated that losses and damages are estimated to cost developing countries between US $290 billion and US $580 billion annually by 2030, rising to between US $1 132 billion and US $1 741 billion by 2050.[64]

3.2 Economic and physical loss and damage

Climate change-induced loss and damage affect everyone, but not equally. In particular, women living in rural communities, who are least responsible for greenhouse gas emissions, are experiencing the worst impacts of the climate crisis and the greatest losses and damages.[65] This is due in part to their dependency on natural resources for their income, sustenance and health. It is also the result of pre-existing gender and other structural inequalities that prevent women from accessing the resources they need and from participating in decision-making spaces.[66]

The economic loss and damage that women in rural communities in Africa experience include loss of livelihood, threat to food security, famine due to drought, infrastructure damage and loss. Non-economic loss and damage include climate-induced forced migration, increased social burdens placed on women, loss of safety and security leading to gender-based violence, shrinking educational opportunities for girls and a rise in negative coping mechanisms, and damage to women and girls' health and well-being. For women, this devastation is more pronounced because they are the burden bearers of their families and the community.[67]

A study of the impact of loss and damage on the livelihoods of women in four countries, namely, Kenya, Nigeria, Rwanda and Zambia, finds that women

63 H Stiftung 'Unpacking finance for loss and damage', https://us.boell.org/en/unpacking-finance-loss-anddamage (accessed 5 October 2023).

64 European Parliament Research Services 'Understanding loss and damage addressing the unavoidable impacts of climate change' (2022), https://www.europarl.europa.eu/thinktank/en/document/EPRS_BRI(2022)733598 (accessed 5 October 2023). See also M Pill 'Towards a funding mechanism for loss and damage from climate change impacts, climate risk management' (2022) 35 *Climate Risk Management* 1; Climate Change 2022: Impacts, Adaptation and Vulnerability, Contribution of Working Group II to the Sixth Assessment Report, Intergovernmental Panel on Climate Change, 2022.

65 S Bhatasara and others. 'Loss and damage action research: Case studies of Malawi, Mozambique and Zimbabwe' (2023), https://oxfamilibrary.openrepository.com/handle/10546/621555 (accessed 10 January 2024); N Chalifour 'Equity considerations in loss and damage' in M Doelle & S Seck (eds) *Research handbook on climate change law and loss and damage* (2021) 24.

66 Chakma and others (n 5).

67 As above. See also F Steady 'Women, climate change and liberation in Africa' (2014) 21 *Race, Gender and Class* 312-333; A Allen and others 'Kenyan women bearing the cost of climate change' (2021) 18 *International Journal of Environmental Research and Public Health* 12697.

experience loss of livelihood due to droughts, floods, irregular rainfall and seasonal shifts in weather patterns.[68] Communities are experiencing damage to crops, as well as damage to infrastructure including houses, buildings, schools, roads, bridges and markets, which in turn lead to financial insecurity. Women, particularly women in rural communities in Africa, are heavily reliant on small-scale agriculture and rain-fed farms. With climate change loss and damage, these communities are experiencing droughts, floods, and lack of rain during the planting period, thereby disrupting their livelihoods, and creating precarious situations for women and girls.[69] Flooding has a disproportionate impact on women, and also creates a domino effect. The destruction of farm lands means that they must go further to collect fire wood, exposing them to various forms of violence, including SGBV. It also affects the way in which women perform their domestic and income-generating activities and threatens their sources of income from their farming activities.[70] The impact of loss and damage on women is aggravated by the fact that women have limited access to land ownership and credit.[71] Households headed by women are further impacted due to their reliance on agriculture and the limited alternative livelihood options open to them.[72]

3.3 Non-economic loss and damage

Non-economic loss and damage include trauma, mental distress, physical health issues, loss of a sense of belonging, risk to reproductive health, and increased risk of gender-based violence.[73] There is a non-economic dimension to the impact of loss and damage on women. Case studies of the lived experiences of loss and damage survivors in Malawi, Mozambique and Zimbabwe propose the following as the non-economic dimensions of loss and damage from climate impacts: psychological, cultural, social, ecological and biophysical.[74] Psychological distress includes trauma and mental distress that is experienced due to the death or injury of family or community members, often in chaotic and frightening circumstances.[75] Cultural identity may be disrupted due to loss of and damage to cultural heritage.[76] Social connections are impacted if those connections are broken due to the deaths of family and community members, displacement, and loss and damage to social structures such as schools.[77]

68 Chakma and others (n 5).
69 As above. See also Adejonwo & Belemsobgo (n 56) 492.
70 Chakma and others (n 5).
71 Adejonwo & Belemsobgo (n 56) 492.
72 As above.
73 Bhatasara (n 65).
74 As above.
75 Bhatasara and others (n 65).
76 As above.
77 Bhatasara and others (n 65).

Human mobility that occurs in the context of climate change, including displacements and migration, is further fuelled by loss and damage.[78] Loss and damage are made more pronounced due to dwindling natural resources, causing forced and placed migration in search of sustenance and results in escalating inter-community conflicts.[79] For women and girls, emerging evidence indicates that the adverse impacts of climate change exacerbate all types of gender-based violence, including physical, sexual, psychological and economic violence.[80] In several parts of Africa, the combined impacts of environmental degradation, scarce natural resources and conflicts have increased human mobility and further exposed women and children to SGBV.[81] Several countries along the Sahel and West Africa are experiencing the impacts of climate change and the consequent aggravation of existing vulnerabilities. While not all these risks are climate induced, many of the challenges are, and the challenges of climate change serve to aggravate pre-existing social and geographical vulnerabilities.

The UN Commission on the Status of Women has acknowledged that climate change, environmental degradation, and more frequent and intense disasters caused by natural hazards often result in the loss of homes and livelihoods, and the displacement of women and girls and their families and communities. It has also recognised that, because of displacement (including protracted displacement), women and girls face specific challenges, including separation from support networks, homelessness, and increased risk of all forms of violence, including SGBV.[82] There is emerging evidence of the linkages between climate change impacts, girls' education and declining educational opportunities for girls, and early marriage as a negative coping mechanism.[83] Research indicates that poverty, community resettlement due to climate change, and the destruction of educational infrastructure by extreme weather events were pushing children out of school, with girls being the first to be removed.[84]

78 Adejonwo (n 59). See also UN Commission on the Status of Women 'Agreed conclusions: Achieving gender equality and the empowerment of all women and girls in the context of climate change, environmental and disaster risk reduction policies and programmes' (2022) UN Doc E/CN.6/2022/L.7 para 26.
79 Chakma and others (n 5).
80 A Vithanage 'Addressing correlations between gender-based violence and climate change: An expanded role for international climate change law and education for sustainable development' (2021) 38 *Pace Environmental Law Review* 327; Adejonwo (n 59).
81 Adejonwo (n 59).
82 As above.
83 Chakma and others (n 5); Steady (n 67); Allen (n 67); The Kvinna Till Kvinna Foundation 'Gender, women's rights, environment and climate change in Rwanda' (2021), https://kvinnatillkvinna.org/publications/gender-womens-rightsenvironment-and-climate-change-in-rwanda/ (accessed 7 October 2023).
84 Chakma and others (n 5).

4 Role of the LDF and the importance of a gender-responsive approach

Equity remains one of the core foundations of the framework conventions and protocols guiding the climate change process. It is crucial that loss and damage finance is provided in line with these principles, including equity, historical responsibility, polluter pays, and respective capability.[85] Furthermore, funding should be new, additional, predictable, precautionary, adequate, and provided in response to needs and best available science.[86] The LDF recognises that climate change can result in irreversible loss and damage, and it aims to enable vulnerable countries to respond to and recover from climate change impacts.[87]

The LDF aims to provide financial assistance to countries that are most vulnerable to the adverse effects of climate change by providing financial resources, enabling these countries to recover from losses incurred due to extreme weather events and to adapt to future climate challenges. The fund embodies the principles of climate justice by acknowledging the historical responsibility of developed countries in contributing to climate change. It advocates compensation and support to those who are unfairly bearing the brunt of climate impacts, empowering African nations to rebuild and strengthen their resilience. By addressing the economic loss and damage caused by climate change, the fund contributes to sustainable development in Africa. It helps nations adopt resilient practices, invest in climate-smart technologies, and promote environmentally-sustainable policies, fostering long-term resilience and prosperity.

The LDF is an essential instrument in addressing the intersection of gender inequality and climate change in local communities in Africa.[88] A good starting point is acknowledging linkages with the Protocol to the African Charter on Human and Peoples' Rights on the Rights of Women in Africa (African Women's Protocol). The LDF can contribute to the fulfilment of the rights of women as contained in the Women's Protocol.[89] A responsive and transformational approach is needed that will shift power relations, safeguard women's rights, and enable women to participate in climate decision making. Despite challenges, women on the frontlines of the climate crisis are leading climate change responses and are central to effective climate action. When disasters strike, women often are the first responders and play a critical role in rehabilitating their communities.

85 Richards and others (n 9).
86 As above.
87 The Sharm el-Sheikh Implementation Plan (n 47).
88 S Sellers 'Gender and climate change: A closer look at existing evidence', https://wedo.org/wp-content/uploads/2016/11/GGCA-RP-FINAL.pdf (accessed 2 March 2024); M Williams *Gender and climate financing: Coming out of the margin* (2015); E Roberts & M Pelling 'Climate change-related loss and damage: Translating the global policy agenda for national policy processes' (2018) 10 *Climate and Development* 4-17.
89 Arts 18, 19 and 9 can be situated within this context.

The fund can contribute to advancing gender equality and climate justice for women in several ways, such as providing financial resources to communities affected by climate-induced losses and damages. These resources can be allocated to projects that directly benefit women, such as building climate-resilient infrastructure, improving water access, or supporting women-led sustainable agricultural practices.[90] The fund can support capacity-building initiatives that empower women in these communities by funding training programmes on climate adaptation, disaster risk reduction, and financial literacy, enabling women to take on leadership roles and make informed decisions about their livelihoods.[91] The fund can also play a crucial role in raising awareness about the gender-specific impacts of climate change and highlight gender-responsive approaches to climate adaptation and mitigation strategies.[92]

The LDF established a transitional committee (TC), tasked with providing recommendations on the institutional arrangements, elements of the funding arrangements, and sources of finance for the fund. According to Schultheiß and others, the terms of reference of the TC raise two pivotal questions: How can the LDF learn from existing funds and enable comprehensive responses to loss and damage? How can the fund best serve the needs and priorities of vulnerable and marginalised communities facing loss and damage?[93]

4.1 LDF and gender-responsive solutions to climate change impact

An integrated gender-responsive approach to climate governance will allow the LDF to serve the needs of vulnerable women in marginalised communities facing loss and damage due to climate change. An integrated gender-responsive approach involves gender mainstreaming, which is the process of assessing the implications for girls and women of any planned action, including legislation, policies and programmes on climate change. It is a strategy for making women's concerns and experiences an integral dimension of the design, implementation, monitoring and evaluation of climate change policies and programmes to prevent that inequality is perpetuated.[94]

90 See the following: B Dahiya & M Okitasari 'Accessing the loss and damage climate fund' (2022) 378 *Science* 1285; H Singh & L Schalatek 'New LDF must deliver climate justice' (2023), https://climatenetwork.org/2023/08/29/new-loss-and-damage-fund-must-deliver-climate-justice/ (accessed 5 October 2023); A Dinshaw & S Tye 'How community-led funding can unleash the potential of the loss and damage fund' (2023), https://www.preventionweb.net/news/how-community-led-funding-can-unleash-potential-loss-and-damage-fund (accessed 5 October 2023); United Nations Environment Programme 'What you need to know about the COP27 Loss and Damage Fund' (2023), https://www.unep.org/news-and-stories/story/what-you-need-know-about-cop27-loss-and-damage-fund (accessed 5 October 2023).

91 As above.

92 Dahiya & Okitasari (n 90).

93 L Schultheiß and others 'Operationalising the Loss and Damage Fund: Learning from the funding mosaic' (2023) Germanwatch, www.germanwatch.org/en/88557 (accessed 5 October 2023).

94 See the following: Adejonwo & Belemsobgo (n 56) 221; UNICEF 'Gender equality: Glossary of terms and concepts' (2017), chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/

There is an increasing awareness of the importance of gender mainstreaming into climate change policies and various development strategies at regional, state and local levels. It is imperative for the LDF to be gender responsive and implement programmes and decisions with gender-specific mandates. Research indicates that the implementation of climate policies and programmes with gender-specific mandates has been uneven and implemented in a superficial manner or as an add-on activity.[95] Policies aimed at developing the adaptive capacity at the community level, especially among agricultural and pastoral communities, often fail to recognise and respond to the gendered nature of women's experiences.[96] The LDF presents another opportunity for intentional response and approach that will engender the implementation of decisions with gender-specific mandates.

The success of the LDF will depend on its ability to implement gender-responsive measures. Some traditional financing instruments such as social protection, contingency finance, catastrophe risk insurance and catastrophe bonds, and climate finance sources and instruments such as green bonds, concessional loans, grants and donations, could be used to deal with loss and damage.[97] However, it is doubtful if these funds are geared toward a gender-responsive approach. Others have called for equitable financing instruments such as windfall taxes on fossil fuel companies for people struggling with rising food and energy prices and to countries suffering loss and damage caused by the climate crisis; debt for loss and damage swaps;[98] international taxes; community window, which is a mechanism for funds to reach the local communities at local level without going through national, regional or global intermediaries and more easily respond to local needs;[99] and a dedicated finance facility for loss and damage under the UN Framework Convention on Climate Change.[100] A broadened donor based and innovative finance tool would be needed to respond to the magnitude of loss and damage.

A gender-responsive approach to implementing the LDF will include a gender-sensitive legal and institutional framework; gender-responsive financial services and opportunities for women; women's representation and participation in decision making; climate information services for women; and sex-disaggregated data and relevant gender indicators. These measures will ensure that the LDF serves the needs of vulnerable women in marginalised communities facing loss and damage due to climate change. An integrated gender-responsive approach includes the full involvement and participation of women in energy

https://www.unicef.org/rosa/media/1761/file/Genderglossarytermsandconcepts.pdf (accessed 5 October 2023).

95 Y Glemarec and others *Leveraging co-benefits between gender equity and climate action for sustainable development* (2016); Adejonwo & Belemsobgo (n 56); Awiti (n 29).

96 Awiti (n 29).

97 United Nations Environment Programme (n 90).

98 As above.

99 Dinshaw & Tye (n 90).

100 United Nations Environment Programme (n 90).

transition, agriculture, social economy, environmental health and biodiversity protection. Reports and studies have stressed that gender equality and women's empowerment are fundamental tools for improving economic, social and political conditions, reducing poverty, and encouraging economic growth.[101] A gender-responsive approach aligns with the objective of the LDF which aims to provide new, additional, predictable and adequate financial support to assist developing countries and communities that are particularly vulnerable to the adverse effects of climate change by providing finance for economic and non-economic loss and damage. To key into the aim of the LDF, African countries must adopt strategies to strengthen the role of women in response to climate change and in reducing their vulnerabilities to its effects.

5 Recommendations and conclusion

5.1 Recommendations

Both the LDF and a gender-responsive approach are integral components of effective climate response and action in Africa. The fund provides crucial financial support to communities in Africa that suffer irreversible and severe damage as a result of climate change, helping them cope with the aftermath, while a gender-responsive approach ensures that climate policies are inclusive, equitable, and considerate of the specific vulnerabilities and strengths of women in the continent. Together, they contribute to building a more resilient and sustainable future for Africa in the face of climate change. To advance gender-responsive approach to the implementation of the LDF, this article offers the following recommendations.

A gender-sensitive legal and institutional framework starts with a national policy on gender and a dedicated national action plan on gender and climate change. A national action plan on gender and climate change focuses on effective strategies for integrating gender into the implementation of national climate change initiatives including loss and damage. It ensures that gender considerations are mainstreamed into climate change processes to guarantee inclusivity in the formulation and implementation of climate change initiatives, programmes and policies.

A gender-responsive financial service and opportunities for women will ensure that policies and financing for loss and damage are gender transformative. Micro-finance and insurance schemes should be introduced that specifically cater for women engaged in climate-sensitive sectors such as agriculture and enable women to access funds for climate-resilient technologies and practices. The LDF should

101 International Monetary Fund, African Dept *Pursuing women's economic empowerment* (2008) 4.

be flexible, readily accessible to women by working to remove the barriers that impede women, particularly those in local communities in Africa from accessing climate finance and funds. For example, small-scale funding ensures that locally-appropriate funding is available to enable communities to address the loss and damage they are facing. Small-scale funding will ensure greater accessibility at the local level and enable greater local ownership. This approach allows for simplified due diligence requirements and greater funding flexibility, and it ensures lower levels of risk for funders. Such funds may be channelled through community-based organisations that already have strong connections to local communities. National policies should improve women's access to resources such as land, water and finance. It is also important that such policies improve access and other means to enable women to implement sustainable agricultural practices and improve their income. Discriminatory customs and traditions that perpetuate gender inequality, such as restricted access to land, finance, participation and technology, should be discouraged at the regional, state and local levels.

To ensure inclusivity and active participation of women at community levels, climate information services tailored for women are essential for addressing the unique vulnerabilities and challenges that women may face in the context of climate change. These include local weather and agricultural advisory services, livelihood diversification guidance that provides opportunities and information for alternative livelihood options that are climate-resilient, including training programmes and resources for women to acquire new skills and diversify their income sources. Community-based adaptation programmes are also essential to facilitate women in decision-making processes and to promote women's participation in identifying and implementing climate-resilient solutions at the community level.

5.2 Conclusion

Climate justice can only be achieved when based on the foundations of gender justice. A systemic and transformational approach is needed that will shift power relations, safeguard women's rights, and enable women to lead. The LDF, through its financial support, capacity-building initiatives, advocacy and research, can play a pivotal role in advancing gender equality and climate justice for women. More importantly, the LDF can tackle the gaps that current climate finance institutions such as the Green Climate Fund and Adaptation Fund do not fill by recognising the unique challenges that women face, particularly those in rural communities, and directly addressing these, to adequately address climate change. It is imperative to build an effective response, effective implementation of existing gender policies, strengthening relevant institutions, and ensuring effective institutional coordination among relevant agencies to tap into the fund once it comes into operation. The LDF should contribute to building resilient, sustainable and equitable communities in the face of a changing climate. It is imperative to prioritise and support women to achieve gender equality and climate justice in local communities in Africa.

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The interface between loss and damage, vulnerability and human rights in Africa

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Abstract: This article assesses the intersectionality between vulnerability and impact that arise from losses and damages during climate change, in order to highlight the impact that climate change has on human rights in the context of loss and damage in Africa. It further interrogates the adequacy of climate change law in providing solutions to losses and damages and proposes the application of a human rights-based approach as the solution. The article concludes with possible recommendations on how best to improve ways of ensuring that human rights are placed at the centre of seeking solutions to climate change induced losses and damages.

Key words: climate change; human rights; loss and damage; vulnerability

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1 Introduction

There is no gainsaying that Africa is highly susceptible to the adverse unavoidable climate change impacts. These impacts, which constitute a variegated bag of human-induced activities and natural factors, suggest that increased climate change resilience will only result in further losses and damages to the continent. As captured by Schaeffer, these impacts fluctuate across multiple sectors and include, for example, rising sea-levels and over-flooding, agriculture, loss of ecosystem and biodiversity, among others.[1] Indeed, the 2022 Inter-governmental Panel on Climate Change (IPCC) Report has unequivocally confirmed Africa's vulnerability and pointed out that the region will remain highly susceptible to, and negatively impacted by, climate change and that there is an urgent need to address the situation. This should not be taken to suggest that current mitigation and adaptation measures are inadequate to salvage the climate change impact. Rather, in our view, it should be rightly understood as suggesting that there is an apparent potential for Africa to continue experiencing residual losses and damages and the costs incurred will be contingent on the global mitigation actions ambition level as well as the adaptation investment level at the domestic level.[2]

In as much as it seemingly is difficult to reverse many of the consequential climate change impacts and extreme weather conditions that are more likely in the future, there is a fundamental need in the loss and damage (L&D) debate to consider key issues in the fight against climate change. At the international level, a funding of US $100 billion was set aside to address losses and damages, but today, states, and particularly developed countries, have been reluctant or, more appropriately, hesitant to contribute to the fund. The concept of climate liability and reparations in the L&D debate is not unprecedented,[3] but an apparent late comer that only emerged in 2007 at the Bali Action Plan[4] when adaptation was introduced as a pillar to climate change.[5] We need to point out here that L&D is increasingly becoming an emerging and topical issue in climate change discourse and negotiation.[6] It rests on the premise and understanding that any genuine commitment to effectively address the dire impact of climate change on human

1 M Schaeffer 'Loss and damage in Africa' (2014) 3 *ACPC, United Nations Economic Commission for Africa* 13, https://archive.uneca.org/sites/default/files/PublicationFiles/acpc-loss-and-damage-report_final_en.pdf (accessed 31 March 2023).

2 Schaeffer (n 1) 4.

3 J Liselotte & P Jabczyńska 'Understanding loss and damage: Addressing the unavoidable impacts of climate change' (2022) *European Parliamentary Research Service* 1, https://www.europarl.europa.eu/RegData/etudes/BRIE/2022/733598/EPRS_BRI(2022)733598_EN.pdf (accessed 3 March 2024).

4 United Nations Framework Convention on Climate Change Decision 1/CP.13, Bali Action Plan UN Doc FCCC/CP/2007/6/Add.1 (14 March 2008) para 1(c)(iii).

5 P Toussaint 'Loss and damage and climate litigation: The case for greater interlinkages' (2021) 30 *Review of European, Comparative and International Environmental Law* 18.

6 Art 8 Paris Agreement' K van der Geest & M Schindler Report*: Handbook for assessing loss and damage in vulnerable communities* UNU-EHS (2017) 19; K van der Geest & K Warner 'Vulnerability, coping and loss and damage from climate event' in AE Collins (ed) *Hazard, risk and disaster in society* (2015) 121, 139; R Mechler and others 'Science for law and damage:

rights, and especially on the vulnerable segment of populations in Africa, must in principle address the unavoidable L&D that, in part, is an inherent feature of the vulnerability of Africa to climate change. Therein lies the inescapable nexus between vulnerability, L&D and climate change.

In Africa, as elsewhere, vulnerable communities lack sufficient resources to mitigate or adapt to climate change harms and hence their human rights are immensely affected because of the L&D they suffer during climate change. In this article, we advocate the human rights-based approach (HRBA) to L&D in the context of climate change. We specifically demonstrate that adopting a HRBA solution to minimise L&D is crucial to seek the envisaged solutions to the impact of climate change, hence L&D, contained in the international law on climate change. Our argument is premised on the fact that there currently is no finance within the United Nations Framework on Climate Change (UNFCCC) to address L&D, and we propose that the human rights obligations of states could be used as a compelling tool to assist developing countries in this regard. This does not, however, prevent states from seeking solutions for L&D from other avenues, including holding states accountable, under the international law on human rights.[7] Article 8 of the Paris Agreement[8] establishes L&D as an international pillar of climate change, alongside adaptation and mitigation. Article 8 further encourages states to seek cooperative and facilitative methods to enhance, among other factors, support for L&D.[9] The Warsaw International Mechanism (WIM) as one of the proposed mechanisms is also encouraged to seek collaborative opportunities from bodies other than the UNFCCC.[10] It is implied that these bodies include human rights bodies. This is especially so, considering that many vulnerable countries, especially in Africa, are still grappling with L&D because of the failure of WIM to garner additional funding.[11]

Although we acknowledge that 'L&D were almost kicked to the curb'[12] in the 26th Conference of the Parties (COP26) in Glasgow, Scotland, there is ongoing delaying, derailing and stalling of L&D by the developed countries to bear the responsibility and liability for past, present and future climate disasters. The HRBA provides headway in the middle of some political debate over liability and compensation, by proposing policy consideration on L&D, especially under the

Findings and propositions' in R Mechler and others (eds) *Loss and damage from climate change: Concepts, methods and policy options* (2019) 3.

7 AM Blanco & P Toussaint 'Climate change and human rights: A safe climate' Submission on loss and damage and human rights, https://www.ohchr.org/Documents/Issues/Environment/SREnvironment/SafeClimate/NonState/Climate4Change.docx (accessed 25 April 2023).

8 Paris Agreement (2015).

9 Art 8(3) Paris Agreement.

10 Art 8(5) Paris Agreement.

11 Blanco & Toissaint (n 7).

12 T Phillips 'COP27 will be a failure if reparations for loss and damage are not properly addressed' 17 November 2022, https://mg.co.za/environment/2022-11-17-cop27-will-be-a-failure-if-reparations-for-loss-and-damage-are-not-properly-addressed/ (accessed 12 February 2023).

climate change regime.[13] Under the HRBA, human rights can be integrated into policy designs, implementations and evaluation because the HRBA advocates an approach that is tailored and strategically designed to address L&D within the international law on climate change.[14] This approach goes beyond the traditional mainstreaming of human rights language into texts. The HRBA, therefore, seeks to strengthen the international law on climate change by anchoring it into the human rights regime, therefore, strengthening its response to L&D.[15] Adopting the HRBA requires that the linkages between L&D and international human rights obligations be established, especially because the HRBA focuses on placing human beings at the centre of seeking solutions and decision-making concerning L&D.[16]

Against this background, this article explores the effect of L&D on the human rights of vulnerable communities in the context of climate change in Africa. It then analyses the legal framework for addressing L&D in Africa and builds on this to examine the actual rights-based solutions to mitigate L&D during climate change.

2 Losses and damages and human rights of vulnerable communities

With the increasing interest in the connection between human rights and climate change, interest has grown in the role of human rights law in addressing the climate change dilemma. It is no longer disputable that the losses and damages caused by climate change have had a significantly negative impact on the enjoyment of internationally-recognised human rights.[17] Both civil and political rights (for example, the right to life, liberty and property) and socio-economic rights (for example, the right to work, to education, social security, the highest attainable standard of physical and mental health, adequate food, clothing and housing) have been compromised globally and in Africa. We argue that these disruptive impacts of climate change have thoroughly undermined the provisions of many human rights instruments in our time. Such is the case with, for instance, article 28 of the Universal Declaration of Human Rights (Universal Declaration) which provides for the entitlement of all human beings to a social international order in which human rights of all human beings can be fully realised.[18] Climate change has had significant effects on key dimensions of life. These effects

13 E Lees 'Responsibility and liability for climate loss and damage after Paris' (2017) 17 *Climate Policy* 59-70.
14 P Toussaint 'Voices unheard – Affected communities and the climate negotiations on loss and damage' (2019) 3 *Third World Thematics: A TWQ Journal* 1-20, https://www.tandfonline.com/doi/full/10.1080/23802014.2018.1597640 (accessed 10 May 2023).
15 As above.
16 As above.
17 United Nations Human Rights Council 'The slow onset effects of climate change and human rights protection for cross-border migrants' A/HRC/37/CRP.4 (2018) paras 2-5.
18 Universal Declaration of Human Rights (1948).

include economic stability, access and affordability of clean energy, peace, and food security.[19] Although it would be disingenuous for us not to acknowledge and accept that climate change has a multifaceted impact, it is also important to reckon that communities with already existing vulnerabilities suffer the most from these impacts. Africa contains some of the most vulnerable segments of communities exposed to the brunt of climate change across the globe, despite registering the lowest greenhouse gas (GHG) emissions since 1960.[20]

Despite various mitigation and adaptation efforts proffered at the international, regional and domestic levels, we take for granted to clarify, and rightly so, that not all impacts of climate change can be avoided. Climate-related L&D continue to affect many human rights, but for this special issue on 'Loss and damage in Africa: Legal and policy aspects' in the *African Journal of Climate Change and Justice*, the focus will be limited to the right to life, the right food, the right to work and the right to health, as will be elaborated in the paragraphs below. This is because most of the effects of climate change that have resulted in L&D debate in Africa rotate around these rights as the most significantly affected. For instance, the right to life is one of the most violated rights because of climate change. The right to life guaranteed under article 6 of the International Covenant on Civil and Political Rights (ICCPR)[21] provides that '[e]very human being has the inherent right to life. This right shall be protected by law. No one shall be arbitrarily deprived of his life.' Similarly, the right to life is guaranteed under article 4 of the African Charter on Human and Peoples' Rights (African Charter).[22] Climate change has had and continues to have an adverse impact on human lives in Africa which, as mentioned above, is highly vulnerable to these impacts. It is reported that there will be an increase in the number of deaths from the impact of climate change.[23] This has largely been attributed to climate-related disasters including, but not limited to, food, water, vector-borne diseases, floods, droughts, heat waves, hurricanes, landslides and droughts. For instance, between 2000 and 2004, it is reported that approximately 262 million people across the globe were affected by climate-related disasters, and it has further been reported that approximately 250 000 people were killed by cyclones between 1980 to 2000.[24] It is further estimated that by 2050, there will be an exponential increase from 1,2 billion to 1,6 billion in the number of people whose lives will be at risk because of floods.[25] Furthermore, approximately 12 000 refugees are climate change refugees due to

19 HO Pörtne and others (eds) *Climate change 2022: Impacts, adaptation and vulnerability* (2022), https://www.ipcc.ch/report/ar6/wg2/ (accessed 11 May 2023).
20 Mo Ibrahim Foundation 'The road to COP27 making Africa's case in the global climate debate' (2022) *Forum Report* 12.
21 International Covenant on Civil and Political Rights (ICCPR) (1966).
22 African Charter on Human and Peoples' Rights (1981).
23 Refer, eg, to the IPCC Synthesis Report of the IPCC 6th Assessment Report (AR6) (2023), https://www.ipcc.ch/report/ar6/syr/ and the IPCC AR4 report on 'Climate change 2007: The physical science basis' (2007), https://www.ipcc.ch/report/ar4/wg1/ (accessed 10 May 2023).
24 IPCC AR4 report (n 23).
25 United Nations General Assembly (UNGA) 'Promotion and protection of human rights in the context of climate change' A/77/226 77th session held on 26 July 2022, paras 32-33.

heavy rainfall which has destroyed their shelter, hence forcing them to move in search of safer areas across the globe. In more severe cases in other parts of Africa, over 43 000 people were displaced in Madagascar and two were reportedly killed during the cyclones that occurred between 2020 and 2021. In South Africa, 461 people were reportedly killed as a result of flooding in KwaZulu-Natal province between April and May 2022.[26] Similarly, 61 people were reported to have died during Cyclone Idai in 2019 in Rwanda, killing 130 people.[27] It seems logical to infer from the foregoing that the right to life will inevitably be affected, especially if other related rights, such as the right to food and the right to health, among others, are affected.

Climate change has also had and continues to have a significant effect on the right to food.[28] The right to food together with the right to be free from hunger is guaranteed under the International Covenant on Economic, Social and Cultural Rights (ICESCR) of 1966.[29] Although the African Charter does not expressly provide for the right to food, the African Commission on Human and Peoples' Rights (African Commission) adopted a resolution on the right to food in 2019. The resolution requires African states and governments to take appropriate measures to ensure that the right to food is enjoyed.[30] As the African continent continues to become hotter, however, there are unpredictable rainfall patterns causing droughts across different parts of the continent. The annual temperatures of the African continent are expected to continue to rise above 2 degrees Celsius to about 6 degrees Celsius before the end of the twenty-first century.[31] The effect and implication of this is that about 29 countries in Africa have experienced drought at least once every year between 2010 and 2022, and that an estimated 17,3 million people have been affected by drought in the same period.[32] Similarly, desertification, which is a non-reversible dryland productivity and, hence, soil degradation until plants cannot grow, has led to failed growth of plants. Over 45 per cent of Africa's land is affected by desertification and about one billion hectares of land are drylands.[33] These conditions make food production close to impossible especially because the soils are unproductive with about 34 per cent of agricultural productivity in Africa having been reduced since 1961. Furthermore, food growth and production seasons have been shortened and there is increased water stress and plagues.[34] Low food production has led to food insecurity, leading to high food prices. In Africa, food insecurity has affected approximately

26 As above.
27 As above.
28 P Toussaint & A M Blanco 'A human rights-based approach to loss and damage under the climate change regime' (2020) 20 *Climate Policy* 743-757.
29 Art 11 ICESCR.
30 African Commission 'Resolution on the Right to Food and Nutrition in Africa – ACHPR/Res.431(LXV)' (2019).
31 Mo Ibrahim Foundation (n 20) 12-13.
32 Mo Ibrahim Foundation (n 20) 15.
33 Mo Ibrahim Foundation (n 20) 17.
34 Mo Ibrahim Foundation (n 20) 22.

800 million people, about 281,6 million people are undernourished and about 10 million are unable to afford a balanced diet as of 2020.[35]

Climate change impacts resulting in L&D have significantly impacted the right to work in Africa. The right to work is provided for under article 6(1) of ICESCR and article 15 of the African Charter. It is important to note here that an estimated 60 per cent of the population in 10 of the most vulnerable countries on the African continent work and are employed in the agricultural sector. For instance, Niger and Somalia are countries most vulnerable to climate change, yet 72,5 and 80,3 per cent of their population respectively work in the agricultural sector.[36] In the face of climate-related disasters, many people have been left unemployed, hence an increase in the vulnerability of those populations in the face of climate change. This is especially so in the absence of insurance to aid them to bounce back after their livelihoods have been destroyed by climate-related disasters.[37] Based on this, we argue that a substantial percentage of Africans, especially those working in the agricultural sector, are left unemployed and are left counting their losses in the face of climate change. The International Labour Organisation (ILO) has rightly observed that more than 83 per cent of working hours globally are in the agricultural sector, but they have been lost to heat stress and over 60 per cent of the global working hours in the agricultural sector will similarly be lost by 2030.[38] The rise in temperature has the potential to render agricultural areas unproductive and force many African agricultural workers to migrate. This is aggravated by the fact that the agricultural sector is largely informal and, therefore, is significantly affected by heat stress, hence loss in labour productivity.[39] Considering that work in the agricultural sector is largely performed outdoors and involves the use of a lot of energy for prolonged hours, it is apparent that heat waves induced by climate change greatly affect the workers. Heat stress has driven some agricultural workers from rural areas to urban centres in search of more favourable working conditions.[40] There is therefore a significant impact on the right to work that arises from the losses and damages caused by the effects of climate change on livelihoods, and a HRBA that places states under obligation to fulfil human rights will go a long way towards safeguarding human rights of affected persons in the face of climate change-induced losses and damages.

The right to health is equally significantly affected because of climate change. The right to health under article 12 of ICESCR and article 16 of the African

35 Mo Ibrahim Foundation (n 20) 25.
36 Mo Ibrahim Foundation (n 20) 22.
37 As above.
38 International Labour Organisation (ILO) 'Working on a warmer planet. The impact of heat stress on labour productivity and decent work' (2019), https://www.ilo.org/wcmsp5/groups/public/---dgreports/---dcomm/---publ/documents/publication/wcms_712011.pdf (accessed 25 April 2023).
39 As above.
40 As above.

Charter[41] guarantees a person the right to live within the conditions that ensure that they should enjoy good health of the highest standard. Climate change, however, as already highlighted, has led to malnutrition, and also increased diseases among populations across the globe.[42] Although the global health systems have indeed been weakened by climate change, the African continent has been significantly affected. Axiomatically, the African continent as a vulnerable continent has a predominantly low adaptive capacity and a low health capacity, which was worsened by the COVID-19 pandemic. Over the past two decades in Africa, 40 per cent of climate-related health emergencies have arisen from water-borne diseases. Similarly, vector-borne diseases such as yellow fever account for the 28th of emergencies that are health-related.[43]

More specifically, Madagascar, Mozambique, Malawi as well as surrounding countries suffered severe floods in January and February 2022. This was after a series of tropical floods hit the area, including cyclones such as cyclones Ana and Batsirai. Cyclone Ana specifically was accompanied by heavy rainfall that came along with greenhouse gas and aerosol emissions.[44] In Malawi, tropical cyclone Freddy killed more than 600 people in March 2023. In addition to the destruction of property and livelihoods, over half a million people were displaced.[45] Moreover, when cyclone Gombe hit Mozambique in March 2022, more than 100 000 people were affected, with over 11 000 houses destroyed. Sixteen health posts were affected by the heavy rains and wind, and 346 classroom blocks in about 113 schools were damaged. Moreover, during the Kiremt rainy season in Ethiopia in 2020, severe floods displaced about 3 000 people with estimated damages amounting to about US $135 million.[46] The floods that were partly attributed to four consecutive rainy seasons were later followed by a severe prolonged drought which partly spread across the eastern, southern and southwestern parts of the country. This left many vulnerable communities affected because they lacked water, food and shelter, among others, and 3,5 million livestock lost their lives. Between January and November 2022, about 4 000 people's lives were lost because of extreme weather events.[47] The actual figure of lost lives could be much higher especially because most of the extreme weather events and their impact go unrecorded. All these effects undoubtedly leave psychological, health and economic consequences for the communities. All these impacts have a direct link

41 Art 12 ICESCR; art 16 African Charter.
42 United Nations Human Rights Council 'Report of the Office of the United Nations High Commissioner for Human Rights (OHCHR) on the relationship between climate change and human rights – A/HRC/10/6' (2009) paras 31-34.
43 Mo Ibrahim Foundation (n 20) 26.
44 S Harmeling 'Climate loss and damage in Africa: Massive costs on the horizon' (2024) Care Climate Change and Resilience Platform, https://careclimatechange.org/climate-loss-and-damage-in-africa-massive-costs-on-the-horizon/#post-content (accessed 1 March 2024).
45 B Bafana 'Vulnerable countries need action on loss and damage today and not at COPs to come', https://reliefweb.int/report/world/vulnerable-countries-need-action-loss-and-damage-today-and-not-cops-come (accessed 1 March 2024).
46 Harmeling (n 44).
47 As above.

to human rights, as explained above.[48] We suggest that the obligation of states to address climate change impacts on human rights is a crucial consideration. This is especially because, under human rights law, states are obligated to not only refrain from interfering with human rights but to also protect human rights through all necessary steps and measures to ensure that human rights are protected from violation from other sources.[49] States are under a direct obligation to protect individuals from weather-related hazards that are foreseeable and, hence, an obligation to protect persons from the climate change impact that causes L&D. In the next part of this article we analyse and demonstrate the extent to which the climate change legal framework employs the HRBA in addressing L&D.

3 The legal framework for addressing losses and damages in Africa

Although not unprecedented within the climate change discourse, the concept of L&D is ambiguous. This ambiguity concerns the failure of international climate change policy to provide a concise definition of the concept.[50] Despite this ambiguity, L&D has been a major aspect of the Conference of the Parties (COPs)' decisions and international environmental law principles. Even if it may be argued that L&D does not find explicit reference in the UNFCCC, we take for granted highlighting the normative provision of article 4(8) of the Convention which makes provision for insurance as a viable mechanism for developing countries in addressing the inevitable adverse impacts of climate change. The inclusion of this insurance scheme was perhaps based on earlier calls and concerns by the Alliance of Small Island States reiterating the importance of L&D and the necessity to establish some type of insurance scheme for L&D.[51] Indeed, vulnerable communities in developing countries have routinely advocated industrialised countries to provide L&D finance taking into consideration their historical responsibility for climate change. Article 4(3) of the UNFCCC requires developed countries to provide 'new and additional financial resources' to help developing countries meet the costs of climate action. In meeting the cost of climate change adaptation, article 4(4) requires that developing countries adversely affected by climate change must be assisted. Furthermore, article 4(8) of the UNFCCC requires member states to consider funding, insurance, and the transfer of technology to address the specific needs and concerns of developing countries caused by climate change.

48 As above.
49 United Nations Environment Programme (UNEP) *Climate change and human rights* (2015) 12.
50 L Jensen & P Jabczynska 'Understanding loss and damage: Addressing the unavoidable impacts of climate change' (2022) *European Parliament,* https://www.europarl.europa.eu/RegData/etudes/BRIE/2022/733598/EPRS_BRI(2022)733598_EN.pdf (accessed 12 February 2023).
51 Jensen & Jabczynska (n 50) 2.

The same commitment is reiterated in the Paris Agreement's reporting guidelines. These guidelines require developed country parties to explain how their financial support to developing countries constitutes new and additional resources to combat climate change.[52] Furthermore, the UNFCCC's COP decision in Paris 2015 agreed to include a standalone provision on L&D.[53] Interestingly, article 8 of the Paris Agreement exclusively focuses on L&D and provides that 'parties should enhance understanding, action, and support, including through the Warsaw International Mechanism as appropriate, on a cooperative and facilitative basis with respect to loss and damage'. Nevertheless, commentators have questioned whether the use of *should* instead of *shall* imposes any binding obligations on state parties[54] such that they would normally agree to bear responsibility and liability for climate change impacts. Even if it may be possible on the off-chance that the legality of article 8 could be in doubt, we concur with Toussaint's suggestion that article 8 only outsources liability and compensation to international, regional and domestic courts.[55]

Taking the view that climate change epitomises the ongoing challenge of the twenty-first century and its impact could cause irreparable losses and damages to especially vulnerable communities, we argue that the commitment of developed countries under article 8 of the Paris Agreement, to address the impacts of change through L&D, is salutary. Yet, as rightly argued by Jegede, the ambiguity about the normative content of article 8 makes it problematic for its eventual deployment in practice at the African level, because this option is yet to be identified and explored.[56] Perhaps developed countries' (mis)interpretation of article 8 of the Paris Agreement is responsible for their shared reluctant and vehement refusal to commit to a climate change fund to fund L&D. This contentious debate about the viability of article 8 and, presumably, the L&D provision underpinning it, portrays that reversing the unavoidable harm of climate change has been a major hindrance to the progress on L&D in the entire climate change response regime. When read together with paragraphs 48 to 52 of the COP21 decision, article 8 forswears the possibility of being used as a legitimate basis for future liability for climate change and associated compensation.[57] The foregoing could be attributed to the problematic nature of the Paris Agreement which, according to Sands,

52 UNFCCC 'Decision 2/CP.17, Annex I, UNFCCC Biennial Reporting Guidelines for Developed Country Parties' UN Doc FCCC/CP/2011/9/Add.1 (15 March 2012); UNFCCC 'Decision 19/CP.18, Common Tabular Format for 'UNFCCC Biennial Reporting Guidelines for Developed Country Parties' UN Doc FCCC/CP/2012/8/Add.3 (28 February 2013).

53 UNFCCC 'Decision 1/CP.21, Adoption of the Paris Agreement' UN Doc FCCC/CP/2015/10/Add.1 (29 January 2016) para 51.

54 D Bodansky 'The legal character of the Paris Agreement' (2016) 25 *Review of European, Comparative and International Environmental Law* 142-150.

55 P Toussaint 'Loss and damage and climate litigation: The case for greater interlinkage' (2021) 30 *Review of European, Comparative and International Environmental Law* 16-33.

56 AO Jegede 'Africa versus climate change loss and damages: Exploring AU regional channels for influencing national policy' (2018) 5 *Journal of African Foreign Affairs* 207-208.

57 A Gilder & O Rumble 'An African perspective on loss and damage' (2022) SAIIA Policy Insight 130 8, https://saiia.org.za/wp-content/uploads/2022/06/Policy-Insight-130-gilder-rumble.pdf (accessed 30 March 2023); Jegede (n 56) 212.

failed to provide (any) 'legally binding provisions that require countries to take domestic legal action'.[58] Within this context, we submit, based on the arguments advanced by developed countries within the climate debate, that practical implementation of article 8 of the Paris Agreement in the context of L&D is contingent solely on facilitation and cooperation measures between developed and developing states and not considered as imposing obligations on developed states only. The problematic nature of article 8 is more evident at the African regional level when one gauges the existing potentials at the African Union (AU) level to complement, shape and influence national policy and efforts to address climate change through L&D.[59] The reason for this is that the African Charter contains no provision on L&D, due, in part, to the fact that climate issues only became prominent in the 1990s with the adoption of the UNFCCC.

Principles 21 of the Declaration of the United Nations Conference on the Human Environment (Stockholm Declaration) of 1972 and 2 of the United Nations Conference on Environment and Development (Rio Declaration or Earth Summit) of 1992 address transboundary pollution according to which states have to ensure that activities within their jurisdiction or control do not cause damage to the environment of other states or of areas beyond the limits of national jurisdiction.[60] In this context, the foregoing suggests that the intentional breach by a state of a due diligence standard and the obligations under the 'no-harm' rule not to cause losses and damages, to prevent harm, or to minimise the risk of harm occurring, constitutes the international responsibility of that state to address the losses and damages occasioning from the negligent or intentional breach of duty.

In similar vein, Principle 22 of the Stockholm Declaration and Principle 13 of the Rio Declaration establish that there is a need for states to accelerate efforts to improve the international law on liability and compensation for the harmful impact of environmental damage, whether caused by activities within their domestic jurisdictions or control areas beyond their domestic jurisdictions. This suggests that cooperation and, supposedly, financial cooperation is a central point in addressing L&D in climate change. International cooperation also resonates as an important theme in the COP's decision. For example, in 2010 decision 1/CP.16 recognised the fundamental need to strengthen international cooperation and expertise about the need to understand and reduce L&D associated with the adverse effects of climate change, such as those relating to extreme weather events and slow-onset events, for example.[61] The COP decision established a

58 P Sands 'Climate change and the rule of law: Adjudicating the future in international law' (2016) 28 *Journal of Environmental Law* 19-35; Bodansky (n 54)142-150.
59 Jegede (n 56) 207.
60 Schaeffer (n 1) 34.
61 Decision 1/CP.16, para 25, FCCC/CP/2010/7/Add.1, Report of the Report of the Conference of the Parties on its 16th session, held in Cancun, 29 November to 10 December 2010 6, https://unfccc.int/process-and-meetings/conferences/past-conferences/cancun-climate-change-conference-november-2010/cop-16/cop-16-reports (accessed 31 March 2023).

work programme to consider approaches to L&D and sought suggestions about which factors should be included in the work programme. This work programme includes the development of a climate risk insurance facility to address issues about severe weather events, risk management and reduction, risk sharing and transfer mechanisms such as insurance, including options for micro-insurance, and resilience building, including through economic diversification, approaches for addressing rehabilitation measures associated with slow-onset events, engagement of stakeholders with relevant specialised expertise.[62] In addition, COP19 established

> institutional arrangements, such as an international mechanism, including functions and modalities ... to address loss and damage associated with the adverse effects of climate change in developing countries that are particularly vulnerable to the adverse effects of climate change.[63]

Also, at COP19, the UNFCCC determined a need

> to establish ... institutional arrangements, such as an international mechanism, including functions and modalities ... to address loss and damage associated with the impacts of climate change in developing countries that are particularly vulnerable to the adverse effects of climate change.[64]

Article 24 of African Charter on environmental protection implicitly provides the potential to gauge losses and damages related to climate change. Article 24 imposes the onus to take measures to prevent pollution and ecological degradation on African states. These measures find useful application in the context of climate change which, as reported by the 2022 IPCC Report, has an ongoing implication in Africa. Gauging article 24 of the African Charter in the context of climate change provides the platform for measuring losses and damages associated with climate change.

This segment puts across an argument that whereas the international and regional legal framework attempts to proffer remedies to the climate change dilemma, solutions focusing on human rights are not adequately provided for and, therefore, vulnerable communities will continue to suffer losses and damages associated with climate change.

4 Fostering rights-based solutions to mitigate climate induced losses and damages

Climate change describes a phenomenon that indicates that the earth's surface temperatures and the sub-surface ocean temperatures are moving at an alarming rate. Part of the consequences is that humans will suffer significant losses and

62 Schaeffer (n 1) 35.
63 Decision 3/CP.18 para 9.
64 UNFCCC, Decision 3/CP.18.

damages on account of the impact of climate change. This part dwells on the actual human rights-focused solutions of relevance to the L&D debate. In this context, the L&D during climate change refers to the adverse impacts of climate change that people have not been able to cope with or adapt to, resulting in irreparable damage or irreversible losses.[65] The L&D can be economic but can also imply the loss of non-economic features such as cultures, traditions, and languages, for example, in the case of displacement of affected island communities.[66]

As alluded to above, the IPCC report on the nature of climate change and its impacts reiterates the dangers that climate change poses to well-being, sources of income, food and water availability, and human safety. It identifies those that are more likely to be negatively affected by climate change including rural people reliant on agriculture, those living in dryland areas, and in developing countries. Climate change has aggravated poverty for vulnerable people in Africa and this is reported to continue unabatedly irrespective of the fact that they are the least responsible for causing it.[67]

Most African countries are categorised as developing and least developed with a high population of vulnerable persons who struggle with low levels of export capacity and productivity.[68] As highlighted in part 3 of this article, the rights-based solutions to the mitigation of losses and damages during climate change are imperative. At a continental level, the IPCC in 2022 reiterated that Africa is one of the continents on earth most vulnerable to the potentially devastating effects of climate change.[69] In the African context, the ecological impacts resulting from climate change are exacerbated by what the IPCC qualifies as 'multiple stresses'. The stresses express themselves in various forms, including colossal socio-economic challenges such as poverty, and poor institutional and infrastructural development. These multiple stresses perpetuate poor governance across jurisdictions, a dearth of human capital, lack of financial resources, health risks, conflict, political instability and, ultimately, the displacement of people.

The emergence of the HRBA to mitigate losses and damages during climate change is generally grounded on the understanding that caring for the survival of

65 K Warner and others *Evidence from the frontlines of climate change: Loss and damage to communities despite coping and adaptation* UNU-EHS Report. UNU- EHS (2012) 20.

66 For a recent overview of non-economic loss and damage, see O Serdeczny 'Non-economic loss and damage and the Warsaw international mechanism' in Mechler and others (n 6) 205-220, https://link.springer.com/chapter/10.1007/978-3-319-72026-5_8 (accessed 10 March 2023).

67 Proposal by the Maldives to the OHCHR in September 2008, as part of OHCHR's consultative study on the relationship between climate change and human rights in 'Climate change: Tackling the greatest human rights challenge of our time: Recommendations for effective action on climate change and human rights'. The document was prepared by the Centre for International Environmental Law and CARE International.

68 Least Developed Countries (LDCs) Report 2022 (UNCTAD/LDC/2022), https://unctad.org/ldc2022, https://worldpopulationreview.com/country-rankings/developing-countries (accessed 29 March 2023).

69 IPCC 6th Assessment Report (2022), https://www.ipcc.ch/report/ar6/wg2/ (accessed 9 June 2023).

the ecosystem is a fundamental issue of common concern for humanity.[70] Issues relating to climate change exist within the 'template' of values, practices, and moral viewpoints relating to human interaction with the environment. Beyond this, the issues also exist in a wider context of generally-held values that underpin modern, liberal-democratic societies. These include issues such as respect for individual rights and private property, respect for procedural fairness in the cause of environmental decision making, and the 'rule of law' which generally falls under the rubric of human rights law.[71] It is therefore necessary to fashion rights-based solutions to mitigation of losses and damages during climate change to protect nature and human interests. The current approach to addressing the problem of losses and damages associated with climate change has largely focused on technical and technological solutions, but the HRBA assumes a new significance in the question of what constitutes a pragmatic response to climate change-induced losses and damages. Rights-based solutions provide comprehensive and equitable upshots to the losses and damages associated with climate change. These approaches are based on the recognition and protection of human rights, such as the right to life, the right to food and the right to health, as well as the rights of communities to their land and resources. The right of communities to their resources and the human right to a 'decent', 'healthy' and 'safe' environment is regarded as an emerging 'third-generation' or 'solidarity' right.[72] Nonetheless, a rights-based approach to L&D acknowledges that the root cause of the problem is the failure to respect, protect and fulfil human rights.

Rights-based solutions to the quagmire of losses and damages caused by climate change recognise the rights of affected communities to participate in decision-making processes related to climate change. This involves ensuring that communities are fully informed of the impacts of climate change and that they have the opportunity to express their views and concerns. It also requires that their voices be considered in the design and implementation of adaptation and mitigation measures.[73]

70 LA Malone & S Pasternack *Defending the environment: Civil society strategies to enforce international environmental law* (2006) xvii.

71 Office of the United Nations High Commissioner for Human Rights and the Inter-Parliamentary Union (IPU) *Human rights handbook for parliamentarians No 2*' (2016), https://www.ohchr.org/sites/default/files/Documents/Publications/HandbookParliamentarians.pdf (accessed 2 April 2023).

72 P Gormley *Human rights, and environment: The need for international cooperation* (1976) 48-55; K Mahoney & P Mahoney (eds) *The right to environment in human rights in the twenty-first century* (1993) 517-614; C Dommen 'Claiming environmental rights: Some possibilities offered by the United Nations' human rights mechanisms' (1998) 11 *Georgetown International Environmental Law Review* 1; P Neil 'In pursuit of environmental human rights: Commentary on the Draft Declaration of Principles on Human Rights and the Environment' (1996) 27 *Columbia Human Rights Law Review* 487; T Melissa 'Establishing environment as a human right' (1991) 19 *Denver Journal of International Law and Policy* 301; J McClymonds 'Note: The human right to a healthy environment: An international legal perspective'(1992) 37 *New Year Law School Law Review* 583.

73 OHCHR 'Applying a human rights-based approach to climate change negotiations, policies and measures', https://www.ohchr.org/sites/default/files/Documents/Issues/ClimateChange/InfoNoteHRBA.pdf (accessed 2 April 2023).

A rights-based solution that obliges states and other key stakeholders to provide compensation and reparation for losses and damages caused by climate change is a pragmatic means to mitigate the unavoidable L&D. In this context, states and other relevant actors are liable to provide compensation and reparation to victims affected by climate change impact. African states and other key actors are equally required to adopt and implement measures to prevent further losses and damages from occurring. National efforts such as the development of laws and policies that recognise the rights of communities, as well as the establishment of independent and impartial mechanisms for monitoring and enforcing these rights, are considered part of the rights-based approach.

The establishment of a climate justice framework at the national level to ensure that the burden of climate change impacts is not disproportionately borne by vulnerable communities may pose a significant means of embedding a rights-based solution. This may involve recognising historical responsibility for emissions. In establishing such legal frameworks, the needs of marginaliseed groups should be paramount and prioritised to promote equitable solutions. Similarly, legal frameworks that engender robust adaptation measures that prioritise the needs of vulnerable communities can help mitigate losses and damages. To achieve this, such legal frameworks should include investments in resilient infrastructure, early warning systems, and sustainable livelihood options.[74] Similarly, engaging affected communities in decision-making processes related to climate change adaptation and mitigation are pragmatic ways in which to promote inclusive governance structures, facilitate meaningful participation in policy development, and ultimately entrench human rights-based solutions.

Investing in risk reduction and preparedness strategies can help communities cope with climate-related disasters. Risk reduction and preparedness strategies that strengthen disaster response mechanisms, improve access to information, and appropriate vulnerability assessments promote the use of a human rights-based approach to address L&D as they not only establish the root causes of the problem, but also show practically that the rights of affected communities are duly recognised. Through platforms for providing training, technical assistance and resources to enhance resilience and adaptive capacity, communities become increasingly aware of the issues and are likely to embrace the rights-based solutions.

We submit that rights-based solutions that recognise the root causes of the problem and the rights of affected communities, as well as place obligations on states and other actors to provide compensation and reparation, are pragmatic to mitigating losses and damages associated with climate change. This approach is grounded in the idea that individuals and communities have the right to

74 OHCHR 'The impact of loss and damage from the adverse effects of climate change on human rights', https://www.ohchr.org/en/climate-change/impact-loss-and-damage-adverse-effects-climate-change-human-rights (accessed 27 February 2024).

a safe and healthy environment and that they should be protected from the negative impacts of climate change. The initial step towards implementing such a rights-based solution is to recognise and acknowledge the rights of affected communities. This includes the right to access to information, the right to participate in decision-making processes, and the right to access to justice. These rights provide the foundation for communities to be able to protect themselves from the negative impacts of climate change and to hold those responsible accountable for their actions. Second, the state has to decisively develop legal and institutional frameworks that protect the rights of affected communities and ensure accountability and transparency.

5 Conclusion and recommendations

The article has highlighted the significant impact of losses and damages on the human rights of vulnerable communities in Africa in the context of climate change. It emphasised the need to integrate an HRBA in the L&D debate and calls for strengthening legal frameworks and enhancing capacity building to protect the rights of affected communities. The interface between climate-induced losses and damages, vulnerability and human rights in Africa is a complex and pressing issue that requires urgent attention. Africa, with its diverse ecosystems, rich biodiversity and high dependence on natural resources is particularly vulnerable to the impacts of climate change. The continent is experiencing a wide range of adverse effects, including extreme weather events, rises in sea levels, desertification, and changes in rainfall patterns, all of which contribute to significant economic, social and environmental losses.

Climate-driven losses and damages aggravate the already-existing vulnerability of African communities, especially marginalised populations such as women, children, indigenous peoples and rural communities. Limited access to resources, inadequate infrastructure, poverty and weak governance structures further compound the challenges faced by these vulnerable groups. As a result, they experience heightened risks to their livelihoods, health, food security and overall well-being. The intersection of climate change impacts with human rights in Africa is a critical concern. The adverse effects of climate change often infringe upon various human rights, such as the rights to life, food, water, health, housing and self-determination. The inability to effectively adapt to climate change and address its consequences could lead to violations of these fundamental rights, undermining social justice, equity and sustainable development.

Despite this gloomy picture, we have suggested that adopting a holistic HRBA is the crucial and indispensable tool needed to address these interconnected challenges. Generally, ambitious reduction of GHG emissions, more effective climate change adaptation and better disaster risk management tend to minimise

losses and damages.[75] However, this requires the massive support of countries and companies that contribute disproportionately to global warming. They have a moral obligation to transfer financial resources for adaptation and disaster management to vulnerable countries.

African countries can enhance their efforts to protect the human rights of vulnerable communities in the face of climate change-induced losses and damages. This approach should encompass measures to mitigate greenhouse gas emissions, enhance climate adaptation and resilience, promote sustainable development and safeguard human rights. It requires collaboration and cooperation at local, national, regional and international levels, involving governments, civil society organisations, the private sector and the international community.

Key interventions should include enhancing climate change education and awareness, supporting vulnerable communities with adaptation strategies and technologies, strengthening social safety nets, empowering marginalised groups, promoting gender equality and women's rights, improving governance, and ensuring equitable access to resources and justice systems.[76] These actions should be underpinned by a commitment to human rights principles, including participation, accountability, non-discrimination, and the empowerment of vulnerable communities. This much has been highlighted in the context of the need to achieve the Sustainable Development Goals in Africa.[77]

In conclusion, we firmly submit that addressing the interface between L&D, vulnerability and human rights in Africa requires a comprehensive and transformative approach. By integrating climate action, human rights and sustainable development, Africa can build resilient and inclusive societies that are better prepared to mitigate and adapt to the impacts of climate change, while protecting and promoting the rights and well-being of its people. It is our shared duty to act firmly and urgently, ensuring that no one is left behind in the pursuit of a sustainable and equitable future for Africa and the world.

75 United Nations University Institute for Environment and Human Security (UNU-EHS) *Handbook for assessing loss and damage in vulnerable communities Report No 21*' (April 2017), https://collections.unu.edu/eserv/UNU:6032/Online_No_21_Handbook_180430.pdf (accessed 17 May 2023).

76 C Terry 'Reducing people's vulnerability to natural hazards communities and resilience. Research Paper 2008/034' (2008) *Helsinki: United Nations University World Institute for Development Economics Research (UNU-WIDER).*

77 JCN Ashukem and others 'From political rhetoric to concrete actions – A human rights-based approach to the Sustainable Development Goals in Africa' (2025) *African Journal of International and Comparative Law* (forthcoming).

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Mobility-induced loss and damage and vulnerability: An integrated policy approach for Africa

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Abstract: The concept of loss and damage (L&D) has increasingly gained attention in global climate discussions and is anticipated to cause displacement and increase vulnerability and implications for human rights. However, there is limited analysis on how the L&D caused by climate mobility connects with vulnerability, and the appropriate policy response to address the linkages. This article demonstrates the interfaces and advocates the need for an integrated policy approach to address mobility induced by L&D in Africa.

Key words: climate change; displacement; human rights; integrated policy approach; loss and damage; vulnerability

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1 Introduction

The concept of loss and damage (L&D) is the actual and/or potential manifestation of impacts associated with climate change in developing countries that negatively affect human and natural systems.[1] It is both a policy mechanism and the sum of impacts inflicted by climate change and extreme events.[2] These include economic losses such as loss of property, assets, infrastructure, agricultural production and/or revenue, and those that are difficult to quantify in economic terms, such as degraded health, losses induced by human mobility, loss of cultural heritage, and loss of indigenous and local knowledge.

The concept of L&D started in 1991 when the small island developing states (SIDs) demanded compensation for the losses that had occurred due to climate change. It then became a formal part of the United Nations (UN) Framework Convention on Climate Change (UNFCCC) since the establishment of the Warsaw International Mechanism (WIM).[3] The insufficiencies in the mitigation and adaptation efforts, evidence of the increasing global warming[4] and the concerns about historical responsibility have raised several queries relating to environmental injustices caused by climate change.[5]

Climate change is a result of long-term accumulation of greenhouse gases (GHGs) that cause a rise in global temperatures and effects including drought, sea level rise, floods and wild fires.[6] Although other factors such as natural disasters and changes in land use also cause environmental problems,[7] climate change is the major cause of environmental destruction, including biodiversity loss.[8] Estimates reveal that desertification due to drought alone affects over 4 billion hectares of land in more than 164 countries, and directly impacts approximately 1,5 billion

1 E Calliari 'Loss and damage: A critical discourse analysis of parties' positions in climate change negotiations' (2018) 21 *Journal of Risk Research* 725-747, https://doi.org/10.1080/13669877.2016.1240706 (accessed 5 September 2023).

2 E Boyd and others 'Loss and damage from climate change: A new climate justice agenda' (2021) 4 *One Earth* 1365-1370, https://doi.org/10.1016/j.oneear.2021.09.015. (accessed 4 September 2023).

3 E Boyd and others 'A typology of loss and damage perspectives' (2017) 7 *Nature Climate Change* 723-729, https://doi.org/10.1038/nclimate3389 (accessed 23 September 2023).

4 E Roberts & S Huq 'Coming full circle: The history of loss and damage under the UNFCCC' (2015) 8 *International Journal of Global Warming* 141, https://doi.org/10.1504/IJGW.2015.071964 (accessed 3 October 2023).

5 C Zimm & N Nakicenovic 'What are the implications of the Paris Agreement for inequality?' (2020) 20 *Climate Policy* 458-467, https://doi.org/10.1080/14693062.2019.1581048 (accessed 7 October 2023).

6 MF Akorede and others 'Mitigating the anthropogenic global warming in the electric power industry' (2012) 16 *Renewable and Sustainable Energy Reviews* 2747-2761, https://doi.org/10.1016/j.rser.2012.02.037 (accessed 6 October 2023).

7 AR Khavarian-Garmsir and others 'Climate change and environmental degradation and the drivers of migration in the context of shrinking cities: A case study of Khuzestan province, Iran' (2019) 47 *Sustainable Cities and Society* 101480, https://doi.org/10.1016/j.scs.2019.101480 (accessed 8 September 2023).

8 DW Sintayehu 'Impact of climate change on biodiversity and associated key ecosystem services in Africa: A systematic review' (2018) 4 *Ecosystem Health and Sustainability* 225-239, https://doi.org/10.1080/20964129.2018.1530054 (accessed 25 September 2023).

people globally.[9] The consequences of climate change may worsen to the level that even if global temperature is maintained below 2°C, or 1,5°C, compared to pre-industrial levels, significant impact will still be felt on the biodiversity.[10]

The biodiversity which is the main component of the environment, is very fundamental in supporting the livelihood of mankind. For instance, the ecosystem which is the functional unit of biodiversity supplies multiple services such as the provision of a habitat, fuel wood, food, timber, medicinal plants, and cultural and environmental sustaining functions.[11] These services serve as a source of employment and livelihood for billions of people in the world.[12] However, the ecosystem is threatened by the escalating loss of biodiversity.[13] Environmental degradation and loss of ecosystem services may deteriorate living conditions and force people to be displaced.

For instance, flooding associated with mud slide[14] and drought associated with desertification and land degradation have displaced many people in Eastern and Western Africa.[15] Migration can occur within or across countries. Without adequate measures and global action, up to 216 million people in six world regions could be affected by climate-induced migration and internal displacement by 2050.[16] Migration may increase environmental degradation especially when it is associated with over-population, insecurity and scarcity of resources.[17] These may limit access to essential needs such as food, water, forest resources, and land for cultivation, therefore increasing the rate of vulnerability of specific groups of

9 S Berberoglu and others 'Spatial and temporal evaluation of soil erosion in Turkey under climate change scenarios using the Pan-European Soil Erosion Risk Assessment (PESERA) model' (2020) 192 *Environmental Monitoring and Assessment* 491, https://doi.org/10.1007/s10661-020-08429-5 (accessed 15 September 2023).

10 MS Evans & B Munslow 'Climate change, health, and conflict in Africa's arc of instability' (2021) 141 *Perspectives in Public Health* 338-341.

11 CN DeLoyde & WE Mabee 'Ecosystem service values as an ecological indicator for land management decisions: A case study in Southern Ontario, Canada' (2023) 151 *Ecological Indicators* 110344, https://doi.org/10.1016/j.ecolind.2023.110344 (accessed 16 September 2023).

12 R Panwar, H Ober & J Pinkse 'The uncomfortable relationship between business and biodiversity: Advancing research on business strategies for biodiversity protection' (2023) 32 *Business Strategy and the Environment* 2554-2566, https://doi.org/10.1002/bse.3139 (accessed 25 September 2023).

13 D Roe, N Seddon & J Elliott 'Biodiversity loss is a development issue' (2021) *International Institute for Environment and Development*, https://pubs. iied. org/pdfs/17636IIED.pdf (accessed 19 September 2023).

14 M Call & C Gray 'Climate anomalies, land degradation, and rural out-migration in Uganda' (2020) 41 *Population and Environment* 507-528, https://doi.org/10.1007/s11111-020-00349-3 (accessed18 September 2023).

15 A Vrieling and others 'Early assessment of seasonal forage availability for mitigating the impact of drought on East African pastoralists' (2016) 174 *Remote Sensing of Environment* 44-55, https://doi.org/10.1016/j.rse.2015.12.003 (accessed 13 September 2023).

16 K Neef, E Jones & J Marlowe 'The conflict, climate change, and displacement nexus revisited: The protracted Rohingya refugee crisis in Bangladesh' (2003) *Journal of Peacebuilding and Development* 15423166231190040, https://doi.org/10.1177/15423166231190040 (accessed 20 September 2023).

17 Evans & Munslow (n 10).

people, including women, children, the elderly, Indigenous Peoples, persons with disabilities and youths.[18]

The people who are displaced by climate change are exposed to several risks, including loss of cultural land, conflict and insecurity, loss of cultural heritage,[19] loss of life, loss of freedom of choice, and inaccessibility to public services.[20] These may violate their rights including the right to life, food, water, good health, good living conditions, and access to social and cultural rights.[21] Several policies and regulatory frameworks have been put in place to address some of these human rights issues. However, most of the policies under UNFCCC focus more on the migrants with less focus on those who remain but are also vulnerable.[22]

Vulnerability to climate change displacement may increase when adaptation actions are unaffordable,[23] or not physically or technically possible,[24] socially difficult,[25] or not sufficient to prevent the associated problems.[26] The Intergovernmental Panel on Climate Change (IPCC) estimates that between 3.3 and 3.6 billion people live in contexts that are highly vulnerable to climate change[27] with the majority located in conflict-prone and fragile-prone areas.[28] Although more (80 per cent) greenhouse gases are emitted by developed countries,[29] African countries are disproportionally vulnerable to the long-lasting

18 S Jodoin, A Savaresi & M Wewerinke-Singh 'Rights-based approaches to climate decision-making' (2021) 52 *Current Opinion in Environmental Sustainability* 45-53, https://doi.org/10.1016/j.cosust.2021.06.004 (accessed 11 September 2023).

19 Intergovernmental Panel on Climate Change (IPCC) *Climate Change 2022 – Impacts, Adaptation and Vulnerability: Working Group II Contribution to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change* (2023), https://doi.org/10.1017/9781009325844 (accessed11 September 2023).

20 K Warner and others 'Climate change, environmental degradation and migration' (2010) 55 *Natural Hazards* 689-715, https://doi.org/10.1007/s11069-009-9419-7 (accessed 21 August 2023).

21 MM Naser and others 'Policy challenges and responses to environmental non-migration' (2023) 2 *Npj Climate Action* 5, https://doi.org/10.1038/s44168-023-00033-w (accessed 17 May 2024).

22 As above.

23 T Afifi and others 'Climate change, vulnerability and human mobility: Perspectives of refugees from the East and Horn of Africa' (2012) United Nations University, Institute for Environment and Human Security 1 *Climate Change* (5 September 2023).

24 As above.

25 S Barrett and others 'Assessing vulnerabilities to disaster displacement' (2021) *Policy* 1.

26 R Byrnes & S Surminski 'Addressing the impacts of climate change through an effective Warsaw international mechanism on loss and damage' (2019) *London School of Economics Grantham Institute on Climate Change and the Environment* 16.

27 H Lee and others ''Climate change 2023: Synthesis report. Contribution of Working Groups I, II and III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change (The Australian National University, 2023), https://doi.org/10.59327/IPCC/AR6-9789291691647 (accessed 2 October 2023).

28 P Läderach and others 'Climate finance and peace – Tackling the climate and humanitarian crisis' (2021) 5 *The Lancet Planetary Health* e856-858, https://doi.org/10.1016/S2542-5196(21)00295-3 https://doi.org/10.1016/S2542-5196(21)00295-3 (accessed 20 September 2023).

29 MGJ Den and others 'Countries' contributions to climate change: Effect of accounting for all greenhouse gases, recent trends, basic needs and technological progress' (2013) 121 *Climatic Change* 397-412, https://doi.org/10.1007/s10584-013-0865-6 (accessed 23 September 2023).

impacts spread all over the world.[30] This has increasingly raised ethical issues relating to justice, rights, welfare, virtue, political legitimacy and interaction between humanity and nature.[31] The Paris Agreement (PA) was therefore adopted to address some of these inequality issues.[32] However, technological, financial and gaps in assessing non-economic losses still limit its operations. Knowledge on the linkages between climate change, displacement and L&D is crucial for informing new policy developments that would help to reduce the associated problems.

There has been recognition of the effects of climate-induced displacement on human rights. However, there is limited information about specific interfaces that exist between L&D caused by climate mobility and the vulnerable groups and also the appropriate policy that links to them. Therefore, this article describes losses and damages caused by climate displacement and explores linkages to selected human rights legal/policy instruments and agreements that protect the rights of vulnerable groups such as children, women, the disabled, the youth, Indigenous Peoples, and people in disaster-prone areas.

2 Connecting the dots

2.1 Climate change, the environment and ecosystem services

The environment is an interconnected system that comprises physical, social, cultural and biological elements that form biodiversity. The biological environment that encompasses the evolutionary, ecological and cultural processes for the sustenance of life on earth[33] is diverse in terms of gene, species

30 A Chaudhury 'Role of intermediaries in shaping climate finance in developing countries – Lessons from the Green Climate Fund'a new consortium for dedicated funding set up under the United Nations Framework Convention on Climate Change (UNFCCC (2020) 12 *Sustainability* 5507; G Althor, JEM Watson & RA Fuller 'Global mismatch between greenhouse gas emissions and the burden of climate change' (2016) 6 *Scientific Reports* 20281, https://doi.org/10.1038/srep20281 (accessed 2 October 2023).the extent to which this leads to inequity between GHG emitters and those impacted by the resulting climate change depends on the distribution of climate vulnerability. Here, we determine empirically the relationship between countries' GHG emissions and their vulnerability to negative effects of climate change. In line with the results of other studies, we find an enormous global inequality where 20 of the 36 highest emitting countries are among the least vulnerable to negative impacts of future climate change. Conversely, 11 of the 17 countries with low or moderate GHG emissions, are acutely vulnerable to negative impacts of climate change. In 2010, only 28 (16%).

31 Zimm & Nakicenovic (n 5).as do the historical and current emissions of greenhouse gases (GHGs

32 As above.

33 SE Andres and others 'Defining biodiverse reforestation: Why it matters for climate change mitigation and biodiversity' (2023) 5 *Plants, People, Planet* 27-38, https://doi.org/10.1002/ppp3.10329 (accessed 25 September 2023).which may create perverse outcomes when designing schemes and projects. Here, we review how the concept of biodiversity is defined and applied in reforestation projects, and restoration more broadly. Improved transparency around the use of the term biodiversity is urgently needed to provide rigour in emerging market mechanisms, which seek to benefit the environment and people. Reforestation to capture and store atmospheric carbon is increasingly championed as a climate change mitigation policy response. Reforestation plantings have the potential to provide conservation co-benefits when

and ecosystem.[34] The ecosystem, being the major functional unit of biodiversity consisting of biotic and abiotic components that interacts with each other within and beyond their ecological niches, is fundamental to mankind.[35] Whereas 70 per cent of Africa's population derives their livelihood from agriculture,[36] over 80 per cent relies solely on traditional medicine derived from plants for their primary healthcare needs.[37] However, the environment, including biodiversity, is increasingly deteriorating worldwide. Evidence shows increasing extinction rates and decreasing global trends for the large majority of nature's contributions to the survival of humankind.[38]

The ecosystem supplies multiple services required to meet human needs and sustain livelihoods. These include provisioning services such as feed, fuel wood, food, timber; regulating services including disease and climate regulation; supporting services such as soil formation, nutrient retention; and cultural services, for instance, recreation and ecotourism.[39] These services serve as a source of employment and livelihood for billions of people in the world,[40] but the degradation of biodiversity has limited its ability to provide these services.[41] Although other factors such as natural disasters and changes in land use also cause environmental problems,[42] climate change is the major cause of environmental destruction, including biodiversity loss.[43]

For example, slow onset such as droughts and extreme climate events such as storm surges, sea level rises and floods have caused the extinction of species, loss of habitat, bleaching of coral reefs, loss of vegetation cover, loss of soil fertility,

diverse mixtures of native species are planted, and there are growing attempts to monetise biodiversity benefits from carbon reforestation projects, particularly within emerging carbon markets. But what is meant by 'biodiverse' across different stakeholders and groups implementing and overseeing these projects and how do these perceptions compare with long-standing scientific definitions? Here, we discuss approaches to, and definitions of, biodiversity in the context of reforestation for carbon sequestration. Our aim is to review how the concept of biodiversity is defined and applied among stakeholders (e.g., governments, carbon certifiers and farmers

34 GMA Bermudez & P Lindemann-Matthies 'What matters is species richness' – High school students' understanding of the components of biodiversity' (2020) 50 *Research in Science Education* 2159-2187, https://doi.org/10.1007/s11165-018-9767-y (accessed 25 September 2023).

35 J Sadeghi and others 'Microbial community and abiotic effects on aquatic bacterial communities in north temperate lakes' (2021) 781 *Science of the Total Environment* 146771, https://doi.org/10.1016/j.scitotenv.2021.146771 (accessed 8 October 2023).

36 AJ Fernando 'How Africa is promoting agricultural innovations and technologies amidst the COVID-19 pandemic' (2020) 13 *Molecular Plant* 1345-1246, https://doi.org/10.1016/j.molp.2020.08.003 (accessed 16 September 2023).

37 S Dubale and others 'Phytochemical screening and antimicrobial activity evaluation of selected medicinal plants in Ethiopia' (2023) 15 *Journal of Experimental Pharmacology* 51-62, https://doi.org/10.2147/JEP.S379805 (accessed 25 September 2023).

38 M Wagner 'Business, biodiversity and ecosystem services: Evidence from large-scale survey data' (2023) 32 *Business Strategy and the Environment* 2583-2599, https://doi.org/10.1002/bse.3141 (accessed 8 October 2023).

39 DeLoyde & Mabee (n 11).

40 Panwar and others (n 12).

41 Roe and others (n 13).

42 Khavarian-Garmsir and others (n 7).

43 Sintayehu (n 8).

air and water pollution, acidification and eutrophication.[44] These have declined agricultural productivity, threatened food security and environmental quality.[45] The degradation of the ecosystems may lead to scarcity in natural resources, deteriorate living conditions and cause displacement of people.[46] For instance, floods associated with mud slides and drought associated with desertification and land degradation have caused a shortage of ecological resources such as timber, fuel wood and food, and caused many people in Eastern and Western Africa to migrate.[47] Migration may lead to population growth that results in over-exploitation of resources and conflicts.[48] These may further increase loss of biodiversity, destruction of food systems, loss of cultural heritage[49] and deterioration of human health, among others.[50]

Today, over 85 per cent of the world population lives in a state of ecological overshoot.[51] Lack of vegetation cover is associated with soil erosion, loss of soil nutrients, loss of soil moisture, reduction in agricultural productivity and food insecurity.[52] Whereas 28 out of the 37 countries that rely on food aid come from Africa, more than 226 million people in Africa are starving, and 40 to 50 per cent live below the poverty line.[53] Indigenous Peoples who take care of over 40 per cent of the total global land area providing refuge for approximately 80 per cent of the earth's biodiversity, provide a good opportunity for environmental protection.[54]

44 M Guillermo, F Fraga & M Harsdorff 'The future of work in a changing natural environment: Climate change, degradation and sustainability' *ILO Research Paper Series, Geneva: International Labour Office*, 2018; R Pinto, VND Jonge & J C Marques 'Linking biodiversity indicators, ecosystem functioning, provision of services and human well-being in estuarine systems: Application of a conceptual framework' *Ecological* (2014) 36 *Indicators* 6440-655, https://doi.org/10.1016/j.ecolind.2013.09.015(accessed 8 October 2023).

45 P D'Odorico & S Ravi 'Land degradation and environmental change' (2016) *Biological and Environmental Hazards, Risks, and Disasters* 219-227, https://doi.org/10.1016/B978-0-12-394847-2.00014-0 (accessed 15 September 2023).

46 E Ferris 'Research on climate change and migration: Where are we and where are we going?' (2020) 8 *Migration Studies* 612-625, https://doi.org/10.1093/migration/mnaa028 (accessed 6 October 2023).

47 Vrieling and others (n 15); D Hummel 'Climate change, land degradation and migration in Mali and Senegal – Some policy implications' (2016) 5 *Migration and Development* 211-233, https://doi.org/10.1080/21632324.2015.1022972 (accessed 25 September 2023); Call & Gray (n 14).

48 Evans & Munslow (n 10).

49 IPCC (n 19).

50 A Fugiel and others 'Environmental impact and damage categories caused by air pollution emissions from mining and quarrying sectors of European countries' (2017) 143 *Journal of Cleaner Production* 159, https://doi.org/10.1016/j.jclepro.2016.12.136 (accessed 6 October 2023).

51 Z Langnel and others 'Income inequality, human capital, natural resource abundance, and ecological footprint in ECOWAS member countries' (2021) 74 *Resources Policy* 102255, https://doi.org/10.1016/j.resourpol.2021.102255 (accessed 11 September 2023).

52 P Panagos, P Borrelli & D Robinson 'FAO calls for actions to reduce global soil erosion' (2020) 25 *Mitigation and Adaptation Strategies for Global Change* 789-790, https://doi.org/10.1007/s11027-019-09892-3 (accessed 15 September 2023).

53 SAO Adeyeye and others 'Africa and the nexus of poverty, malnutrition and diseases' (2023) 63 *Critical Reviews in Food Science and Nutrition* 641-656, https://doi.org/10.1080/10408398.2021.1952160 (accessed 16 September 2023).

54 A Normyle, M Vardon & B Doran 'Aligning indigenous values and cultural ecosystem services for ecosystem accounting: A review' (2023) 59 *Ecosystem Services* 101502, https://doi.org/10.1016/j.ecoser.2022.101502 (accessed 16 September 2023).

However, their knowledge is not adequately documented and, therefore, is being eliminated.[55]

Despite the existing environmental policies and environmental programmes in Africa, the increasing rate of global warming is anticipated to increase environmental degradation, exacerbate displacement and the rate of vulnerability on the continent.[56]

2.2 Climate mobility and specific vulnerable groups

Climate migration and its associated problems have increased the vulnerability of women, children, the elderly, Indigenous Peoples, persons with disabilities and the youth.[57] According to IPCC, vulnerability refers to the degree to which a system is susceptible to and unable to cope with the adverse effects of climate change.[58] Under UNFCCC, vulnerability is measured by adaptation matrix against parameters such as adequacy and effectiveness of adaptation support.[59]

Vulnerability may occur when adaptation actions are unaffordable,[60] not physically or technically possible,[61] socially difficult,[62] or not sufficient to prevent the issues.[63] Vulnerability due to climate change may take several paths and have resultant effects on migrants, host communities, and the people who remain. For instance, occurrences of flooding associated with loss of assets,[64] and droughts associated with shortages of water, pasture and land degradation may force people to abandon their ancestral land.[65] Although migration can be an effective climate change adaptation strategy, it is also associated with several environmental risks. For instance, in Karamoja, North Eastern Uganda, mobility is used to access water and pasture, but also to control diseases and parasites. However, the livestock herders interface with several insecurity threats.[66] When this happens, women, children and the disabled who remain behind are exposed to security risks as they

55 S Muwanga and others 'Influence of agro-pastoral activities on land use and land cover change in Karamoja, Uganda' (2020) 12 *Journal of Agricultural Science* 266, https://doi.org/10.5539/jas.v12n9p266. (accessed 1 May 2023).
56 O Serdeczny and others 'Climate change impacts in sub-Saharan Africa: From physical changes to their social repercussions' (2017) 17 *Regional Environmental Change* 1585-1600, https://doi.org/10.1007/s10113-015-0910-2 (accessed 28 August 2023).
57 Jodoin and others (n 18).
58 L Christiansen, G Martinez & P Naswa (eds) *Adaptation metrics – Perspectives on measuring, aggregating and comparing adaptation results* (2018).
59 As above.
60 Afifi and others (n 23).
61 As above.
62 Barrett and others (n 25).
63 Byrnes and Surminski (n 26).
64 A Kassegn & E Endris 'Review on socio-economic impacts of "triple threats" of COVID-19, desert locusts, and floods in East Africa: Evidence from Ethiopia' (2021) 7 *Cogent Social Sciences* 1885122, https://doi.org/10.1080/23311886.2021.1885122 (accessed 13 September 2023).
65 Vrieling and others (n 15).
66 Muwanga and others (n 55); D Abrahams 'Land is now the biggest gun: Climate change and conflict in Karamoja, Uganda' (2021) 13 *Climate and Development* 748-760, https://doi.org/10.1080/17565529.2020.1862740 (accessed 18 September 2023).

may not be able to defend themselves. Migration requires economic and physical capacities that everyone may not have, and because of inadequate opportunities, incapabilities and more exposure to security threats, women, children and elderly people usually are those left behind in the face of, climate migration crisis.[67]

When climate migration associates with over-population,[68] it may lead to over-utilisation of resources that cause an increase in ecosystems degradation.[69] Linking to their responsibilities, women are more vulnerable to ecosystem degradation as they greatly depend on environmental resources such as water, firewood and other forest products to support family needs.[70] Their limited access to resources, including land, information, and the likelihood of being unemployed, further constrain them. Poor people are equally vulnerable to ecosystems degradation as they are disproportionately dependent on biodiversity to meet their day-to-day livelihood needs.[71]

The degradation of biodiversity[72] may reduce yields and lead to food insecurity and malnutrition,[73] which is felt more by women and children who are exposed to high mortality rates.[74] The Food and Agricultural Organisation (FAO) estimates that the number of people suffering hunger may increase from 60 million in 2014 to 840 million by 2030.[75] Indigenous Peoples have vast knowledge on biodiversity and agro-ecology,[76] which are crucial for adaptation and improving food production. However, climate displacement detaches them from traditional systems that may lead to loss of cultural identity, causing them to lose their vast knowledge.[77] The young generation is also threatened as meeting their future resource needs may be difficult owing to the increasing rate of environmental destruction and global warming.[78]

67 N Chindarkar 'Gender and climate change-induced migration: Proposing a framework for analysis' (2012) 7 *Environmental Research Letters* 025601, https://doi.org/10.1088/1748-9326/7/2/025601 (accessed 13 September 2023).
68 A Hendrixson & B Hartmann 'Threats and burdens: Challenging scarcity-driven narratives of "overpopulation"' (2019) 101 *Geoforum* 250-259.
69 D'Odorico & Ravi (n 45).
70 P Figueiredo & PE Perkins 'Women and water management in times of climate change: Participatory and inclusive processes' (2013) 60 *Journal of Cleaner Production* 188-194, https://doi.org/10.1016/j.jclepro.2012.02.025 (accessed 12 September 2023).
71 Roe and others (n 13).
72 TT Nguyen and others 'Security risks from climate change and environmental degradation: Implications for sustainable land use transformation in the Global South' (2023) 63 *Current Opinion in Environmental Sustainability* 101322, https://doi.org/10.1016/j.cosust.2023.101322 (accessed 9 October 2023).
73 FAO, IFAD, UNICEF, WFP and WHO *The state of food security and nutrition in the world 2021* (2021), https://doi.org/10.4060/cb4474en (accessed 12 September 2023).
74 N Rees and others *The coldest year of the rest of their lives: Protecting children from the escalating impacts of heatwaves* (2022).
75 FAO and others (n 73).
76 MA Altieri & CI Nicholls 'Agroecology: A brief account of its origins and currents of thought in Latin America' (2017) 41 *Agroecology and Sustainable Food Systems* 231-237, https://doi.org/10.1080/21683565.2017.1287147 (accessed1 March 2023).
77 JK Maldonado and others 'The impact of climate change on tribal communities in the US: Displacement, relocation, and human rights' (2013) 120 *Climatic Change* 601-614, https://doi.org/10.1007/s10584-013-0746-z (accessed 9 October 2023).
78 Naser and others (n 21).

Addressing the increasing rate of vulnerability to climate displacement[79] is difficult but may improve with the formulation and implementation of policies and programmes that protect the integrity and diversity of nature, and those that ensure equitable, ecological and sustainable use of natural resources.[80] The integration of a human rights-based approach in any climate change adaptation and mitigation measure is key.

2.3 Climate mobility and key human rights

Climate migration may cause adverse impacts on social environmental rights of vulnerable people. These may include the right to a safe and healthy environment, security, freedom of movement, right to food, water, cultural identity and sense of place. Human rights and the environment are interrelated, interconnected, and mutually responsive as they both address the well-being of humanity, meaning that, a safe and healthy environment is necessary for the full enjoyment of fundamental human rights.[81] The majority of the African population rely on environmental resources such as wood products, food, medicinal plants, water, land, cultural heritage, and habitat for sustenance of their livelihoods.[82] However, climate change has deteriorated the biodiversity that underpins these services, caused a decline in ecosystem services,[83] and displaced many people.[84]

The growing evidence of biodiversity degradation that is associated with loss of a safe environment has increased concerns and debates around biodiversity conservation and has also given birth to several policy instruments. The UN Convention on Biological Diversity (CBD) provides for biodiversity conservation.[85] Article 24 of the African Charter on Human and Peoples' Rights (African Charter) recognises the need for the rights of all people to a general satisfactory environment favourable to their development.[86] The preamble 4 to the African Leaders Nairobi Declaration on Climate Change and Call to Action (DCCCA) calls for the successful implementation of Sham el-Sheik (COP 27) decision at the Arab Republic of Egypt, while preambles 22 and 24 call for the

79 L Szboova '*Climate change, migration and rural adaptation in the near East and North Africa region* (2023), https://doi.org/10.4060/cc3801en (accessed 16 September 2023).
80 MA Hossen and others 'Governance challenges in addressing climatic concerns in coastal Asia and Africa' (2019) 11 *Sustainability* 2148, https://doi.org/10.3390/su11072148 (accessed 9 September 2023).
81 P Pathak 'Human rights approach to environmental protection' (2014) 7 *OIDA International Journal of Sustainable Development* 17.
82 DeLoyde & Mabee (n 11).
83 EMC Santos and others 'Mainstreaming revisited: Experiences from eight countries on the role of national biodiversity strategies in practice' (2023) 16 *Earth System Governance* 100177, https://doi.org/10.1016/j.esg.2023.100177 (accessed 19 September 2023).
84 Vrieling and others (n 15); Hummel (n 47).
85 United Nations Convention on Biological Diversity (CBD) Rio de Janeiro, 5 June 1992.
86 African Charter on Human and Peoples' Rights, adopted 27 June 1981, OAU Doc CAB/LEG/67/3 rev. 5, 21 ILM 58 (1982), entered into force 21 October 1986 (African Charter).

operationalisation of the L&D fund as agreed in COP 27 and integration of biodiversity in national plans and processes respectively.[87]

The Cancun Declaration on Mainstreaming the Conservation and Sustainable use of Biodiversity for Well-Being highlights the need to live in harmony with nature, and stresses out the need for additional efforts to ensure implementation of the Convention on Biological Diversity and facilitate closer collaboration with other initiatives adopted by international community.[88] The Kunming Declaration (KD) recognises the progress made under the 2011-2020 strategic plan of biodiversity, but is deeply concerned that the progress has been insufficient to realise some biodiversity targets, thus the ongoing biodiversity loss possesses risks to human health, social security and culture prosperity, and jeopardises the achievement of sustainable development goals (SDGs).[89]

The implementation plan of Sharm el-Sheik (COP 27) decision recognises the growing gravity , scope and frequency of L&D associated with adverse effects of climate change including forced displacement, and expresses the financial costs associated with L&D for developing countries, causing debt burden and impairing the Sustainable Development Goals (SDGs).[90] Violations of rights to a safe environment, mainly due to biodiversity loss, may also be linked to violations of other human rights and well-beings, thus requiring integrated policy approaches and implementation.

Human rights violations can take place even before people leave their countries of origin. These may include difficulties in accessing travel permits, interfering with the right to freedom of movement[91] that may violate the rights to social protection and social security. Article 9(2)(f) of the Kampala Convention on Internally Displaced Persons (CIDP) guarantees freedom of movement and choice of residence of internally-displaced persons (IDPs), except where the restriction on such movements is necessary, justified and appropriate to the requirements of ensuring security for the IDPs or maintaining public security, order or public health.[92] However, in most cases climate refugees are normally hosted in specified locations known as camps.

87 African Leaders Nairobi Declaration on Climate Change and Call to Action (DCCCA).
88 Cancun Declaration on Mainstreaming the Conservation and Sustainable Use of Biodiversity and Wellbeing (DMCSUBW) UNEP/CBD/COP/13/24 6 December 2016.
89 Kunming Declaration 'Ecological civilisation: Building a shared future for all life on earth' (KD) CBD/COP/15/5/Add.1 13 October 2021.
90 Report of the Conference of the Parties serving as the meeting of the parties to the Paris Agreement on its 4th session, held in Sharm el-Sheikh from 6 to 20 November 2022, FCCC/PA/CMA/2022/10 17 March 2023.
91 P Oberoi & E Taylor-Nicholson 'The Enemy at the gates: International borders, migration and human rights' (2013) 2 *Laws* 169-186, https://doi.org/10.3390/laws2030169 (accessed 9 October 2923).
92 African Union Convention for the Protection and Assistance of Internally Displaced Persons in Africa (Kampala Convention), adopted by the Special Summit of the African Union held in Kampala, Uganda, 23 October 2009.

Climate migration may cause insecurity especially in situations of severe resource scarcity that may lead to loss of assets. This threatens the right to social protection. Article 7 of the Protocol to the African Charter on Human and Peoples' Rights of Citizens to Social Protection guarantees social protection of migrants, and article 4 guarantees social insurance.[93] Even with these policies in place, many people lose assets due to climate-associated migration, especially when migration occurs on a voluntary basis. For instance, host communities in Northern Uganda suffer losses of assets including livestock to Karamojongs as they temporarily migrate with their livestock in search of water and pastures.[94]

When climate migration causes a population increase, it may lead to over-utilisation, reduction in ecosystem services and contamination of some natural resources. For instance, the lack of access to safe and clean water is a common problem at almost all refugee settlements. Linked to their responsibility, women are more affected as they experience difficulties in accessing water for their families. Article 15 of the Protocol to the African Charter on Human and Peoples' Rights on the Rights of Women in Africa (African Women's Protocol) ensures that women have the right to clean drinking water.[95] However, approximately 1,1 billion people lack access to clean water supplies and more than 2,6 billion people lack access to basic sanitation.[96]

A reduction in ecosystem services, including water shortages, may weaken agricultural production, hence leading to food insecurity that violates the right of access to food. Article 11 of the International Covenant on Economic, Social and Cultural Rights (ICESCR) recognises the right of everyone to an adequate standard of living for themselves and their families, including food and freedom from hunger.[97] Because agricultural production may cause environmental degradation, the realisation of article 11 will require an improvement in the methods of production, conservation and distribution of food through making full use of technical and scientific knowledge, dissemination of knowledge on principles of nutrition and reforming agrarian systems for efficient use of natural resources. A similar point can be made of article 15(b) of the African Women's Protocol which also recognises the rights of women to nutritious food.[98] However, recent data reveals that more than two billion people lack regular access to safe, nutritious and sufficient food, and an estimated 821 million people are not able

93 Protocol to the African Charter on Human and Peoples' Rights on the Rights of Citizens to Social Protection and Social Security (2022).
94 Abrahams (n 66).
95 Protocol to the African Charter on Human and Peoples' Rights on the Rights of Women in Africa, adopted 11 July 2003, entered into force 25 November 2005 (African Women's Protocol).
96 JN Maduelosi & MU Ezuluofor 'Education as a vaccine against girl child bullying' (2023) 4 *British Journal of Multidisciplinary and Advanced Studies* 1.
97 International Covenant on Economic, Social and Cultural Rights, adopted by General Assembly Resolution 2200A (XXI) (ICESCR).
98 African Women's Protocol (n 95).

to acquire sufficient food to meet the minimum dietary energy requirement.[99] This makes it difficult to achieve the SDG to eradicate poverty by 2030.

Food and water shortages may increase the likelihood of illness and death, which violates the right to good health and the right to life. The right to good health is protected in article 12 of ICESCR which provides that all people have a right to the enjoyment of the highest standard of physical and mental health.[100] The right to life is protected in article 4 of the African Charter which notes that every human being is entitled to respect for their life and the integrity of their person,[101] and in article 9 of the Kampala Convention which calls for the protection of the right to life during settlement.[102] Despite the existence of all the above-mentioned provisions, many people still die due to food shortages and contamination. For instance, two million people die every year due to water contamination.[103]

Climate displacement may increase government expenditures, and the need for more human capital and technological advancement diverts the states' attention from other development priorities to climate actions, therefore leading to a violation of the right to development which is protected in article 55(a) of the Charter of the United Nation (UN Charter), which calls for the promotion of economic growth and social progress and development,[104] article 1 of ICESCR which recognises that all people are entitled to economic, social and cultural development,[105] and article 3 of the Declaration on the Human Right to Development (DHRD) which recognises that states have the primary responsibility for the creation of national and international conditions favourable to the realisation of the right to development.[106]

Despite these policy frameworks, vulnerability to climate displacement remains alarming. The challenges in addressing climate change are increasingly becoming urgent with the window of opportunity seemingly closing due to the anticipated greater impact at a 2 degree Celsius. For instance, a 50 to 80 per cent cut in emissions by 2050 has been proposed as a means to limit GHG

99 A Allee, LR Lynd & V Vaze 'Cross-national analysis of food security drivers: Comparing results based on the Food Insecurity Experience Scale and Global Food Security Index' (2021) 13 *Food Security* 1245-1261, https://doi.org/10.1007/s12571-021-01156-w (accessed 27 May 2024).
100 ICESCR (n 97).
101 African Charter (n 86).
102 Kampala Convention (n 92).
103 AY Rosinger & A Brewis 'Life and death: Toward a human biology of water' (2020) 32 *American Journal of Human Biology* e23361, https://doi.org/10.1002/ajhb.23361 (accessed 27 May 2024).
104 Charter of the United Nations (adopted 26 June 1945, entry into force 24 October 1945) 1 UNTS XVI (UN Charter).
105 ICESCR (n 97).
106 Declaration on the Right to Development Resolution adopted by the General Assembly, A/RES/41/128, 4 December 1986.

abundance below 500 ppm CO 2-eq.[107] The realisation of the weakness of the current mitigation and adaptation measures, evidence of the increasing rise in global temperature, and concerns about the historical responsibility has caused long-term international debates that called for negotiation for a more equitable sustainable growth pathway.[108]

3 Integrated policy approach driven by the Paris Agreement

The integrated policy approach broadly refers to a process of embedding cross-cutting policy issues across compartmentalised, fragmented and siloed policy systems, and this may involve the integration of new policy issues into old policy processes.[109] The Paris Agreement (PA) is a legally-binding international treaty on climate change that was adopted by 196 parties at the conclusion of the twenty-first UN Climate Change Conference (COP21) in Paris, France, on 12 December 2015 after a long period (nearly 17 years) of negotiation.[110] It is the second global climate change treaty formed after the establishment of the Kyoto Protocol in 1998, but the first international treaty to dedicate an entire article to loss and damage.[111]

The agreement was notable for creating a unanimous, legally-binding accord in some key areas of climate change in spite of the complexity and difficulties relating to differing needs of developed and developing countries.[112] In particular, the PA addressed equity through establishing common but differentiated responsibilities and respective capabilities as a basic principle that requires developed countries to take the lead in curbing emissions.[113] The Kyoto Protocol previously had setbacks because countries, including the United States of America, did not ratify it, Russia and Japan did not join the second commitment period and countries including Canada withdrew from it due to different views regarding the developed and developing countries. As a replacement for the Kyoto Protocol, the PA has transformed the international climate regime from

107 J Ming-Suet Ng and others '"Genes, meet gases": The role of plant nutrition and genomics in addressing greenhouse gas emissions' in D Edwards & J Batley (eds) *Plant genomics and climate change* (2016) 149-172, https://doi.org/10.1007/978-1-4939-3536-9_7 (accessed 6 October 2023).

108 Zimm & Nakicenovic (n 5).

109 K Skagen & E Lerum Boasson 'Climate policy integration as a process: From shallow to embedded integration' (2024) 26 *Journal of Environmental Policy and Planning* 279-294, https://doi.org/10.1080/1523908X.2024.2334707 (accessed 27 May 2024).

110 SN Seo 'Beyond the Paris Agreement: Climate change policy negotiations and future directions: Beyond the Paris Agreement' (2017) 9 *Regional Science Policy and Practice* 121-140, https://doi.org/10.1111/rsp3.12090 (accessed 17 August 2023).

111 J Kreienkamp & L Vanhala 'Climate change loss and damage' (2017) *Global Governance Institute* 1-28 (accessed 7 October 2023).

112 D Hoad 'The 2015 Paris Climate Agreement: Outcomes and their impacts on small island states' (2016) 11 *Island Studies Journal* 315-320, https://doi.org/10.24043/isj.351 (accessed 10 August 2023).

113 Zimm & Nakicenovic (n 5).

a 'regulatory' to a 'catalytic and facilitative' model.[114] It provides an inclusive framework and relies on the concept of self-differentiation, based on the notion that each country is individually best placed to assess its capabilities in relation to mitigation policies.[115]

The treaty was therefore launched as a landmark international agreement whereby all nations agreed to take responsibility in reducing GHG emissions for the first time. However, it is based on voluntary emission reduction pledges, hence no legal framework binds party members' voluntary pledges.[116] At its core are the nationally determined contributions (NDCs) that specify national pledges to reduce GHG emissions and adapt to climate change in a sustainable manner.[117] Article 7(14) and article 14 of the treaty require all parties to do a regular global stock take of progress, while article 13 requires parties to make transparent frameworks to track progress on the implementation of their NDCs, and article 13 emphasises adaptation actions.[118] Parties are therefore obligated to create a five-yearly assessment of observed adaptation to track progress and enable appropriate future commitments.[119]

As also prioritised by the 196 parties to the Convention on Biological Diversity, the inclusion of actions for addressing biodiversity loss by the parties to PA in their NDCs provides an essential opportunity to combat biodiversity loss as different ecologies are unique and may require specific actions.[120] Addressing direct and indirect drivers of biodiversity loss requires integrated policy approaches and coherent implementation.[121] Despite the progress so far, the global stock take, which should have been concluded at COP 28, is anticipated to be far from reaching the goal due to the inconsistencies in pledges made provided by the NDCs.[122] Furthermore, the current adaptation reporting requirements are not sufficient to enable countries to provide complete, transparent or

114 T Hale '"All hands-on deck": The Paris Agreement and non-state climate action' (2016) 16 *Global Environmental Politics* 12-22, https://doi.org/10.1162/GLEP_a_00362 (accessed 7 October 2023).

115 J Bednarek 'Is the EU realising an externally just green transition? An analysis of the carbon border adjustment mechanism from the perspective of the common but differentiated responsibilities principle' (2023) *SSRN Electronic Journal*, https://doi.org/10.2139/ssrn.4434079 (accessed 7 October 2023).

116 Seo (n 110).

117 C Tolliver, AR Keeley & S Managi 'Drivers of green bond market growth: The importance of nationally determined contributions to the Paris Agreement and implications for sustainability' (2020) 244 *Journal of Cleaner Production* 118643, https://doi.org/10.1016/j.jclepro.2019.118643 (accessed 7 October 2023).

118 A Lesnikowski and others 'What does the Paris Agreement mean for adaptation?' (2017) 17 *Climate Policy* 825-831, https://doi.org/10.1080/14693062.2016.1248889 (accessed 16 August 2023).

119 EL Tompkins and others 'Documenting the state of adaptation for the global stocktake of the Paris Agreement' (2018) 9 *WIREs Climate Change*, https://doi.org/10.1002/wcc.545 (accessed 16 August 2023).

120 JS Simmonds and others 'Moving from biodiversity offsets to a target based approach for ecological compensation' (2020) 13 *Conservation Letters* e12695.

121 Santos and others (n 83).

122 T Ourbak & L Tubiana 'Changing the game: The Paris Agreement and the role of scientific communities' (2017) 17 *Climate Policy* 819-824, https://doi.org/10.1080/14693062.2017.1348331 (accessed 7 October 2023).

consistent reports of their adaptation activities.[123] The UNFCCC recognises that achievement of the NDCs depends greatly on the availability of financial and technological support to developing countries.

Supported by article 9, PA's obligation for developed country parties to provide financial support to assist developing country parties with mitigation and adaptation efforts led to the agreement to mobilise not less than $100 billion annually.[124] Serving as the fourth session, decisions 2 and 3 of the PA established the new fund for responding to loss and damage, and decision 4 established a transitional committee to assist on the operationalisation of the new funding arrangements for responding to loss and damage.[125] However, the committee still lacks clarity on the sources and scope of the application of the new funding arrangements.[126]

Yet, Africa faces financial deficits. Between about $1.3 trillion and $1.6 trillion, averaging $1.4 trillion, will be needed between 2020 and 2030 to implement Africa's climate action commitments and NDCs, while accessing the current fund is difficult for vulnerable communities due to application complexities and delays in disbursement.[127] The existing financial opportunities should be transformed to enable the timely disbursement of funds. For the new funding arrangements, more clarity should be given to the transition committee to guide them on the scope and mode of application of the funds. A policy arrangement that protects the rights of groups in vulnerable situations, such as Indigenous Peoples, the youth, persons with disabilities and women, is key. Such a policy approach also requires the inclusion and prioritisation of biodiversity enhancement actions in the NDCs of states.[128]

4 Conclusion

The challenges in addressing climate change are increasingly becoming urgent with windows of opportunity seemingly closing due to its anticipated greater impacts. L&D is associated with climate change in developing countries and

123 J Ellis & S Moarif 'Identifying and addressing gaps in the UNFCCC reporting framework' OECD/IEA Climate Change Expert Group Papers, vol 2015/07, OECD/IEA Climate Change Expert Group Papers (1 November 2015), https://doi.org/10.1787/5jm56w6f918n-en (accessed 7 October 2023).

124 JA Leggett 'The United Nations Framework Convention on Climate Change, the Kyoto Protocol, and the Paris Agreement: A summary' UNFCCC, New York 2 (2020) (accessed 5 October 2023) Paris Agreement (PA).

125 As above. Decision 2/CMA.2 'Warsaw International Mechanism for Loss and Damage associated with Climate Change Impacts and its 2019 review' 2021; Decision -/CMA.3 'Glasgow Climate Pact' 2022; Decision; Decision 2/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' FCCC/PA/CMA/2022/10/Add.1.

126 Leggett (n 24).

127 V Songwe, N Stern & A Bhattacharya 'Finance for climate action: Scaling up investment for climate and development' Grantham Research Institute on Climate Change and the Environment, London School of Economics and Political Science, London.

128 Jellis & Moarif (n 123).

negatively affects human and natural systems. More importantly, as the article has illustrated, it has occasioned displacement in different parts of Africa. This development has implications for groups such as women, children, the youth, elderly and Indigenous Peoples mostly in developing countries that are highly dependent on climate-sensitive resources and with low technological, financial and adaptive capacities. The need to address mobility induced by L&D requires an integrated policy approach and a coherent implementation strategies in Africa.

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Environmental migrants as victims of 'ecological disorganisation'? Reflections from the Omo-Turkana case study

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Abstract: This article argues that scholarship's attempts to define and protect environmental migration based on a priori categories fail to grasp the complexity of the phenomenon. In particular, most (working) definitions do not recognise environmental victims or victims of ecological disorganisation, as environmental migrants, thus excluding them from recognition and protection. The article deploys an interdisciplinary analysis, based on international human rights law and green criminology to demonstrate that environmental victims may be forced to leave their country and be subjected to severe human rights violations akin to migrants fleeing natural hazards and disasters. Therefore, the article concludes that protection should not be based on labelled environmental causes of migration, rather on their consequences in terms of human rights violations.

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Key words: ecological disorganisation; environmental migrants; environmental migration; human rights

1 Setting the scene for the framing of environmental migration

Despite increasing evidence, data, and awareness of the role played by environmental factors on migration, a legal protection framework for people compelled to flee due to environmentally-related factors is persistently missing at the international level.[1] This is also due to the fact that a holistic definition able to provide comprehensive protection has not been achieved so far, notwithstanding relevant attempts in this direction. In 2007, for instance, the International Organisation for Migration (IOM) set forth a working definition of 'environmental migration', which partially reflects the complexity of the phenomenon.[2] In particular, it covers internal and international movements of both voluntary and forced nature, while stressing the relevant link between changes in the environment, including climate change and migration. Despite these benefits, which justify our choice to use this definition throughout the article, this attempt has not achieved consensus at the international level. Moreover, it does not explicitly refer to environmental harms caused by human activities. Such an exclusion severely limits its scope of application and risks leaving people compelled to flee because of man-made hazards behind. Most other working definitions that have been promoted over the years by scholars similarly neglect the role played by harmful environmental activities in triggering migration and further distinguish between natural or man-made, sudden or slow-onset, environmental or climate drivers.

1 The sources supporting such evidence are increasingly vast. Among many others, see J McAdam 'Displacement in the context of climate change and disasters' in C Costello, M Foster & J McAdam (eds) *The Oxford handbook of international refugee law* (2021) 832; DJ Cantor 'Environment, mobility, and international law: A new approach in the Americas' (2021) 2 *Chicago Journal of International Law* 263; L van Praag and others (eds) *Migration and environmental change in Morocco* (2021); M Ammer, M Mayrhofer & M Scott 'Disaster-related displacement into Europe: Judicial practice in Austria and Sweden' (2022) ClimMobil Report; M Mayrhofer & M Ammer 'Climate mobility to Europe: The case of disaster displacement in Austrian asylum procedures' (2022) 4 *Frontiers* 1; T Wood 'Protection and disasters in the Horn of Africa: Norms and practice for addressing cross-border displacement in disaster contexts' (2013) The Nansen Initiative; C Scissa 'The climate changes: Should EU migration law change as well? Insights from Italy' (2022) 1 *European Journal of Legal Studies* 5. See also IDMC *Global report on internal displacement* (2021); CB Field and others *IPCC, 2014: Climate change 2014: Impacts, adaptation, and vulnerability. Part A: Global and sectoral aspects. Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change* (2014); HO Pörtner and others (eds) *Climate change 2022: Impacts, Adaptation and Vulnerability'. Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change* (2022); The Nansen Initiative *Agenda for the Protection of Cross-Border Displaced Persons in the Context of Disasters and Climate Change* (2015).

2 IOM *Discussion note: Migration and the environment* (2007) 33: 'Persons or groups of persons who, for reasons of sudden or progressive changes in the environment that adversely affect their lives or living conditions, are obliged to leave their habitual homes, or choose to do so, either temporarily or permanently, and who move either within their country or abroad.'

Thus far, academic proposals addressing the issue may be primarily categorised according to (a) the breadth of environmental factors considered, caused broadly by environmental events versus by the sub-category of climate change-related events;[3] (b) the nature of the migration trigger, such as natural hazards versus man-made disasters;[4] (c) the graduality of the event, such as slow-onset versus sudden-onset events;[5] (d) the protection status to be issued, namely, refugee versus complementary protection statuses;[6] (e) the spatial dimension, for instance, internal versus international movements;[7] (f) the temporal dimension, such as temporary versus permanent migration;[8] (g) the level of willingness to move, meaning voluntary movement versus forced migration;[9] (h) the prominence given to environmental harm, where environmental harm is seen either as the main cause of migration or one among the complex set of adverse drivers;[10] (i) the legal framework designed to provide protection at the international, regional or national levels.[11]

Similarly, national provisions providing for protection against environmental causes of migration mostly refer only to natural hazards, thus ignoring the relevance of harmful environmental activities in triggering migration movements. For instance, Angola and Iceland grant protection against natural disasters.[12] Similarly, Cuba foresees protection to persons leaving their country 'due to

3 Among others, F Bierman & I Boas 'Preparing for a warmer world: Towards a global governance system to protect climate refugees' (2010) *Global Environmental Politics* 10; B Docherty & T Giannini 'Confronting a rising tide: A proposal for a convention on climate change refugees' (2009) 33 *Harvard Environmental Law Review* 349; A Williams 'Turning the tide: Recognising climate change refugees in international law' (2008) 30 *Law and Policy* 30; N Myers & J Kent *Environmental exodus: An emerging crisis in the global arena* (1995).

4 Among others, DC Bates 'Environmental refugees? Classifying human migration caused by environmental change' (2002) 23 *Population and Environment* 465; Bierman & Boas (n 3); N Myers 'Environmental refugees: A growing phenomenon of the 21st century' (2002) 357 *Philosophical Transaction B* 609.

5 Bierman & Boas (n 3); F Renaud and others *Control, adapt or flee. How to face environmental migration?* (2007) 5.

6 Among others, E El-Hinnawi *Environmental Refugees* (1985); Bates (n 4); Bierman & Boas (n 3); Docherty & Giannini (n 3); IOM *World Migration report: Managing labour mobility in the evolving global economy* (2008); W Kälin 'Conceptualising climate-induced displacement' in J McAdam (ed) *Climate change and displacement: Multidisciplinary perspectives* (2010) 81; V Kolmannskog & F Myrstad 'Environmental displacement in European asylum law' (2009) 11 *European Journal of Migration and Law* 313; N Subramanian & J Urpelainen 'Addressing cross-border environmental displacement: When can help?' (2013) 14 *International Environmental Agreements: Politics, Law and Economics* 14; Renaud and others (n 5); AH Westing 'Environmental refugees: A growing category of displaced persons' (1992) 19 *Environmental Conservation* 201; JL Jacobson *Environmental refugees: A yardstick of habitability* (1988).

7 D Hodgkinson and others 'Towards a convention for persons displaced by climate change: Key Issues and preliminary responses' (2008) 8 *New Critic* 8.

8 El-Hinnawi (n 6 above); IOM (n 6); Myers & Kent (n 3); UNDESA/DSD & UNU-EHS *Environmentally induced migration and sustainable development* (2011).

9 Kälin (n 6); IOM (n 6).

10 El-Hinnawi (n 6); Bates (n 4); Bierman & Boas (n 3); Docherty & Giannini (n 3); IOM (n 6); Kälin (n 6); Kolmannskog & Myrstad (n 6); Subramanian & Urpelainen (n 6); Renaud and others (n 5).

11 R Zetter *Protecting environmentally displaced people: Developing the capacity of legal and normative frameworks* (2011); Bierman & Boas (n 3); Docherty & Giannini (n 3); Williams (n 3); Myers & Kent (n 3); German Advisory Council on Global Change *World in transition: Climate change as a security risk* (2007).

12 C Hansen-Lohrey 'Assessing serious disturbances to public order under the 1969 OAU Convention, including in the context of disasters, environmental degradation and the adverse

cataclysm or other phenomena of nature'.[13] Domestic laws in Argentina and Ecuador protect migrants fleeing natural or environmental disasters.[14]. The US provides a temporary protection status to persons displaced by, among others, environmental disasters, which may include 'an earthquake, flood, drought, epidemic, or other environmental disaster in the state resulting in a substantial, but temporary, disruption of living conditions in the area affected by the disaster'.[15] An exception is provided for by Italy, which provides different forms of protection to migrants fleeing their country not only on account of 'natural disasters', slow-onset hazards and calamities, but also harmful environmental activities such as irreparable pollution due to oil spills.[16]

The phenomenon of environmental migration could hardly be portioned into *ad hoc* legal categories focusing on selected variables. This in fact risks leading to the creation of narrow and fragmented labels, which would ultimately obscure the multifaceted and complex relations between migration and environmental dynamics. In our view, building a definition on *a priori* categories of factors able to trigger environmental migration can hardly reflect the complexity of the phenomenon and risk obscuring societal responsibilities connected to environmental migration. In particular, human activities harming the environment are rarely included among the causes triggering environmental migration, thus excluding people affected by them from recognition and protection.

In this article, we take a stance against such a fragmented approach as it falls short in considering the structural causes forcing people to flee. In other words, the choice to ground (working) definitions, and related protection schemes, upon narrow and pre-selected options could veil the need to engage in a more structured fashion with the different multifaceted aetiologies underpinning environmental migration. These could obviously include natural hazards. However, a proper understanding of the phenomenon should necessarily consider the role played by systemic processes of 'ecological disorganisation' characterising the Anthropocene. This article focuses on this latter aspect.

Specifically, we argue that environmental migration could be aetiologically connected to processes of 'ecological disorganisation' resulting from (neo-liberal) dynamics of production and consumption. 'Ecological disorganisation' includes an array of potential disruptive factors, including widespread disposal of toxic waste, soil contamination, biodiversity depletion, soil degradation. To highlight such a connection without reproducing case-by-case categorisations,

effects of climate change' (2023) UNHCR Legal and Protection Policy Research Series 7; Parliament of Iceland Foreign Nationals Act 80 of 2016 art (43).

13 Reglamento de la Ley de Migraciones Decreto 26 de 1978 art (80).

14 Reglamentación de la Ley de Migraciones Decreto 616 de 2010 sec 24(h); Ley Organica de Movilidad Humana, Suplemento – Registro Oficial 938 de 2017 art (58).

15 R Bernstein Murray & S Petrin Williamson *Migration as a tool for disaster recovery: A case study on US policy options for post-earthquake Haiti* (2011).

16 Scissa (n 1) 14.

this article suggests shifting the focus from *pre-selected* and potentially misleading lists of triggers of environmental migration to the *ex post* evaluation of the consequences stemming from harmful environmental activities in terms of human rights violations. In short, we suggest shifting the perspective from the remit of abstract labels to the realm of factual environmental harms caused by ecological disorganisation. We believe that a deeper understanding of the complex phenomenon of environmental migration, which goes far beyond natural disruptions, benefits from such a harm-based approach as it succeeds in encompassing also those who are usually left out from (working) definitions of environmental migration. Furthermore, the focus on the consequences of environmental harm instead on the causes of flight puts emphasis on human rights breaches and state obligations to respect, to protect and to fulfil the human rights of environmental migrants. This would allow protection instruments to better tackle comprehensively human rights violations linked to environmental factors.

To do so, we combine a conceptual analysis with a legal mindset. More into detail, our research on the relation between ecological disorganisation and environmental migration situates within the broader horizon of green criminological perspectives on ecological issues and related processes of environmental victimisation. By taking this perspective, we conceptualise people forced to leave due to environmental harm as environmental victims. We then use the case study concerning the Omo-Turkana basin to substantiate our argument. This ultimately allows us to infer that 'environmental migrants' is a broad category that *ought to* embed both those who are 'victims' of natural hazards – who are usually recognised as such and granted protection – as well as those who are victims of harmful processes of environmental disorganisation, and thus fall outside protection.

Methodologically, we adopt a mainly descriptive stance based on socio-legal scholarship developed within the realm of international human rights law and critical green criminological studies. This criminological literature will assist conceptualising environmental victimhood, combined with a legal approach in the discussion of the environmental harm's criteria. We selected the Omo-Turkana basin as case study for it provides exemplificative support to the conceptual analysis of this article. In particular, our analysis of this case study is based upon second-hand sources. Among the vast material on this case, we selected contributions by academic scholarship and civil society organisations that empirically found a link between environmental harms and migration movements. In light of the foregoing, we argue for potential human rights violations against concerned populations grounded on international human's rights instruments such as the United Nations (UN) International Covenant on Civil and Political Rights (ICCPR) and the International Covenant on Economic, Social and Cultural Rights (ICESCR).

This article is organised as follows. Following this introduction, part 2 introduces the notion of 'environmental disorganisation' as adopted within green criminological perspectives. On this ground, part 3 then provides a green criminological harm-based understanding of environmental victimhood. Part 4 illustrates the case study, concerning the construction of mega-dams (Gibe I, II and III) by Ethiopia alongside the Ethiopian Gibel Gibe and Omo rivers and the Kenyan Lake Turkana. This case is emblematic of human-induced alterations of an ecosystem and related acute effects on human beings. By assessing potential human rights violations against indigenous groups in the Omo-Turkana basin, part 5 suggests a connection between environmental victimisation and forced migration. Part 6 argues that considering environmental migrants in terms of environmental victims would not only better reflect the multifaceted nature of the phenomenon, but it would also let protection instruments relying on such definitions to comprehensively tackle human rights violations linked to environmental factors. Part 7 offers some concluding observations.

2 Environmental disorganisation in the green criminological scholarship

Referring to 'victims of ecological disorganisation', this article (culturally) situates itself within the horizons of green criminological perspectives,[17] which are 'broadly concerned with human rights, abuse of power, and human suffering irrespective of whether the circumstances are within the ambit of law'.[18] Differently from orthodox criminology, green criminology explores environmental offences[19] and victimisation in terms of harm, injustice and inequalities in relation to societal structures of power imbalances.[20] Specifically, in the so-called age of 'ecological collapse',[21] green criminology is pioneering in tracing the roots of many environmentally-disruptive activities within the founding features of our societies and economies and their underlying power structures and interests.[22]

Green criminology has emerged as a multidisciplinary and intersectional perspective, primarily grounded in the observation of reality.[23] Its founding

17 Green criminology is not a theory on its own. It rather unfolds as a multidisciplinary discipline, or rather a perspective. On green criminology, see, among the others, MJ Lynch 'The greening of criminology. A perspective for the 1990s' (1990) 2 *Critical Criminology* 3; V Ruggiero & N South 'Critical criminology and crimes against the environment' (2010) 18 *Critical Criminology* 245; R White *Global environmental harm. Criminological perspectives* (2010).

18 C Williams 'An environmental victimology' reprinted in R White (ed) *Environmental crime: A reader* (2009) 200-202.

19 Offence is here meant broadly as to encompass criminal, administrative, and civil illicit behaviours.

20 A Brisman & S Nigel *Routledge international handbook of green criminology* (2020).

21 MJ Lynch 'Green criminology and environmental crime: Criminology that matters in the age of global ecological collapse' (2020) 1 *Journal of White Collar and Corporate Crime* 50.

22 L Bisschop *Governance of the illegal trade in e-waste and tropical timber. Case studies on transnational environmental crime* (2015).

23 R Ellefsen and others (eds) *Eco-global crimes contemporary problems and future challenges* (2012); A Brisman *Introdução à criminologia verde: Perspectivas críticas, descoloniais e do Sul* (2022) Tirant Brasil.

aim is to extend the gaze beyond the narrow remit of legally-defined criminal, administrative or civil liabilities to encompass the dimension of what *is* (il) legal as well as, and above all, what *ought to be* illegal.[24] To achieve this objective, green criminology investigates hidden forms of victimisation through the interdisciplinary, or inter-sectoral,[25] 'harm' criterion.[26] This criterion, which traces the social and political origins of certain harmful yet legal behaviours and their factual consequences in the social realm, reflects the broad social harm approach adopted by Hillyard and Tombs. This approach is decoupled from the judicial findings of criminal, administrative or civil liabilities, and draws attention to the interplay between victimisation processes and the societal dynamics prompted by power structures.[27] Environmental harm, therefore, includes aspects pertaining to the physical, economic, emotional, psychological, as well as cultural spheres.

Ecological disorganisation is a theoretical approach that intersects with theories of social disorganisation,[28] political economy and critical studies, such as green criminology. It has evolved from, and theoretically supports, green criminological empirical research devoted to explore the ontological systemic links between green crimes, injustice, and the structural organisation of capitalism from a political economic standpoint.[29] It ties ecological changes and harms stemming from the steering forces of capitalism together by 'drawing attention to the ways in which human preferences for organising economic production consistent with the objectives of capitalism are an inherent contradiction with the health of the ecological system'.[30] In other words, ecological disorganisation refers to the capitalist forces that trigger often irreversible alterations in bio-systems through pollution, consumption and exploitation of natural resources. Therefore, this notion discloses the belief that the understanding of green crimes and violence against the planet could not be disentangled from the history of

24 T Spapens, R White & M Kluin *Environmental crime and its victims. Perspectives within green criminology* (2014).

25 M Hall *Victims of environmental harm. Rights, recognition and redress under national and international law* (2013).

26 A Nurse 'Green criminology: Shining a critical lens on environmental harm' (2017) 3 *Palgrave Communication* 1.

27 P Hillyard & S Tombs 'Beyond criminology?' in P Hillyard and others (eds) *Beyond criminology: Taking harm seriously* (2004) 10-29.

28 Social disorganisation theories suggest that major changes in urban areas are the result of capitalism-driven large-scale social transitions such as industrialisation and urbanisation. On these theories, and their contribution to cross-cultural criminological studies, see R Bennet 'Development and crime: A cross-national time series analysis of competing models' (1991) 32 *Sociological Quarterly* 346-63. On the connection of these theories with ecological issues, with focus on social impacts of natural resources extraction on local populations, see DS Shoko 'Small-scale mining and alluvial gold panning within the Zambezi basin: An ecological time bomb and tinderbox for future conflicts among riparian states' paper presented at the ninth conference of the International Association of the Study of Common Property The Commons in an Age of Globalisation, Victoria Falls, Zimbabwe (17-21 June).

29 MJ Lynch & MA Long 'Green criminology: Capitalism, green crime and justice, and environmental destruction' (2022) 5 *Annual Review of Criminology* 255; MJ Lynch and others *Green criminology and green theories of justice: An introduction to a political economic view of eco-justice* (2019).

30 MJ Lynch and others 'Is it a crime to produce ecological disorganisation? Why green criminology and political economy matter in the analysis of global ecological harms' (2013) 53 *British Journal of Criminology* 997.

capitalism and from its inherent contradictory and conflicting relation with nature.[31]

This theoretical construct has then prompted additional strands of research, such as the treadmill of production (ToP) theory.[32] The ToP points to capitalism's inherent necessity to destroy nature to fuel the growth of production and, ultimately, profit accumulation. This interpretation of the capitalism-nature relationship resonates strong in the work of McCarthy and Prudham who claim that neo-liberal capitalism *necessarily* is an environmental project, that is, an ontological project of environmental destruction.[33]

The connection between green criminological perspectives and the theoretical notion of 'ecological disorganisation' reveals more than a cultural affinity. It rather represents a synergy that uncovers qualified victimisation processes. Green criminology focuses on harms, thereby acknowledging environmental 'victims' even where formal legal violations are absent. Concurrently, 'ecological disorganisation' pinpoints the aetiology of the harms that lead to such victimisation within the extractive capitalist logics at the heart of our societies. On this foundation, Lynch and others pose the though-provoking question on whether 'ecological disorganisation' should not be conceived, from a green criminological perspective, in terms of a crime of capitalism against nature and its related social spheres.[34]

This theoretical frame allows inferring that forced environmental migrants and environmental victims are intertwined when migration is the direct outcome of such destructive processes of ecological disorganisation. Consequently, 'ecological disorganisation' is hereby referred to as activities transforming nature for economic purposes: The environmental harms pertinent to this article arise from such disorganisation.

3 Environmental victimisation

'Environmental victim' is a complex notion that raises multiple complex issues in terms of legal and procedural recognition of it.[35] At the international level,

31 Lynch and others (n 30) 1009.

32 A Schnaiberg *The environment: From surplus to scarcity* (1980); P Stretesky and others *The treadmill of crime. Political economy and green criminology* (2014). Despite differences, ecological Marxism falls within these strands, as it presents capitalism-nature relations in terms of radical contradictions and conflicts. See JB Foster *Marx's ecology: Materialism and nature* (2000); K Saito *Karl Marx's ecosocialism: Capital, nature, and the unfinished critique of political economy* (2017).

33 J McCarthy & S Prudham 'Neoliberal nature and the nature of neoliberalism' (2004) 35 *Geoforum* 275.

34 Lynch and others (n 30) 1005.

35 Hall (n 25); E Skinnider *Victims of environmental crime – Mapping the issues* (2011); H Croall 'Victims of white-collar and corporate crime' in P Davies and others (eds) *Victims, crime and society* (2007) 78.

a definition of environmental victim is still missing except for the 1994 UN Commission on Crime Prevention and Criminal Justice that adopted a resolution on environmental crimes, urging states to consider including 'the rights of identifiable victims in their legal systems, victims assistance, facilitation of redress and monetary compensation'.[36]

For the purposes of this work, it should be highlighted that most of the issues and uncertainty surrounding environmental victimisation rest within the binomial association victim-crime. Specifically, this is problematic because what 'crime' *is* ultimately depends on how society considers certain conducts. Criminalisation in fact is the outcome of entrenched social, political, economic, and cultural factors that shape the axiological foundations of that society.[37] Therefore, the conception of what is '*lawful but awful*' largely varies according to the type of society in which the harmful conduct occurs. Shades characterising what environmental crime entails ultimately determine uncertainty regarding the understanding of environmental victimhood.[38]

This is where green criminology intervenes by bringing a fresher and critical perspective on the matter, for it questions the legitimacy of this binomial association victim-crime on the empirical and theoretical ground that most polluting and environmentally destructive human practices are not only sanctioned but also promoted by states. Already in 1996, Williams was pioneering in acknowledging the 'limits of law' in addressing environmental victimisation.[39] Also drawing from concepts of environmental justice, he coherently advocated a broader definition of environmental victim as 'those of the past, present or future generation who are injured as a consequence of change to the chemical, physical, microbiological or psychological environment, brought about by deliberate or reckless, individual or collective, human act or omission'.[40]

While this definition has long served as the principal reference point for identifying environmental victims, it has become incongruous with the evolving ethos of green criminological research, which extends beyond the confines of legal remit. This is because Williams built such definition upon the legalistic 'injury' criterion to ensure judicial workability within legal systems. However, this criterion is narrower than the social harms advocated by Hillyard and Tombs, for it is bound to judicial determinations of liability. Differently, harms-based criteria, which are disentangled from 'unlawful harms', align better with green criminological perspectives on environmental victims,[41] conceptualised as 'real,

36 UN Economic and Social Council *The role of criminal law in the protection of the environment* (1994).
37 Skinnider (n 35); MJ Lynch & P Stretesky 'The meaning of green: Contrasting criminological perspectives' (2003) 7 *Theoretical Criminology* 217.
38 N Passas 'Lawful but awful: 'Legal corporate crimes'' (2005) 34 *Journal of Socio-Economics* 771.
39 Williams (n 18 above) 16.
40 Williams (n 18) 35.
41 R White *Environmental harm: An eco-justice perspective* (2014).

complex, contradictory, and often politically inconvenient victims'.[42] In short, social harm approaches allow detecting environmental detrimental activities that not only stem from entirely lawful activities but also receive the state's political/economic support.[43] As further analysed, the Omo-Turkana case exemplifies environmental disruptions that, in Skinnider's words 'are actually legal and take place with the consent of society',[44] and that often are instrumental in preserving the ruling classes' power, as this article's case study highlights.

In light of the foregoing, we rely upon the environmental harm approach as developed by the green criminological scholarship to showcase the connection between environmental migration and environmental victims.[45] The choice to assess victimisation from a harm perspective is a path already explored by the international legal framework. In this respect, a promising starting point is the UN Declaration of Basic Principles of Justice for Victims of Crime and Abuse of Power, of which article 18 provides a definition for victims of abuse of power that includes actions and omissions that do not constitute crimes, but simply lead to a person or persons suffering harm. In this respect, we shall not attempt to reach a formal definition of this parameter. As White recommends, one should discuss harm on the basis of the real world of conflicts over rights outside formal labels.[46] However, the assessment of environmental harm and related victimhood cannot be established only by considering individuals' subjective perception of harm, as pointed out by Williams.[47] Therefore, for the purpose of legal certainty, the following analysis assesses harm by relying upon two objective criteria, entailing both an empirical and a legal dimension: Environmental degradation and human rights.

3.1 Environmental degradation and human rights

As for the empirical criterion, we suggest relating environmental harm with processes of environmental degradation. The UN Office for Disaster Risk Reduction (UNDRR) defines environmental degradation as the reduction of the capability of the environment to meet social and ecological objectives and needs.[48] This definition highlights both the physical harm against the natural

42 T Kearon & B Godey 'Setting the scene: A question of history' in S Walklate (ed) *Handbook of victims and victimology* (2007) 17.

43 C Gibbs and others 'Introducing conservation criminology: Towards interdisciplinary scholarship on environmental crimes and risks' (2010) 50 *British Journal of Criminology* 124 define the notion of 'deep' green perspective which construes environmental crime as any human activity that disrupts a biotic system.

44 Skinnider (n 35) 2. At 16, Skinnider notes that 'it can be difficult to fully separate the question of what is illegal from what should be illegal'.

45 On this criterion, see White (n 17); T Spapens and others *Environmental crime and its victims perspectives within green criminology* (2014); Hall (n 25); L Natali *Green criminology. Prospettive emergenti sui crimini ambientali* (2015).

46 White (n 17).

47 Williams (n 18) 16.

48 UNDRR *United Nations International Strategy for Disaster Reduction (UNDRR) Secretariat Evaluation* (2010).

matrices and its social dimension. In other words, the sustainability of human livelihood is strictly linked to the preservation of the environment and depends on one another. A non-exhaustive list of examples of man-made processes of environmental degradation includes a 'land misuse, soil erosion and loss, desertification, wild land fires, loss of biodiversity, deforestation, mangrove destruction, land, water and air pollution, climate change, sea level rise and ozone depletion'.[49] The UNDRR definition, though, falls short in explaining how to assess when 'the reduction of the capability of the environment to meet social and ecological objective' occurs. In other words, it is unclear what is the required threshold of serious or significant degradation for the physical criterion of environmental harm to be met. To address this issue, as later discussed, we will follow a socio-ecological system lens to discuss environmental degradation within the context of the Omo-Turkana case study.

With regard to the legal criterion, Hall discusses the impacts of environmental harm on health, economic, and socio-cultural aspects.[50] Similarly, Williams and White suggest connecting environmental victimisation with human rights violations and abuse of power.[51] In the same vein, we adopt a human rights-based approach to assess environmental victimhood. To this end, the two 1966 international covenants are of guidance. Notably, ICESCR and ICCPR set forth essential obligations to respect, fulfil and promote human rights, also in the context of harmful environmental activities.[52] The Committee on Economic, Social and Cultural Rights (ESCR Committee) noted already in 2018 that '[q]uite apart from such voluntary commitments made under the climate change regime, however, all states have human rights obligations, which should guide them in the design and implementation of measures to address climate change'.[53]

This interpretation has been endorsed also by the ICCPR treaty-monitoring body, the UN Human Rights Committee (UN HRC) in its General Comment 36 on the right to life. In this respect, it made clear the connection between environmental degradation and states' obligation under the international human rights regime, by stating that '[e]nvironmental degradation, climate change and unsustainable development constitute some of the most pressing and serious

49 As above.
50 Hall (n 25) 27.
51 Williams (n 18) and White (n 17) suggest referring to victims of abuse of power as defined by the UN General Assembly's 1985 Declaration of Basic Principle of Justice an Abuse of Power, as 'persons who, individually or collectively, have suffered harm, including physical or mental injury, emotional suffering, economic loss or substantial impairment of their fundamental rights'.
52 A Pillay 'Economic, social and cultural rights and climate change' in OC Ruppel and others (eds) *Climate change: International law and global governance* (2013) 243; UN Economic, Social and Cultural Rights Council General Comment 15 on the Right to Water (2012) para 28; ESCR Committee General Comment 14 on the right to health (2000) para 27.
53 ESCR Committee Climate change and the International Covenant on Economic, Social and Cultural Rights (2018) para 20.

threats to the ability of present and future generations to enjoy the right to life.'[54] It goes further, by stressing:[55]

> The implementation of the obligations to ensure the right to life, and in particular life with dignity, depends, *inter alia*, on measures taken by States parties to preserve the environment and protect it against harm, pollution and climate change caused by public and private actors. States parties should therefore ensure sustainable use of natural resources, develop and implement substantive environmental standards, conduct environmental impact assessments and consult with relevant States about activities likely to have a significant impact on the environment, provide notification to other States concerned about natural disasters and emergencies and cooperate with them, provide appropriate access to information on environmental hazards and pay due regard to the precautionary approach.

Increasingly, international and regional monitoring bodies have recognised the environmental implications stemming from the breaches of such international human rights obligations. For instance, in the case *Social and Economic Rights Action Centre (SERAC) & Another v Nigeria* (*SERAC*) before the African Commission on Human and Peoples' Rights (African Commission), Nigeria was held responsible for the drastic health and environmental impacts of oil exploration in Ogoniland due to the contamination of water on indigenous land with lead and mercury affecting the community's health, particularly that of the children.[56] Similarly, the UN Commission on Human Rights has stated that the contamination of the areas inhabited by people by various toxic wastes is considered a violation of fundamental social and economic rights.[57] More recently, the UN HRC observed that Paraguay failed to prevent and control the toxic contamination of indigenous lands in violation with the indigenous community's rights.[58] The use of fumigation and illicit agrochemicals for a decade drastically reduced the natural resources needed to support their survival, largely based on subsistence crops, hunting and fishing. Environmental harm led to a number of intangible repercussions, such as severe health issues and a loss of traditional knowledge, indigenous rituals as well as community structure as families were forced to leave their land.

4 The Omo-Turkana case study

Ethiopia has for a long time experienced the severe challenges correlated to climate change and harmful environmental activities.[59] In particular, invasive development projects are further exacerbating Ethiopians' vulnerability and loss

54 ESCR Committee General Comment 36 on the right to life with dignity (2018) para 62.
55 As above.
56 (2001) AHRLR 60 (ACHPR 2001).
57 UN Commission on Human Rights *Adverse effects of the illicit movement and dumping of toxic and dangerous products and wastes on the enjoyment of human rights by the Special Rapporteur on Toxic Waste, Fatma-Zohra Ouhachi-Vesely* (2001).
58 *Portillo Cáceres v Paraguay* Communication 2751/2016 UN Human Rights Committee (20 September 2019) UN Doc CCPR/C/126/D/2751/2016.
59 NA Webster 'Ethiopia, climate change and migration' (2019) *DIIS Comment*.

of livelihood. Ethiopia, in fact, has massively invested in hydropower dams.[60] The development of such infrastructures has been pursued since 2005 by the former ruling coalition, the Ethiopian People's Revolutionary Democratic Front (EPRDF), to exploit the country's enormous hydroelectric capability, estimated to range between 30 000 and 45 000 MW.[61] The Ethiopian government aimed to fulfil its economic and political ambitions to make Ethiopia the main energy provider of the region, able to export electricity to neighbouring countries, such as Kenya, Djibouti and Sudan. Such expansive policies reflected EPRDF's attempts to resort to an authoritarian model of 'developmental state', which grounded its political legitimisation and popular consent upon the achievement of ambitious growth objectives.[62]

The Ethiopian government presented the Gibe III mega-dam, Africa's third-largest hydroelectric plant, as the main flagship of its whole hydropower programme, essential to support its energy exportation goals.[63] However, no environmental impact assessment was conducted prior to the approval of the construction of Gibe III.[64] As Woldergebrael reported, national authorities cut off public participation, impeding the involvement in the decision making of local communities, including around 500 000 indigenous pastoralists, agropastoralists and fishers who lived along the Omo-Turkana basin and largely depended upon the preservation of the fragile ecosystem of the Omo river.[65] In addition, a no-bid engineering procurement and construction contract was granted to the Italian corporation Salini Impregilo SpA, following derogatory and fast-track decision-making procedures.[66] The massive Gibe III plant vividly portrayed the EPRDF's developmentalist strategy aimed at reshaping the use of natural resources according to the party's own power interests.[67] In light of foregoing, the next sub-section tests the previously-discussed harm-based conceptualisation of environmental victim against the impact of Gibe III on the Omo-Turkana basin. The analysis presents this case as an example of 'ecological disorganisation'. Precisely, it stands as a capitalist-driven form of nature exploitation, which effects could be appreciated in terms of environmental degradation as well as of human rights impacts, consistently with the environmental harm sub-criteria earlier seen.

60 National Planning Commission 'Growth and transformation plan ii' (2015) *Federal Democratic Republic of Ethiopia*.

61 Campagna per la Riforma della Banca Mondiale *The Gilgel Gibe affair. An analysis of the Gilgel Gibe hydroelectric projects in Ethiopia* (2008); CJ Carr *River basin development and human rights in Eastern Africa – A policy crossroads* (2017).

62 F Gebresenbet 'Securitisation of development in Ethiopia: The discourse and politics of developmentalism' (2014) 41 *Review of African Political Economy* 64; C Clapham 'The Ethiopian developmental state' (2018) 39 *Third World Quarterly* 1151.

63 The official assessment on Gibe III environmental and social impacts was completed only in 2009, three years after the inception of the project. EEPCO 'Gibe III Hydroelectric project' (2009).

64 Campagna per la Riforma della Banca Mondiale (n 61).

65 EH Woldegebrael 'The materialisation of 'developmental state' in Ethiopia: Insights from the Gibe III Hydroelectric Development Project Regime, Omo Valley' (2018) 35 *L'Espace Politique*.

66 Woldegebrael (n 65) 15.

67 E Fantini & L Puddu *Ethiopia and international aid: Development between high modernism and exceptional measures* (2016).

This allows to infer a connection between potential processes of environmental victimisation and migration phenomena occurred in the area.

4.1 The Omo-Turkana basin as social-ecological system

Hodbod and others conducted empirical research of the social and environmental consequences arising from the dam projects, utilising the social-ecological system (SES) as their theoretical framework.[68] An SES is the result of complex adaptive systems characterised by dynamic interactions cross-scale interaction, self-organisation, and the potential for abrupt shift, such as regime changes. The resilience of an SES is a central notion of this theoretical frame, referring to its ability to withstand disturbances and alterations while continuing to supply essential ecosystem services, such as fresh water or favourable climate conditions, to the society it sustains.[69] Resilience, therefore, underscores the reciprocal links between human and ecological domains constituting SESs.[70] As previously mentioned, environmental harm is predicated on the 'environmental degradation' sub-criterion. Yet, there is a lack of clarity in both international and academic text regarding the definition of 'degradation'. For this reason, we adopt the socio-ecological analysis by Hodbod and others, which provides empirical and comprehensive evidence of the impacts that the Gibe III project – here meant as an exogenous human factors – have on the interrelated humane and natural aspects, in line with the broader concept of ecological disorganisation.

Under these premises, Ethiopia could be considered a macro-SES, characterised by a number of sub social-ecological systems, among which the Omo-Turkana basin. In this regard, Gibe III represents an exogenous technological driver, the aim of which is to extract certain essential services, that is, electric power from local rivers, to the benefit of the macro-system Ethiopia. This energetic exploitation of the Omo-Turkana sub-system, however, is not sustainable from a resilience perspective. Indeed, while the energy policy could lead to economic and strategic advantages to the macro-system Ethiopia in the long-term, it also jeopardises, in a potential irreversible way, the capability of the Omo-Turkana sub-system to be resilient and to provide local populations with traditional and essential services.

Several studies have substantiated the environmental damages caused by the construction of Gibe III.[71] This dam, because of its position and dimension, is

68 J Hodbod and others 'Social-ecological change in the Omo-Turkana basin: A synthesis of current developments' (2019) 48 *Ambio* 1099.

69 B Walker and others 'Resilience, adaptability and transformability in social-ecological systems' (2004) 9 *Ecology and Society* 5; CS Holling 'The resilience of terrestrial ecosystems: Local surprise and global change' (2009) *Policy Problems and Approaches* 64.

70 E Biggs *Principles for building resilience sustaining ecosystem services in social-ecological systems* (2015) 251.

71 Hodbod and others (n 68); Carr (n 61); S Avery *Lake Turkana ad the lower Omo: Hydrological impacts of major dam and irrigation developments* (2012); Human Rights Watch *What will*

deemed to have reduced consistently and, if not halted, the Ethiopian Omo river's flow. The Omo river being the main tributary of the Kenyan Lake Turkana, Gibe III consequently also affected this lake.[72] As available data demonstrate, Gibe III has caused several environmental damages affecting both the quality and quantity of water available to the down-stream regions. In particular, hydrological, ecological and biological adverse impacts have been found.[73] Indeed, the filling of the Gibe III reservoir has determined a drastic reduction of water inflows in Lake Turkana, whose water levels declined by more than 1,5 meters between 2015 and 2017.[74] Furthermore, Gibe III has damped seasonal flow variability in the Omo river constraining the annual flood pulse. From an ecological point of view, the decrease of water from the Omo river has affected the microbiological structure of Lake Turkana's waters. Indeed, since the Omo river supplies 90 per cent of the inflows of Lake Turkana, its water reduction also caused a significant decrease of vital nutrients and of cyanobacteria, which are vital for sustaining the lake's fish species.[75] On this behalf, Lake Turkana is home to over 60 species of fish, ten of which are endemic to the lake. The hydrological regime change is expected to reduce the lake biomass by up to 50 per cent.[76] This is because reduced inflow from the Omo river will lead to a concomitant increased salinity of the water and a reduction in the lake's nutrient levels, damaging several fish species' capability to reproduce and to survive.[77]

Such ecosystemic changes determined social and economic damages indigenous communities' main economic means of survival. Fisheries – which constitute a traditional and flourishing source of interregional trade among indigenous populations in Kenya, Uganda and the eastern Democratic Republic of the Congo (DRC) – have been affected by the hydrologic changes in Lake Turkana.[78] Other traditional livelihood strategies – such as agriculture, pastoralism and rainfed farming – have been also endangered by the reduction in the river flows and by the degradation of wildlife habitat.[79] The disruption of these traditional livelihoods is expected to irremediably hamper the food security of the populations settled along the Omo-Turkana basin.[80]

In light of the foregoing, the fierce exploitation for energetic purposes of the Omo river has affected the equilibrium of that system by hampering its

happen if hunger comes? Abuses against the indigenous peoples of Ethiopia's lower Omo Valley (2012); International Rivers *La diga Gibe 3 in Etiopia: fonte di carestie e conflitti* (2009).

72 S Avery *What future for lake Turkana: The impact of hydropower and irrigation development on the world's largest desert lake* (2013).

73 Hodbod and others (n 68) 1103.

74 USDA Foreign Agricultural Service 'Lake Turkana' (2017).

75 NJ Gownaris 'Fisheries and water level fluctuations in the world's largest desert lake' (2017) 10 *Ecohydrology* e1769.

76 Avery (n 71).

77 Hodbod and others (n 68) 1104.

78 Hodbod and others (n 68) 1106.

79 Hodbod and others (n 68) 1105-1106.

80 EG Stevenson & L Buffavand 'Do our bodies know their ways?' Villagisation, food insecurity, and ill-being in Ethiopia's lower Omo Valley (2018) 61 *African Studies Review* 109.

capacity to fulfil local populations' essential needs. Therefore, Gibe III illustrates the dire consequences of policy failure in implementing adequate resource governance consistent with SES's adaptation capacity.[81] The former government's reorganisation of society's livelihood in the Omo-Turkana system triggered a forced and disruptive transformation process affecting the whole Omo-Turkana SES, whose economic, social and cultural conditions are no longer tenable.[82] Reported cases of migration and conflicts in the area under review – exacerbated by food insecurity, economic crisis, and increasing competition over natural resources – are clear indicators of such a violent transformation process towards a new social equilibrium.[83] In the next part we suggest a connection between such migrations flows and processes of environmental victimhood, here conceived as the failure to build resilience and to strengthen adaptability to changes.

5 Human rights violations as outcome of environmental victimisation and migration

Arguably, Ethiopia has not taken into duly account the severe socio-economic, cultural, and environmental impacts of the construction of mega-dams along the Omo river. This led to, among others, severe environmental degradation and water scarcity within and across national borders, which irremediably affect the ecosystems of flora and fauna as well as the survival of indigenous populations living alongside the Omo river. Whereas internal and international migration movements have been used traditionally by indigenous groups as coping strategies to adapt to traditional semi-arid areas, the increasing dispossession of their land, prolonged droughts and water scarcity triggered by the mega-dams over the last years have been reportedly driving migration as measure of last resort. The majority of Ethiopia's nearly 110 000 million inhabitants are dependent on agriculture for their livelihoods. According to a recent study, emigration from Ethiopia between 2018 and 2020 has, among others, been 'potentially attributable to the region's comparative vulnerability to climate-related disasters such as floods, cyclones, and droughts during this period'.[84] Indeed, almost 2 000 survey respondents indicated that their reason to leave Ethiopia was related to natural hazards. In such a dire context, the recent construction of Gibe III is deemed to have disrupted further their means of survival. According to Carr's findings, '[w]hole segments of these indigenous groups have been forced to migrate to lands along the Omo river and around the shores of Lake Turkana in recent years'.[85] In particular, Carr found

81 T Plieninger & C Bieling *Resilience and the cultural landscape understanding and managing change in human-shaped environments* (2012) 283.

82 B Walker and others 'Resilience, adaptability and transformability in social-ecological systems' (2004) 9 *Ecology and Society* 5.

83 Stevenson & Buffavand (n 80); L Buffavand ''The land does not like them': Contesting dispossession in cosmological terms in Mela, south-west Ethiopia' (2016) 10 *Journal of Eastern African Studies* 476.

84 E Nelson & S Khan 'Climate and migration in East and the Horn of Africa: Spatial analysis of migrants' flows data' (2021) *Harvard Humanitarian Initiative* 14.

85 Carr (n 61) 11.

that thousands of people belonging to the Dasanech's indigenous community were compelled to migrate from Ethiopia to the north-eastern shores of Lake Turkana in Kenya and joined other members of their community. In other words, since the inception of Ethiopia's aggressive development projects, indigenous groups have allegedly been forced to move across international borders primarily due to harmful environmental activities. This part explores potential violations of core human rights of indigenous groups due to environmental harm under international human rights law. The analysis benefits from leading cases decided by the UN HRC on similar matters.

Both Ethiopia and Kenya are parties to ICCPR and ICESCR and, thus, have been bound to respect, fulfil and promote the human rights enshrined therein. In the case of the Omo-Turkana case study, there seems to be strong evidence of disruption of a core set of human rights respectively protected under the two covenants. To begin with, well-documented episodes of forced relocation carried out by the Ethiopian authorities have been reported together with violent repression of indigenous' protests. In addition, the government is deemed to have failed to conduct genuine and comprehensive community consultations prior to the inception of the mega-dam projects in the region nor a transparent impact assessment.[86] Thus, Ethiopia seems to have disregarded the international requirement of collecting the free and informed consent of concerned indigenous communities, who have been not sufficiently informed about the dramatic socio-economic, cultural and environmental impacts of Gibe III on their livelihood. The construction of Gibe III deprived Indigenous Peoples of their main economic activities and sources of survival, which seems not compliant with article 1 of both international covenants, that enshrines the right to self-determination, the inherent freedom of all people to pursue their economic, social and cultural development, as well as the prohibition to be deprived of their own means of subsistence.

The harmful consequences on the local populations' sources of survival could also be of relevance under the right to life under article 6 of ICCPR, which the UN HRC defined as 'the supreme right' and established that no derogation is admissible under any circumstances.[87] Given its foundational character, scholars have argued that the right to life is part of customary international law, has the character of a *jus cogens* norm, and creates obligations *erga omnes*.[88] The UN HRC also noted that a state's failure to take appropriate measures or to exercise

86 International Rivers (n 71); Survival International *National contact point for the OECD guidelines. Specific instance submitted to the Italian NCP on 11 March 2016 by Survival International Italia against Salini Impregilo SpA* (2016).

87 UN Human Rights Committee (n 52).

88 P Gormley 'The right to life and the rule of non-derogability: Peremptory norms of *jus cogens*' in B Ramcharan (ed) *The right to life in international law* (1985) 120; R Higgins 'Derogations under human rights treaties get access arrow' (1976) 48 *British Yearbook of International Law* 281.

due diligence to prevent, punish, investigate or redress the harm caused by its agents, private persons, entities may also breach article 6.[89]

Article 27 of ICCPR protects the rights of minorities, who shall not be denied the right, in community with the other members of their group, to enjoy their own culture, to profess and practice their own religion, or to use their own language. As indigenous groups can be minority groups, state parties must ensure their full protection as well.[90] Arguably, Ethiopia might have violated article 27 of ICCPR insofar as the construction of Gibe III deprived Indigenous Peoples of their main economic activities and sources of survival. Forced migration and relocation from areas traditionally inhabited by indigenous groups are further elements substantiating the claim. The UN HRC has recently decided a similar case.[91] In its views, adopted in September 2022, on the case of *Daniel Billy & Others v Australia (Torres Strait Islanders Petition)*, the UN HRC held that the unavailability of natural resources, alternative means of subsistence and humanitarian aid had direct repercussions on the Indigenous Peoples' homes, private and family lives, their collective ability to maintain a traditional way of life and to transmit their customs and culture to future generations in a matter that is incompatible with article 27 of ICCPR.[92] Similarly, the construction of mega-dams along the Omo-Turkana basin has reportedly damaged indigenous groups' way of life, customs, and traditions and restricted access to their traditional livelihoods.

With specific reference to ICESCR, article 12 on the right to water state that all state parties should ensure adequate access to water for subsistence farming and for securing the livelihoods of indigenous and nomadic communities. The UN Economic, Social and Cultural Rights Council argued that state parties have substantive obligations to prevent threats to health from unsafe and toxic water conditions, ensure that natural water resources are protected from contamination by harmful substances and pathogenic microbes.[93] Moreover, states must refrain from unlawfully diminishing or polluting water, air and soil and must adopt necessary and effective legislative and other measures to restrain third parties from polluting and inequitably extracting water. This interpretation has been recently endorsed by the OHCHR, which recognised that safe, sufficient water

89 UN Human Rights Committee General Comment 31: The nature of the general legal obligation imposed on States Parties to the Covenant (2004) para 8.

90 UN Human Rights Committee General Comment 23: Article 27 on the Rights of Minorities (1994) para 1.

91 *Daniel Billy & Others v Australia* Communication 3624/2019 UN Human Rights Committee (18 September 2023), UN Doc CCPR/C/135/D/3624/2019, paras 8.9-8.14. For an analysis of the case, see M Cullen "Eaten by the sea': Human rights claims for the impacts of climate change upon remote subnational communities' (2018) 9 *Journal of Human Rights and the Environment* 171; M Feria-Tinta 'Torres strait islanders: United Nations Human Rights Committee delivers ground-breaking decision on climate change impacts on human rights' (2022) *EJIL: Talk!*; C Voigt 'UNHRC is turning up the heat: Human rights violations due to inadequate adaptation action to climate change' (2022) *EJIL:Talk!*

92 Human Rights Committee in *Billy & Others* (n 91) paras 8.9-8.14.

93 UN Economic, Social and Cultural Rights Council (n 52).

and healthy aquatic ecosystems are essential for protecting basic human rights, such as the right to health and to food, and to eradicate poverty.[94] However, Indigenous Peoples in Ethiopia have reportedly been forced to drink dangerously polluted water, as they have been deprived of healthy water by the mega-dam plantation. Indeed, the regulation of Omo river flow has eliminated the annual flood pulse of the river, with a consequent significant drop in the Lake Turkana's water levels.[95]

It has been estimated that Gibe III could reduce the Omo river's downstream flow volume by at least 60 to 70 per cent with a consequent dramatic retreat of 8 to 10 kilometres of the northern and central portions of Lake Turkana. This radical reduction would destroy entire vegetal and animal ecosystems, which are vital to the survival of indigenous pastoralists, agropastoralists and fishers. Additionally, no specific health measure has been provided to the indigenous communities, whose access to traditional natural medicaments, made of plants and herbs, has been restricted given the lake retreat. Furthermore, there have been reports of diseases and deformity spreading among the communities because they had no alternative but to drink the fluoride water of Lake Turkana. These omissions and severe health impacts seem to disregard the right to health, also protected under article 16 of the African Charter on Human and Peoples' Rights (African Charter). Already in 2000, the ESCR Committee called on states to provide Indigenous Peoples with specific, culturally-appropriate measures to improve their access to health services and care, while condemning development-related activities that lead to forced displacement and eviction of Indigenous Peoples.[96] In doing so, Ethiopia may have also damaged Indigenous Peoples' rights to an adequate standard of living that, pursuant to article 11 of ICESCR, includes the rights to food, clothing, housing, and to the continuous improvement of people's living conditions as well as to be free from hunger and malnutrition. Additionally, and contrary to the official presumption that local populations would benefit from the mega-dams, the intense production of electricity have almost exclusively supported the industrial, agro-industrial and commercial sectors along with government entities. The unaffordable electricity costs in Ethiopia, estimated to rise at least of 200 per cent according to the World Bank, is projected to persistently leave marginalised groups without electricity, whose living standards thus will probably worsen.[97]

Beyond international obligations, Ethiopia may be considered to be responsible under two specific provisions of the African Charter, the main regional human rights treaty. The mega-dam plan may be held accountable of violation of article 21 of the African Charter on the right of all peoples to freely dispose of their

94 UN Human Rights Office *Human rights and the global water crisis: Water pollution, water scarcity and water-related disasters* (2021) 4.
95 Hodbod (n 68).
96 UN Economic, Social and Cultural Rights Council (n 52).
97 World Bank *The eastern electricity highway project under the first phase of the Eastern Africa power integration programme* (2012).

wealth and natural resources. As prescribed by the African Charter, this right shall be exercised in the exclusive interest of the people, who shall never be deprived of it. Similarly, according to Survival International, article 24 on right to a general satisfactory environment favourable to people's development had been disregarded. To date, the case is still pending before the African Commission.

In light of the foregoing analysis, the construction of Gibe III may have led to severe violations of the human rights of hundreds of thousands of indigenous groups settled along the Omo river, who in the near future might have no other choice but to systematically move to Kenyan Lake Turkana, thus potentially giving rise to cross-border movements of environmental migration.[98]

6 A case towards a holistic protection

White conceptualises 'environmental harm' in terms of 'ecological harm', namely, a social harm that affects the relational realm between human beings and the environment.[99] This conceptualisation is grounded on the philosophical understanding of socio-ecological relations based on ecocentrism[100] and endorses the idea that social justice is intrinsically related to ecology. While ecocentrism does not neglect human needs, such as economic necessities, it rather attempts to strike a fair balance between an instrumental use of nature for human purposes and the biocentric conceptions of nature as enjoying an inner value. In building the environmental harm parameter on the above-discussed concurring criteria, we aim to echo White's perspective. Coherently with the notion of 'ecological disorganisation', environmental harm could be conceptualised as the failure of developing non-exploitive relations between human beings and the non-human realms, being ecological destruction and human misery intrinsically intertwined.[101]

It follows that environmental victims are the outcome of such a failure, that is, of 'ecological disorganisation' due to economic-driven processes of nature alternation. More into detail, 'environmental victimhood' enshrines the thick conceptualisation of environmental harm in ecological terms and manifests a unique complexity that differentiates such category of victims from others falling under more neutral labels, such as 'victims of environmental crimes' or 'victims of environmental illicit behaviours'. Whereas these latter notions generically refer to people somehow affected from whatsoever activities in violation of environmental laws and regulations, the green criminological notion of 'environmental

98 E Nabenyo 'Climate-induced involuntary migration: Nomadic pastoralists' search for elusive pastures in Kenya' (2020) 64 *Forced Migration Review* 10.
99 See also White (n 41).
100 Ecocentrism supports the idea that 'humans and their activities are inextricably integrated with the rest of the natural world in communal or communal-like arrangements'. BK Steverson 'Ecocentrism and ecological modelling' (1994) 16 *Environmental Ethics* 71.
101 M Halsey & R White 'Crime, eco-philosophy and environmental harm' (1998) 2 *Theoretical Criminology* 345.

victimhood' conceives affected persons as living entities in-between nature. In other words, it refers to the harm to the net of relations that, in Friskics' words, constitute the 'relational milieu of actual concrete being-with-others', in which relation refers to 'physical, sensorial action experiences with living beings, human and non-human alike'.[102] For example, environmental victimhood can be assessed with regard to communities living on a river's delta shore devastated by decades of oil leakage provoked by oil-drilling activities or to urban communities living in the proximity to maxi-industrial sites.[103] As a corollary, environmental victimisation entails a supra-individual dimension, because it does not stem from single inter-individual violent actions, rather from an act of violence perpetrated against an entire ecosystem. As such, environmental victimhood is not socially neutral. Precisely, in White's words, environmental victimhood is 'a social process that involves dimension of time and space, behaviours involving acts, omissions, and social features pertaining to powers and collectivises and, as such, is never socially neutral'.[104]

This deep understanding of human beings as living entities in-between nature meaningfully characterises the harm-based status of forced environmental migrants as the outcome of violent processes of 'ecological disorganisation'.[105] The Gibe case study exposes a connection between migration and processes of environmental victimisation that occurs when a certain ecosystem is so disrupted (or 'disorganised') by human driven activities that it can no longer provide its essential resources, that is, services, thus undermining human well-being and potentially violating core aspects of the human rights protected under ICCPR and ICESCR.

More in detail, the Gibe case demonstrates that migration is not solely the consequence of abstract processes of victimisation. Rather, environmental migrants *are* environmental victims, specifically because environmental harms erode their capabilities to adapt to human-driven transformative processes of ecosystems. The connection between environmental victimisation and migration highlights a dynamic process, which reflects the degree of people adaptability to environmental disruptions. The lower the persons' adaptation capability is, also due to concurring pre-existing layers of vulnerabilities, the more serious the compromising of their fundamental rights becomes, together with a higher risk of being forced to flee.

102 S Friskics 'Dialogical relations with nature' (2001) 23 *Environmental Ethics* 395. On this, see also S Porfido 'Restorative justice for environmental crimes: Who is the victim?' (2021) 2 *Mediares – Journal on Conflict Transformation, Restorative Culture and Mediation* 1.

103 Amnesty International 'Niger delta negligence' (2018); European Court of Human Rights, App 54414/13 e 54264/15 (Judgment) *Cordella & Others v Italy* (2019).

104 R White *Transnational environmental crime. Toward an eco-global criminology* (2011).

105 According to Hall (n 25), environmental victimisation, like other forms of victimisation, is an active social process.

With this as a backdrop, protection should apply not only to those falling under recognised categories, but also to those persons who suffer from environmental harm. In other words, recognising the connection between environmental victimisation and environmental migration allows to prioritise the person's material ground of vulnerability over abstract legal categories. The ultimate importance of advocating the shift from an *a priori* perspective to an *ex post* harm-based one rests in the possibility to highlight the human rights dimension characterising the phenomenon of environmental migration.

In this respect, one could here refer, for instance, to the aforementioned article 6 of ICCPR as interpreted by the UN HRC in its General Comment 36 on the right to life with dignity, where it recognises that, in principle, environmental factors can violate the right to life. Specifically, the GC 36 states: [106]

> The duty to protect life also implies that States parties should take appropriate measures to address the *general conditions in society* that may give rise to direct threats to life or prevent individuals from enjoying their right to life with dignity. These general conditions may include ... industrial accidents, degradation of the environment, deprivation of land, territories and resources of Indigenous Peoples.

The 'general conditions in society' thus encompass also those harmful environmental activities falling under the notion of 'ecological disorganisation'. In the specific case of Ethiopia, there is room to argue that the state failed to strike a fair balance between the legitimate goals of economic development and its human rights obligations towards affected local populations. Migration may be arguably seen as the outcome of such failure.

When applied to the context of environmental migration, the right to life with dignity may give rise to the duty to protect the person concerned from removal back in dire environmental conditions.[107] In the landmark case *Teitiota v New Zealand*, the UN HRC asserted that 'without robust national and international efforts, the effects of climate change in receiving states may expose individuals to a violation of their rights under articles 6 or 7 of the Covenant, thereby triggering the non-refoulement obligations of sending states'.[108]

106 UN Human Rights Committee (n 54) para 26 (our emphasis).

107 For its part, the ESCR Committee has noted that a failure to prevent foreseeable harm to human rights caused by climate change, or a failure to mobilise the maximum available resources in an effort to do so, could constitute a breach of states' obligations under the covenant. UN ESCR Committee *Committee releases statement on climate change and the Covenant* (2018).

108 *Ioane Teitiota v New Zealand* Communication 2728/2016 UN Human Rights Committee (23 September 2020) UN Doc CCPR/C/127/D/2728/2016, para 9.11. For an analysis of the case, see E Sommario 'When change and human rights meet: A brief comment on the UN Human Rights Committee's Teitiota decision' (2021) *Questions of International Law* 51; C Scissa 'The principle of non-refoulement and environmental migration: A legal analysis of regional protection instruments' (2022) 3 *Diritto, Immigrazione e Cittadinanza* 1; JH Sendut 'Climate change as a trigger of non-refoulement obligations under international human rights law' (2020) *EJIL:Talk*!; A Maneggia 'Non-refoulement of climate change migrants: Individual human rights protection or 'responsibility to protect'? The Teitiota case before the Human Rights Committee' (2020) *Diritti umani e diritto internazionale* 635.

As a result, states shall refrain from removing a third country national in any manner whatsoever back to a country where their life and liberty could be at serious risk, thus confirming the applicability of complementary forms of protection against environmental causes of migration under international human rights law. Therefore, by taking a harm-based approach, non-refoulement obligations may arise not only in the context of climate change, but also in the context of harmful environmental activities, industrial accidents, as well as in all those situations where the 'general conditions in society' may cause a violation of the right to life with dignity protected under the Covenant.

7 Concluding remarks

The nexus between environmental threats and migration is increasingly investigated in the literature and is high in the political agenda of several international fora. However, both working definition advanced by different stakeholders and national provisions addressing the matter have often failed to grasp its complexity, as environmental migration has been constrained by pre-selected causes referring to space, time, typology of movement, drivers, and protection status, among others. Moreover, much of the present literature on the matter focuses on climate change and extreme weather events, excluding the role that harmful environmental activities can play in compelling people to leave. Against this background, we relied upon the conceptualisation of environmental victimhood, which offered a fertile ground to assess the connection between environmental harm and human rights violations under the 1966 ICCPR and ICESCR.

We first correlated environmental victimisation, as intended in green criminology, to cross-border migration and looked at potential human rights violations against affected groups. We then illustrated the Omo-Turkana case study as concrete materialisation of such a linkage. By analysing existing literature on the topic, the case study seems to substantiate our assumption according to which victims of harmful environmental activities – in the present case, indigenous groups affected by the construction of mega-dams along the Omo river in Ethiopia and the Lake Turkana in Kenya – can be forced to migrate cross-borders due to unbearable environmental conditions, triggering severe human rights violations. The ongoing construction of other mega-dams on the site confirms the relevance and the timing of this research analysis and calls for further studies on the matter to shed light on states' responsibility to protect people from environmental harm as well as on the possibility for environmental migrants to find protection in other countries.

The Omo-Turkana case study therefore leads to three final observations: (i) the state-backed economic-oriented activities impacting the environment could result in processes of 'ecological disorganisation' and cause environmental harm; (ii) persons affected by such 'disorganisation' arguably fall within the harm-based

green criminological notion of 'environmental victims'; (iii) at the same time, such victims can be also subject to human rights violations and can sometimes be compelled to flee due to environmental harm, as shown by evidence-based research and recent views. These findings urgently call for the endorsement of a holistic *ex post* assessment of human rights violations of people compelled to flee due to any environmental threats in order to provide for comprehensive and effective protection responses to environmental migration.

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African approaches to climate and disaster displacement as loss and damage: Gaps and prospects

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Abstract: A research agenda charting out proposals for future research on addressing knowledge gaps at the intersection of climate change, disasters, and human mobility in Africa in 2021 emphasised the need for a deeper examination of the characterisation of displacement as loss and damage. Such an inquiry is essential for advancing the effective implementation of international and regional climate frameworks. This article seeks to assess the extent to which climate and disaster displacement is presently addressed as loss and damage in law and policy on the continent and to propose some suggestions for its better integration. It proposes enhanced data collection and reporting on the economic and non-economic costs and impacts of climate and disaster displacement, the adoption of a human rights-based approach and the provision of effective remedies for displacement as loss and damage.

Key words: climate and disaster displacement; climate change law and policy; loss and damage; human rights-based approach

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1 Introduction

Displacement resulting from the increasing severity and incidence of sudden and slow-onset events is on the rise in Africa, reaching record high figures over the past year, with aggravating impacts on livelihoods, security and fragility.[1] Recent data indicates that, owing to the region's elevated vulnerability, this trend is projected to persist and intensify over the next few decades, surpassing rates observed in other parts of the world and to affect 5 per cent of the African population by 2050.[2] Climate and disaster displacement occurs more often within countries rather than across borders and, more importantly, displaced populations – typically the poorest and most vulnerable – remain disproportionately exposed and susceptible to climate risks and impacts when displaced.[3] Climate and disaster displacement also leads to a broad range of economic and non-economic losses ranging from infrastructural damages, losses to industries such as agriculture and tourism, the disruption of health and disenfranchisement, and the loss of traditional knowledge, culture and agency.[4]

Climate and disaster displacement has gained increasing prominence within the discourse on loss and damage,[5] and is recognised equally as a form, signal and driver of loss and damage.[6] At the Second Glasgow Dialogue held in June 2023 to discuss the arrangements for the funding of activities to avert, minimise and address loss and damage, displacement was identified as a cross-cutting issue in the operationalisation of the Loss and Damage Fund.[7] In this respect, it was highlighted that there is a significant shortage of resources for the preparation and recovery of displaced communities, that their legal protection is inadequate, and that the reconstruction of societies is essential to facilitate their return.[8]

1 Internal Displacement Monitoring Centre (IDMC) *2023 Global Report on Internal Displacement: Internal Displacement and Food Security* (2023) 16-22, https://www.internal-displacement.org/global-report/grid2023/ (accessed 1 September 2023).

2 Africa Climate Mobility Initiative 'The Africa Climate Mobility Report: Addressing climate-forced migration and displacement' (2023) 20, https://africa.climatemobility.org/about (accessed 1 September 2023).

3 United Nations High Commissioner for Refugees (UNHCR) 'Gender, displacement and climate change' (November 2022) 1, https://www.unhcr.org/uk/media/gender-displacement-and-climate-change (accessed 1 September 2023).

4 A Thomas & L Benjamin 'Non-economic loss and damage: Lessons from displacement in the Caribbean' (2020) 20 *Climate Policy* 715.

5 B Mayer 'Migration in the UNFCCC workstream on loss and damage: An assessment of alternative framings and conceivable responses' (2017) 6 *Transnational Environmental Law* 107.

6 KE McNamara and others 'The complex decision-making of climate-induced relocation: Adaptation and loss and damage' (2016) 18 *Climate Policy* 111.

7 Subsidiary Body for Implementation 'Summary of the second Glasgow dialogue' June 2023 paras 52-58, https://unfccc.int/documents/630612 (accessed 1 September 2023). See also N Biehler, N Knapp & A Koche 'Displacement and migration in the international climate negotiations: Loss and damage debate offers new scope for action' Stiftung Wissenschaft und Politik Comment No 56 (December 2023), https://www.swp-berlin.org/publications/products/comments/2023C56_DisplacementMigrationCOP_Web.pdf (accessed 1 September 2023).

8 Summary of the second Glasgow dialogue (n 7).

In contrast with growing policy attention in international fora to displacement and loss and damage, the characterisation of climate and disaster displacement as loss and damage in the African context is not well established. The conceptualisation of displacement as loss and damage was recently identified as a priority area for future research on climate change law and policy in Africa, which was underscored to be central to furthering the effective development and implementation of relevant international and regional frameworks on the continent.[9] This is particularly significant given the array of challenges commonly encountered by low and middle-income nations of the Global South when dealing with loss and damage more broadly,[10] encompassing overlapping financial, political, institutional and capacity-based barriers. Significantly also, where loss and damage is addressed, it typically neglects the needs of vulnerable groups.[11]

This study seeks to review the current conceptualisation of climate and disaster displacement in legal and policy responses in Africa and propose solutions for the improved protection of vulnerable displaced groups and communities. It is structured in five parts. It first reviews the salient impacts of climate and disaster displacement in the African context using recent examples, focusing specially on the compounded effects of climate impacts, conflict, poverty, low adaptive capacity as well as the intersectional determinants of vulnerability such as gender, age, class, disability, indigenous or minority status, among others. It then examines the definition of climate and disaster displacement and its linkages with loss and damage within international and regional institutional frameworks and initiatives across international climate change law, international human rights law and international migration law. Further, it analyses the characterisation of climate and disaster displacement in law and policy in the African context. More specifically, it interrogates the framing of climate and disaster displacement and the remedial solutions sought in the nationally-determined contributions (NDCs) of African states under the Paris Agreement. It also examines the integration of climate and disaster displacement concerns and cognate mechanisms within climate legislation and climate-related policies. Finally, it identifies current legislative and policy gaps and shortcomings in the protection of climate and disaster displaced populations in Africa and proffers some potential focus areas for intervention.

9 'Research agenda for advancing law and policy responses to displacement and migration in the context of disasters and climate change in Africa' Outcome of the virtual workshop series on developing a research and policy agenda for addressing displacement and migration in the context of disasters and climate change in Africa (November 2021) 14-17, https://disasterdisplacement.org/portfolio-item/research-agenda/ (accessed 1 September 2023).

10 Overseas Development Institute (ODI) 'Barriers to addressing climate change-related losses and damages in low and middle-income countries: A rapid evidence assessment' (2023), https://cdn.odi.org/media/documents/Barriers_to_addressing_climate_change-related_LD_in_low-_and_middle-income_cou_Z2pQ7VH.pdf (accessed 1 September 2023).

11 See K Lofts, S Jodoin & L Parker 'A rights-based approach to loss and damage due to climate change' in M Doelle and SL Seck (eds) *Research handbook on climate change law and loss and damage* (2021) 201.

2 African experiences of climate and disaster displacement

Vulnerability and exposure to climate risks and impacts in Africa vary across regions, countries and local communities, while also being shaped by non-climatic factors, notably socio-economic processes, access to resources, and intersectionality within social groups.[12] Further, dimensions of social identity and status affect susceptibility to loss and damage.[13] The deleterious impacts of climate change on peoples and economies in Africa are amplified and more persistent due to acute dependence on climate-dependent sectors, poor urban infrastructure and the dearth of adequate planning and policy.[14] These impacts aggravate conflict, poverty and displacement, thwarting longer-term economic development.[15] Notably, displacement is one of the primary impediments to post-disaster recovery.[16]

Climate and disaster displacement is on the rise in Africa.[17] Between 2008 and 2019, climate-related disasters caused around 23 million displacements.[18] It increased threefold since 2021 and peaked at 7,4 million in 2022.[19] This is a consequence of the trend toward more frequent and severe extreme weather events on the continent. Displacement is also increasingly protracted and longer lasting owing to recurring events and the erosion of the prospects of return and durable solutions. This in turn increases vulnerability. In 2019, tropical cyclone Idai displaced over 2 million people in Mozambique and around 300 000 in Zimbabwe. In affected areas, significant damage was caused to agricultural land, infrastructure and housing. Access to drinking water, food, sanitation and health, and shelter was disrupted over the longer term, which impeded the achievement of durable solutions and future preparedness.[20] Many displaced persons were transferred to resettlement sites with no hospitals or schools nearby.[21] Consecutive

12 Intergovernmental Panel on Climate Change (IPCC) Climate Change 2022: Impacts, Adaptation and Vulnerability: Working Group II Contribution to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change (2022) 1318-1320, https://report.ipcc.ch/ar6/wg2/IPCC_AR6_WGII_FullReport.pdf (accessed 1 September 2023).

13 IPCC (n 12) 1318.

14 International Monetary Fund (IMF) 'Climate challenges in fragile and conflict-affected states' (2023), https://www.imf.org/en/Publications/staff-climate-notes/Issues/2023/08/24/Climate-Challenges-in-Fragile-and-Conflict-Affected-States-537797?cid=bl-com-CLNEA2023001 (accessed 24 September 2023).

15 IMF (n 14) 4.

16 RAA Zuñiga, GN de Lima & DE Quiroga 'Climate change and population displacement in Africa' in CO Odimegwu & Y Adewoyin (eds) *The Routledge handbook of African demography* (2022) 510.

17 For an analysis of the phenomenon of climate and disaster displacement in Africa, see Zuñiga and others (n 16).

18 Zuñiga and others (n 16) 527.

19 IDMC (n 1) 17.

20 IDMC 'Eight months after Idai: Chronology of displacement, humanitarian needs and challenges going forward in Mozambique' (2019) 13, https://www.internal-displacement.org/sites/default/files/publications/documents/report_dtm_idmc_idai_2019_0.pdf (accessed 1 September 2023).

21 UNHCR 'One year on, people displaced by cyclone Idai struggle to rebuild' 13 March 2020, https://www.unhcr.org/news/stories/one-year-people-displaced-cyclone-idai-struggle-rebuild (accessed 1 September 2023).

cyclones following Idai, notably, Kenneth in 2019 and Eloise and Chalane in 2021, led to enduring effects in the region, with many displaced years later due to loss of livelihoods and income, food insecurity and the deteriorating spread of communicable diseases.[22] Amid the cyclones, Mozambique saw an outbreak of cholera.[23] In early 2022, tropical storm Ana triggered over 600 000 displacements across Malawi, Madagascar, Mozambique and Zimbabwe and, more recently in 2023, cyclone Freddy displaced around 1,5 million in Mozambique, adding to earlier instances of displacement and to conflict-induced displacement. In Madagascar, six consecutive storms over the course of 2022 resulted in the highest number of displaced persons in its history.[24] Storms destroyed more than 15 000 homes and severely damaged crops, dramatically reducing food provision and agricultural production,[25] significantly limiting prospects of return.

Moreover, crucially, displacement disproportionately affects populations living in vulnerable situations. Experiences and impacts of displacement are gendered.[26] Within patriarchal systems, women have less access and control over resources, information and credit, and are less involved in decision-making processes around climate-related coping strategies.[27] Women in rural areas often lack the resources to move and are more likely to be left behind.[28] In addition, at temporary rescue shelters, women are subjected to heightened risks of violence and impoverishment.[29] In Zimbabwe, where over 50 000 persons were displaced in the aftermath of cyclone Idai in 2019, gender-based violence was rife.[30] Owing to household conflict and the lack of privacy and security within the camps, women were more susceptible to sexual harassment and exploitation, trafficking, forced child marriage and domestic abuse.[31] The interruption of maternal and neonatal healthcare services, combined with the loss of community support, increases the vulnerability of displaced women.

Similarly, children face the brunt of the effects of climate and disaster displacement. Displacement often results in the separation of children from their families and communities. In addition, disruption to education and development

22 CARE '2 years since cyclone Idai and Mozambique has already faced an additional 3 cyclones' 12 March 2021, https://www.care.org/news-and-stories/press-releases/2-years-since-cyclone-idai-and-mozambique-has-already-faced-an-additional-3-cyclones/ (accessed 1 September 2023).

23 Médecins Sans Frontières (MSF) 'Mozambique declares cholera cases in Beira in wake of cyclone Idai' 28 March 2019, https://www.msf.org/mozambique-declares-cholera-cases-beira-cyclone-idai (accessed 1 September 2023).

24 MSF (n 23) 31.

25 As above.

26 S Bradshaw *Gender, development and disasters* (2013).

27 MA Abebe 'Climate change, gender inequality and migration in East Africa' (2014) 4 *Washington Journal of Environmental Law and Policy* 104, 113-118.

28 Abebe (n 27) 126.

29 S Bhatasara 'Debating sociology and climate change' (2015) 12 *Journal of Integrative Environmental Sciences* 217.

30 N Louis 'Environmental social work: Accounting for women's tragedies in the face of climate change-induced disasters in Chimanimani district in Zimbabwe (2020) 9 *African Journal of Gender, Society and Development* 197,199.

31 Louis (n 30) 206-207.

makes displaced children prone to forced conscription, child labour, child marriage and sexual assault.[32] They are also particularly susceptible to severe malnutrition and health hazards.[33] Flooding across Nigeria in 2022 gave rise to a million displacements, half of which were children.[34] The latter were particularly affected by the cholera outbreak in temporary camps.[35] Also, persons with disabilities typically face several barriers to inclusion at various stages of a disaster or climate-related emergency, notably due to the lack of accessible emergency information and resources and disaster preparedness measures, limited access to shelters and basic services and additional challenges in recovery following disasters.[36] Persons with disabilities may be left behind given the inaccessibility of evacuation programmes, and face heightened vulnerability through the loss of support networks and loss and damage to assistive devices.[37] Learning facilities and temporary schools, when available, often are not equipped to meet the needs of children with disabilities.[38] Indigenous communities also commonly face discrimination and economic marginalisation when displaced, while lacking access to critical social services and intercultural health services.[39] They are also markedly affected when dislocated due to the cultural and spiritual significance of ancestral land and the loss of their traditional livelihoods, cultural heritage and local knowledge and practices.[40]

Additionally, displacement can intensify competition over scarce land and water resources, escalating conflict and threatening social cohesion. In 2022 Somalia saw its most severe drought in 40 years causing over a million displacements. The large influx of people in some parts of the country put a strain on resources, heightening food insecurity and leading to a state of emergency.[41]

32 GS Yigzaw & EB Abitew 'Causes and impacts of internal displacement in Ethiopia' (2019) 9 *African Journal of Social Work* 32, 38.

33 UNICEF 'Children displaced in a changing climate: Preparing for a future already underway' (2023) 9-10, https://www.unicef.org/media/145951/file/Climate%20displacement%20report%20(English).pdf (accessed 30 September 2023).

34 Save the Children 'Number of children displaced across sub-Saharan Africa by climate shocks doubled to a record high in 2022' (4 September 2023), https://www.savethechildren.net/news/number-children-displaced-across-sub-saharan-africa-climate-shocks-doubled-record-high-2022 (accessed 30 September 2023).

35 'Cholera preys on displaced children in flood-hit Nigerian state' *Reuters* 28 October 2022, https://www.reuters.com/business/healthcare-pharmaceuticals/cholera-preys-displaced-children-flood-hit-nigerian-state-2022-10-28/ (accessed 30 September 2023).

36 A Kosanic and others 'An inclusive future: Disabled populations in the context of climate and environmental change' (2022) 55 *Current Opinion in Environmental Sustainability* 101159.

37 UNHCR *Disability, displacement and climate change* (April 2021), https://www.unhcr.org/uk/media/disability-displacement-and-climate-change (accessed 30 September 2023).

38 Kosanic and others (n 36).

39 International Organisation for Migration (IOM) 'Three imperatives for ensuring integration of indigenous youth when moving in the context of climate change, environmental degradation and disasters', https://environmentalmigration.iom.int/blogs/three-imperatives-ensuring-integration-indigenous-youth-when-moving-context-climate-change-environmental-degradation-and-disasters (accessed 30 September 2023).

40 M Hansungule & AO Jegede 'The impact of climate change on indigenous peoples' land tenure and use: The case for a regional policy in Africa' (2014) 21 *International Journal on Minority and Group Rights* 256, 276.

41 IDMC (n 1) 29.

Moreover, climate and disaster displacement has also led to the loss of cultural values and traditional lifestyles.[42]

3 Climate and disaster displacement in international law

As is elaborated above, an upsurge of climate and disaster displacement in recent years in Africa has had far-reaching and long-lasting effects on individuals and communities, most particularly on groups living in vulnerable situations. The impacts of climate change extend in time and space to a wide spectrum of economic and non-economic loss and damage in this context. Relevant normative frameworks on loss and damage have growingly recognised the need for addressing climate and disaster displacement. This part intends to clarify the scope and parameters of international and regional law on climate and disaster displacement,[43] particularly in the context of loss and damage. To this end, it examines select international and regional frameworks including those relating to international climate change law, international migration law and international human rights law, to illuminate the current understanding of climate and disaster displacement as loss and damage and measures aimed at averting, minimising and addressing displacement and its impacts on vulnerable people and communities.

3.1 Climate and disaster displacement and international climate change law

3.1.1 UNFCCC and the recognition of displacement as loss and damage

The United Nations Framework Convention on Climate Change (UNFCCC)[44] does not establish or define the concept of loss and damage. However, the latter gradually became a prominent part of the discussions under the UNFCCC, with climate and disaster displacement underscored as an important component. The sixteenth Conference of Parties (COP16) to the UNFCCC first established a work programme on loss and damage in 2010, which was intended to consider approaches to address loss and damage, including impacts of extreme weather events and slow-onset events in developing countries that are particularly vulnerable and to strengthen international cooperation and expertise in order to

42 Friedrich Stiftung, Act Alliance and Climate Migration and Displacement Platform 'Africa regional brief: Human rights in the context of climate-induced migration and displacement' (June 2023) 5, https://library.fes.de/pdf-files/bueros/aethiopien/20464.pdf (accessed 30 September 2023).

43 For a comprehensive overview, see M Cullen 'Disaster, displacement and international law: Legal protections in the context of a changing climate' (2020) 8 *Politics and Governance* 270-280.

44 United Nations Framework Convention on Climate Change adopted 9 May 1992, entered into force 21 March 1994 1771 UNTS 107.

understand and reduce loss and damage.[45] The 2010 Cancun Agreement featured the first stand-alone paragraph on climate displacement and migration, calling on the international community to take 'measures to enhance understanding, coordination and cooperation with regards to climate change induced displacement, migration and planned relocation, where appropriate, at the national, regional and international levels'.[46]

A year later, at the thirty-fourth session of the Subsidiary Body for Implementation, the work programme on loss and damage was focused into three thematic areas, notably assessing the risk of loss and damage, the range of approaches to address loss and damage and the role of the Convention in enhancing the implementation of approaches to address loss and damage in developing countries.[47] At COP18 in 2012 it was agreed that the Convention should enhance knowledge and understanding of approaches to address loss and damage, strengthen dialogue and coordination among relevant stakeholders and enhance action and support to address loss and damage.[48] In this respect, it encouraged further efforts in better understanding 'how impacts of climate change are affecting patterns of migration, displacement and human mobility'.[49]

3.1.2 International mechanisms for displacement as loss and damage

The Warsaw Mechanism on Loss and Damage was established at COP19 in 2013 as an international mechanism for promoting the implementation of approaches to address loss and damage associated with the adverse effects of climate change in a comprehensive, integrated and coherent manner.[50] Notably, among others, it is mandated to address gaps in the understanding of approaches to address loss and damage in the areas outlined under decision 3/CP.18, paragraph 7, which includes the ways in which climate impacts are affecting patterns of migration, displacement and mobility patterns. It is tasked with facilitating support of action to address loss and damage, improving coordination and providing technical guidance and support.

45 Decision 1/CP.16 The Cancun agreements: Outcome of the work of the ad hoc working group on long-term cooperative action under the Convention (15 March 2011) UN Doc FCCC/CP/2010/7/Add.1.
46 Decision (n 45) para 14.
47 Report of the Subsidiary Body for Implementation on its 34th session (12 August 2011) UN Doc FCCC/SBI/2011/7 paras 109-116.
48 Decision 3/CP.18 Approaches to address loss and damage associated with climate change impacts in developing countries that are particularly vulnerable to the adverse effects of climate change to enhance adaptive capacity (8 December 2012) UN Doc FCCC/CP/2012/L.4/Rev.1.
49 Decision (n 48) para 7(a)(vi).
50 Decision 2/CP.19 Warsaw international mechanism for loss and damage associated with climate change impacts (22 November 2013) UN Doc FCCC/CP/2013/L.15.

The 2015 Paris Agreement,[51] adopted at COP21, includes a specific article on loss and damage. Article 8 states the 'importance of averting, minimising and addressing loss and damage associated with the adverse effects of climate change, including extreme weather events and slow onset events, and the role of sustainable development in reducing the risk of loss and damage'.[52] It identifies overarching areas of cooperation and facilitation, namely, early warning systems, emergency preparedness, slow-onset events, events that may involve irreversible and permanent loss and damage, comprehensive risk assessment and management, risk insurance facilities, climate risk pooling and other insurance solutions, non-economic losses and resilience of communities, livelihoods and ecosystems.[53] Significantly, COP21 called for the establishment of a task force to 'develop recommendations for integrated approaches to avert, and address displacement related to the adverse impacts of climate change'.[54]

The Task Force on Displacement is operationalised by the Executive Committee of the Warsaw International Mechanism for Loss and Damage. In its first phase of implementation between 2017 and 2019, the Task Force developed recommendations for integrated approaches to avert, minimise and address displacement related to the adverse effects of climate change.[55] Notably, it recommended to state parties to elaborate national and subnational legislation, policies and strategies recognising the importance of integrated approaches to avert, minimise, and address displacement related to adverse impacts of climate change and issues around human mobility, taking into account human rights obligations and other relevant international standards with the participation of relevant stakeholders.[56] It further recommended the improvement of research, data collection, risk analysis and information sharing in view of understanding and managing human mobility related to the adverse impacts of climate change, while ensuring the participation of communities affected and at-risk of displacement related to the adverse impacts of climate change.[57] It also underlined the need for integrating human mobility challenges and opportunities into national planning processes, including NDCs.[58] Moreover, it stressed efforts to advance durable solutions and facilitate safe, orderly and regular migration and mobility.[59]

In its second phase of implementation between 2019 and 2021, the Task Force focused, among others, on enhancing the understanding of state parties in integrating climate-related mobility in relevant projects and programmes,

51 Paris Agreement adopted 13 December 2015, entered into force 4 November 2016 UN Doc FCCC/CP/2015/10/Add.1 Decision 1/CP.21.
52 Art 8 Paris Agreement (n 51).
53 As above.
54 Paris Agreement para 49.
55 Report of the Taskforce on Displacement (17 September 2018), https://unfccc.int/sites/default/files/resource/2018_TFD_report_17_Sep.pdf (accessed 30 September 2023).
56 Report (n 55) para 33.
57 As above.
58 As above.
59 As above.

supporting the development of laws, policies and strategies that reflect efforts to avert, minimise and address displacement, building capacities in risk assessment and analysis in relation to climate displacement and the integration of mobility challenges in national planning processes.[60]

3.1.3 A growing focus on displacement as loss and damage

Other complementary mechanisms have been created to further the implementation of approaches for averting, minimising and addressing loss and damage, including displacement. The Santiago Network for Loss and Damage was established at COP25 in order to contribute to the effective implementation of the functions of the Warsaw International Mechanism at the local, national and regional levels.[61] It is responsible for catalysing the technical assistance of relevant organisations, bodies, networks and experts for the implementation of relevant approaches. The structure of the Santiago Network was defined at COP27, [62] where the Loss and Damage Fund, a dedicated fund to assist developing countries in responding to loss and damage, was also established.[63] The Transitional Committee set up to operationalise the Fund is required to be guided by the gaps pertaining to displacement and migration specifically, among other challenges.[64] The Sharm-El-Sheikh Implementation Plan, adopted at COP27, lays emphasis on the need for an effective and adequate response to loss and damage, particularly forced displacement. [65]

3.2 Climate and disaster displacement and international refugee and migration law

3.2.1 Refugee protection

The applicability of the international refugee regime to persons and groups displaced in the context of the adverse effects of climate change and disasters has traditionally been elusive. The restrictive political definition of a refugee under

60 Task Force on Displacement: Plan of Action for 2019-2021, FCCC/SB/2019/5/Add.1, https://unfccc.int/sites/default/files/resource/sb2019_05_add1.pdf (accessed 30 September 2023).

61 Decision 19/CMA.3 Warsaw International Mechanism for Loss and Damage associated with Climate Change Impacts (8 March 2022) UN Doc. FCCC/PA/CMA/2021/10/Add.3.

62 Decision 11/CP.27 Santiago network for averting, minimising and addressing loss and damage associated with the adverse effects of climate change under the Warsaw International Mechanism for Loss and Damage associated with Climate Change Impacts (17 March 2023) UN Doc. FCCC/CP/2022/10/Add.1.

63 Decision 2/CP.27 Funding arrangements for responding to loss and damage associated with the adverse effects of climate change, including a focus on addressing loss and damage (17 March 2023) UN Doc. FCCC/CP/2022/10/Add.1.

64 Decision 2/CP.27 (n 63) para 6.

65 Decision 1/CP.27 Sharm el-Sheikh Implementation Plan (17 March 2023) UN Doc FCCC/CP/2022/10/Add.1 para 25.

the 1951 Refugee Convention,[66] centred around persecution on the basis of race, religion, nationality, membership of a particular social group or political opinion, was not conceived to capture climate and disaster displacement.[67] Also, while crossing an international frontier is a necessary requirement to be accorded refugee status,[68] most of those displaced as a result of climate change do not leave their countries. Moreover, the impacts of climate change are not considered to constitute persecution as it has conventionally been construed to involve the sustained or systemic violation of human rights, along with the failure of state protection.[69] In the case of climate change and disasters, states arguably remain willing to assist and protect affected persons and communities. Furthermore, persons or groups susceptible to climate and disaster displacement are unlikely to constitute a particular social group on the basis of which they face discrimination. Direct and exclusive causality between climate change and displacement is also difficult to establish.[70] Additionally, concerns regarding the adequacy of the governance arrangements of the international refugee regime have been raised to oppose its extension to climate and disaster displacement. Added streams of refugees would purportedly put the United Nations (UN) Refugee Agency (UNHCR) under untenable pressure and produce trade-offs between climate and political refugees.[71] The Global Compact on Refugees underlines the pertinence of climate, environmental degradation and natural disasters, not as causes of refugee movements, but in interacting with their drivers.[72] On the other hand, regional instruments provide a more expansive definition of refugees. Under the OAU Refugee Convention[73] and the Cartagena Declaration,[74] refugee status can be ascribed to those fleeing as a result of 'events seriously disturbing public order'. Although the latter may be interpreted to include climate change and disasters,[75] it has not been characterised as such in practice by governments,

66 Convention Relating to the Status of Refugees adopted 28 July 1951, entered into force 22 April 1954 189 UNTS 137, art 1A(2), read in conjunction with Protocol Relating to the Status of Refugees adopted 31 January 1967, entered into force 4 October 1967 606 UNTS 267.

67 J McAdam 'Climate change and displacement' UNHCR Legal and Protection Policy Research Series (May 2011) 12.

68 As above.

69 JC Hathaway & M Foster *The law of refugee status* (2014) 182-211.

70 W Kälin 'Conceptualising climate-induced displacement' in J McAdam (ed) *Climate change and displacement: Multidisciplinary perspectives* (2010) 84-86.

71 See, eg, MF Vallandro do Valle 'Six of one, half a dozen of the other: The inefficiency of recognising refugee status to environmentally displaced persons' in GC Bruni and others (eds) *Migration and the environment: Some reflections on current legal issues and possible ways forward* (2017) 1, https://www.iriss.cnr.it/wp-content/uploads/2018/02/Migration_and_the_Environment_2017.pdf (accessed 30 September 2023).

72 Global Compact on Refugees, UN Doc A/73/12 (Part II) (2 August 2018) para 8.

73 OAU Convention Governing the Specific Aspects of Refugee Problems in Africa adopted 10 September 1969, entered into force 20 June 1974 1001 UNTS 45 art 1(2).

74 Cartagena Declaration on Refugees adopted 22 November 1984, https://www.unhcr.org/uk/media/cartagena-declaration-refugees-adopted-colloquium-international-protection-refugees-central (accessed 30 September 2023).

75 M Addaney 'The legal challenges of offering protection to climate refugees in Africa' in M Addaney and others (eds) *Governance, human rights and political transformation in Africa* (2017) 81.

who have rather resorted to temporary protection under domestic law.[76] Thus, the role of the refugee regime in the protection of individuals and groups displaced in the context of climate change and disasters has been limited.

However, the growing pertinence of the impacts of climate change more recently has prompted a broader understanding of the eligibility of persons displaced in the context of climate change and disasters to refugee protection. The UNHCR, in its first guidance on the issue, in 2020 recognised that persons displaced by climate change and disasters can make valid claims to refugee status.[77] In making such determinations, decision makers ought not refer solely to the natural hazard or climate event but rather to their broader effects on 'state and societal structures and individual well-being and the enjoyment of human rights', thereby recognising the social and political characteristics of climate change.[78] The various breaches to the enjoyment of human rights, notably, the right to life, physical integrity, an adequate standard of living, health, water and sanitation and self-determination and development can amount to persecution.[79] In assessing state protection, operational responses in the country of origin, or improvements or innovations in the adaptive capacity of the country and its communities need to be taken into account.[80] Persons living in situations of pre-existing vulnerabilities and those disproportionately affected or targeted may have a well-founded fear of persecution.[81] The applicability of the refugee regime is also pertinent where climate change interacts with conflict and violence.[82]

3.2.2 IDP frameworks

As stated in preceding parts of the article, climate and disaster displacement takes place largely within borders. The law on internal displacement has saliently recognised climate and disaster displacement. The 1998 Guiding Principles on Internal Displacement sets the international standards for the protection and assistance of internally-displaced persons.[83] Significantly, the Guiding Principles set forth flight as a result of natural hazards.[84] It expressly provides for the prohibition of arbitrary displacement in the case of disasters.[85] The Kampala Convention – the only legally-binding instrument governing internal

76 UNHCR 'Protecting people crossing borders in the context of climate change normative gaps and possible approaches' (February 2012) 34, https://www.refworld.org/docid/4f38a9422.html (accessed 30 September 2023).
77 UNHCR 'Legal considerations regarding claims for international protection made in the context of the adverse effects of climate change and disasters' (1 October 2020), https://www.refworld.org/docid/5f75f2734.html (accessed 30 September 2023).
78 UNHCR (n 77) para 5.
79 UNHCR (n 77) para 7.
80 UNHCR (n 77) para 9.
81 UNHCR (n 77) para 10.
82 UNHCR (n 77) para 11.
83 Guiding Principles on Internal Displacement (11 February 1998) UN Doc E/CN.4/1998/53/Add.2.
84 Guiding Principles (n 83) Scope and Purpose.
85 Guiding Principles (n 83) Principle 6(2)(d).

displacement – provides for preventing and addressing displacement caused by natural disasters.[86] It requires states to deploy early warning systems, disaster risk reduction strategies, emergency and disaster preparedness and management measures.[87] It also requires that states take special measures to guarantee protection against environmental degradation in areas where internally-displaced persons are located.[88] It further establishes the liability of a state to make reparation for damage when refraining from protecting and assisting internally-displaced persons during natural disasters.[89]

3.2.3 Migration frameworks and policy processes

The Agenda for the Protection of Cross-Border Displaced Persons in the Context of Disasters and Climate Change (The Nansen Initiative)

The Nansen Initiative on Disaster-Induced Cross-Border Displacement, launched in 2012 as a bottom-up consultative process, with the view of identifying community needs and best practices in protection and assistance in the context of cross-border climate and disaster displacement, culminated in the development of a Protection Agenda.[90] The Protection Agenda, endorsed by a global intergovernmental consultation of 109 states in 2015, is intended as a complementary tool to international and regional frameworks, in guiding states and other actors to enhance their preparedness and responses to disaster displacement. It focuses on mitigating vulnerability and building resilience to displacement risks, planned relocation before and after disaster displacement in consultation with affected communities and, the adequate protection of internallY-displaced persons (IDPs).[91] Though a non-binding instrument, through its focus on the local, national and regional level and practical solutions and priority areas and recommendations for future work, it was envisioned to be taken up by states and other actors in their national plans and legislation and cooperation.[92] The Platform on Disaster Displacement, the successor to the

86 African Union Convention for the Protection and Assistance of Internally Displaced Persons in Africa adopted 23 October 2009, entered into force 6 December 2012 Preamble para 5, https://au.int/en/treaties/african-union-convention-protection-and-assistance-internally-displaced-persons-africa (accessed 30 September 2023).
87 AU Convention (n 86) art IV.
88 AU Convention (n 86) art IX.
89 AU Convention (n 86) art XII.
90 The Nansen Initiative 'Agenda for the protection of cross-border displaced persons in the context of disasters and climate change' (Vol 1 December 2015) (Protection Agenda Vol 1), https://disasterdisplacement.org/wp-content/uploads/2015/02/PROTECTION-AGENDA-VOLUME-1.pdf; The Nansen Initiative 'Agenda for the protection of cross-border displaced persons in the context of disasters and climate change' (Vol 2, December 2015), https://disasterdisplacement.org/wp-content/uploads/2015/02/PROTECTION-AGENDA-VOLUME-2.pdf (accessed 30 September 2023).
91 Protection Agenda Vol 1 (n 90).
92 See J McAdam 'From the Nansen Initiative to the Platform on Disaster Displacement: Shaping international approaches to climate change, disasters and displacement' (2016) 39 *University of New South Wales Journal* 1518.

Nansen Initiative, was launched in 2016, to implement the Protection Agenda's recommendations.[93] The Platform has four strategic priorities drawn from the focus areas identified by the Nansen Initiative, notably, addressing knowledge and data gaps, enhancing the use of effective practices and strengthening cooperation, promoting policy coherence and mainstreaming human mobility challenges in policy areas, and promoting policy and normative development in gap areas.

The Platform contributes to efforts to minimise and address the loss and damage incurred due to climate change.[94] It runs the Project to Avert, Minimise and Address Disaster Displacement (PAMAD) aimed at developing a better understanding of displacement in the context of loss and damage and supporting measures for averting, minimising and addressing displacement.[95] Its Data and Knowledge Working Group (DKWG) has also focused on disaster displacement as loss and damage.[96] In this regard, it has stressed the need for improving data efforts in the interventions to avert, minimise and address displacement, clarifying definitions of loss and damage concepts and understanding the diverse and complex repercussions of displacement for different people over time and space. Further, it has called for data collection in the realm of loss and damage such as direct economic costs, access to food and water, loss of income and livelihoods, loss of future outlooks and opportunities, reduced health and access to health care, reduced safety of women and girls, reduced access to education, reduced access to political representation, disruption of community, loss of sense of place/identity and trauma and psychological impacts. It also underscored the need for assessment of loss and damage to account for long-term and cascading impacts.

The Sendai Framework for Disaster Risk Reduction

The Sendai Framework, adopted at the Third UN World Conference on Disaster Risk Reduction in 2015, establishes seven targets for preventing and reducing disaster risks.[97] Notably, it addresses loss and damage as a focus area, notably in Target C, 'Reduce direct disaster economic loss in relation to global gross domestic product by 2030' and Target D 'Substantially reduce disaster

93 Platform on Disaster Displacement 'Addressing the protection needs of people displaced across borders in the context of disasters and climate change' (May 2016), https://www.knomad.org/sites/default/files/2017-03/PDD-Leaflet-11-2016-screen.pdf (accessed 30 September 2023).

94 Platform on Disaster Displacement, Strategy 2019-2023, https://disasterdisplacement.org/wp-content/uploads/2022/07/30062022-Annex-I-PDD-Workplan-2019-2023.pdf (accessed 30 September 2023).

95 Platform on Disaster Displacement 'Project fact sheet – Action and support to avert, minimise and address displacement related to the adverse effects of climate change' https://disasterdisplacement.org/portfolio-item/project-fact-sheet-action-and-support-to-avert-minimize-and-address-displacement-related-to-the-adverse-effects-of-climate-change/ (accessed 30 September 2023).

96 Platform on Disaster Displacement '15 observations on disaster displacement as loss and damage' (November 2022), https://disasterdisplacement.org/portfolio-item/15-observations-on-disaster-displacement-as-loss-and-damage/ (accessed 1 September 2023).

97 Sendai Framework for Disaster Risk Reduction 2015-2030 adopted 8 March 2015, https://www.undrr.org/publication/sendai-framework-disaster-risk-reduction-2015-2030 (accessed 29 September 2023).

damage to critical infrastructure and disruption of basic services, among them health and educational facilities, including through developing their resilience by 2030'. The Sendai Framework explicitly recognises displacement as an impact of disasters for which to build the resilience of communities.[98] It calls on states to adopt policies and programmes addressing disaster-induced mobility in view of strengthening the resilience of affected people and host communities based on national laws and circumstances.[99] However, currently, indicators used to monitor progress against the risk reduction objectives of the Sendai Framework do not include displacement-related metrics.[100] The International Organisation for Migration (IOM) and the Internal Displacement Monitoring Centre (IDMC) are developing displacement-related metrics and indicators to promote the integration of displacement in disaster risk reduction interventions.[101]

The Global Compact for Safe, Orderly and Regular Migration

The Global Compact for Migration, the first UN global agreement on international migration, was adopted in 2018 with the aim of addressing international migration in a comprehensive and holistic manner.[102] It sets out 23 objectives to address migration in a holistic manner. Of those, at least three objectives are explicitly relevant to climate and disaster displacement. First, it aims to 'minimise the adverse drivers and structural factors that compel people to leave their country of origin'.[103] This objective acknowledges that climate change is a driver and structural factor for migration and, as such, it should be addressed by resilience and disaster risk reduction and climate change mitigation and adaptation.'[104] In this respect, it focuses on the development of adaptation and resilience strategies, the integration of displacement into disaster preparedness strategies, the development of mechanisms at the regional and sub-regional levels to address vulnerabilities of people, strengthening information sharing to enhance an understanding of migration movements resulting from disasters and the adverse effects of climate change and ensuring coherent approaches.[105] The Global Compact also aims to enhance the availability and flexibility of pathways for regular migration and climate change.[106] It underscores cooperation

98 Sendai Framework (n 97) paras 19(b) & 33(a).
99 Sendai Framework (n 97) para 30(l).
100 Platform on Disaster Displacement 'Disaster displacement and disaster risk reduction: Policy brief and key messages' (2021), https://globalplatform.undrr.org/sites/default/files/2022-05/Platform%20on%20Disaster%20Displacement%2C%202021.%20PDD%20Policy%20Brief%20and%20Key%20Messages.%20Disaster%20Displacement%20and%20Disaster%20Risk%20Reduction_1.pdf (accessed 30 September 2023).
101 IOM & IDMC 'Developing indicators on displacement for disaster risk reduction', https://environmentalmigration.iom.int/sites/g/files/tmzbdl1411/files/documents/drr-displacement-indicator-project-brochure_0.pdf (accessed 30 September 2023).
102 The Global Compact for Safe, Orderly and Regular Migration 19 December 2018 UN Doc A/RES/73/195.
103 Global Compact (n 102) Objective 2 para 18.
104 As above.
105 Global Compact (n 102) paras 18(h)-(l).
106 Global Compact (n 102) para 21.

in solutions such as planned relocation and visa options, where adaptation and return are not possible.[107] Another objective relates to the consolidation of global partnerships for safe, orderly and regular migration.[108] As such, it stresses the need to enhance global and regional cooperation to catalyse the implementation of frameworks addressing the drivers of displacement, notably, climate change.[109]

UN Agenda 2030 and AU Agenda 2063

The UN 2030 Agenda for Sustainable Development establishes a clear link between climate change, displacement and development.[110] It recognises the role of more frequent and intense disasters and forced displacement in driving back development gains in prior years.[111] It also underlines the challenges brought about by climate change to the sustainable development of nations.[112] Under Goal 1 on ending poverty, it highlights resilience building of the poor and vulnerable in the face of the adverse effects of climate change and disasters.[113] Similarly, AU Agenda 2063 places emphasis on the significance of climate resilient economies and communities for economic prosperity and sustainable development.[114]

3.2.4 Climate and disaster displacement and international human rights law

Climate and disaster displacement brings to bear the broad field of human rights obligations expressed in international and regional human rights law that underpin climate, refugee and migration and development frameworks described in the preceding parts. International human rights law continues to apply to those displaced as a result of climate change and disasters. In most cases, those that are displaced as a result of climate change and disasters remain within their country. In such circumstances, international human rights law imposes a responsibility upon states to respect, protect and fulfil the rights of internally displaced people within their territory free from discrimination.[115] For those persons displaced outside of their country of origin, international human rights law remains relevant on the basis of the principle of *non-refoulement*.[116] Human rights instruments also specifically articulate obligations for vulnerable groups displaced as a result of

107 Global Compact (n 102) para 21(h).
108 Global Compact (n 102) para 39.
109 Global Compact (n 102) para 39(b).
110 UN General Assembly 'Transforming our world: The 2030 Agenda for Sustainable Development' 21 October 2015 UN Doc. A/RES/70/1.
111 UNGA (n 110) para 14.
112 As above.
113 UNGA (n 110) Goal 1.5.
114 African Union Commission (AUC) 'African Union Agenda 2063: A shared strategic framework for inclusive growth and sustainable development' (2013), https://au.int/Agenda2063/popular_version (accessed 30 September 2023).
115 UNHCR 'Climate change, displacement and human rights' March 2022, https://www.unhcr.org/sites/default/files/legacy-pdf/6242ea7c4.pdf (accessed 30 September 2023).
116 As above.

climate change and disasters. The African Charter on the Rights and Welfare of the Child (African Children's Charter) requires states to take measures to reunite children with relatives where displacement results from natural disasters.[117] The UN Convention on the Rights of Persons with Disabilities, under article 11, requires member states to take all necessary measures to ensure the protection and safety of persons with disabilities in natural disasters.[118]

A challenge, however, is that climate change and disasters can considerably weaken state institutions and structures, prompting the question of the scope of state duties in the context of disasters.[119] The Draft Articles on the Protection of Persons in the Event of Disasters, adopted by the International Law Commission in 2016, provide useful guidance on this regard.[120] Importantly, it reaffirms the central role of the state in the protection of persons affected by disasters and in providing disaster relief.[121] The Draft Articles include mass displacement in its definition of a 'disaster', notably 'a calamitous event or series of events resulting in widespread loss of life, great human suffering and distress, mass displacement, or large-scale material or environmental damage, thereby seriously disrupting the functioning of society'.[122] The ILC made clear that states should account for displacement in their obligations in disaster relief.[123] Article 5 of the Draft Articles states that 'persons affected by disasters are entitled to the respect for and protection of their human rights in accordance with international law'. This potentially encompasses the right to life, economic and social rights, notably, the provision of essential food and health care, shelter, housing and education, the right to receive humanitarian assistance, the right of communities to participate in the planning of risk reduction and recovery initiatives and the right to non-discriminatory assistance in the durable solutions to displacement.[124] Moreover, the Draft Articles establish a state duty to seek external assistance where the disaster 'manifestly exceeds its national response capacity'.[125]

4 Legal and policy responses to climate and disaster displacement as loss and damage

This part analyses the characterisation by African states of climate and disaster displacement in the context of loss and damage. Notably, it examines the content

117 African Charter on the Rights and Welfare of the Child adopted 11 July 1990, entered into force 29 November 1999 CAB/LEG/24.9/49 (1990) art 25(2).
118 UN Convention on the Rights of Persons with Disabilities adopted 12 December 2006, entered into force 3 May 2008 2515 UNTS 3 art 11.
119 Cullen (n 44).
120 ILC 'Draft articles on the protection of persons in the event of disasters, with commentaries' (2016), https://legal.un.org/ilc/texts/instruments/english/commentaries/6_3_2016.pdf (accessed 30 September 2023).
121 ILC (n 120) Preamble.
122 ILC (n 120) art 3.
123 ILC (n 120) art 3 Commentary para (8).
124 ILC (n 120) art 5 Commentary para (6).
125 ILC (n 120) art 11.

of NDCs to identify the salient displacement concerns highlighted by states. It also surveys the integration of displacement considerations in climate legislation and policies. To this end, it draws from the updated African NDCs as well as climate legislation.

4.1 Climate and disaster displacement as loss and damage in NDC commitments

African NDCs have been deplored for failing to reflect loss and damage incurred as a result of climate change despite the fact that African states are the most vulnerable to its impacts. According to a 2021 study, only 14 per cent of initial or updated African NDCs had explicitly mentioned loss and damage.[126] A review of NDCs further indicates sparse reporting on climate and disaster displacement as loss and damage. As of September 2023, 46 African states had submitted updated NDCs.[127] Most NDCs, such as that of Chad,[128] Côte d'Ivoire,[129] Eswatini and[130] Tanzania,[131] among others, have referred to the loss and degradation of biodiversity, the loss of agricultural productivity, the loss of crop and livestock, the loss of forests, the loss of habitats and the loss of infrastructure, and so forth. Some NDCs have additionally provided detailed estimates of the direct economic costs associated with extreme weather events, including Central African Republic,[132]

126 B Ryder & E Calliari 'How does loss and damage feature in nationally determined contributions?' (2021) 3, University College London Global Governance Institute, https://www.ucl.ac.uk/global-governance/news/2021/oct/loss-and-damage-nationally-determined-contributions (accessed 30 September 2023).

127 See UNFCCC *Nationally determined contributions registry*, https://unfccc.int/NDCREG (accessed 30 September 2023).

128 Chad 'Update to the nationally determined contribution' (October 2021) 16, 24 & 25, https://unfccc.int/sites/default/files/NDC/2022-06/CDN%20ACTUALISEE%20DU%20TCHAD.pdf (accessed 30 September 2023).

129 Côte d'Ivoire 'Updated NDC' March 2022 20, https://unfccc.int/sites/default/files/NDC/2022-06/CDN_Congo.pdf (accessed 30 September 2023).

130 Eswatini 'Update of the nationally determined contributions' October 2021, https://unfccc.int/NDCREG?field_party_region_target_id=All&field_document_ca_target_id=All&field_vd_status_target_id=5933&start_date_datepicker=&end_date_datepicker=&page=3 (accessed 30 September 2023).

131 Tanzania 'Updated NDC' July 2021 2, https://unfccc.int/sites/default/files/NDC/2022-06/TANZANIA_NDC_SUBMISSION_30%20JULY%202021.pdf (accessed 30 September 2023).

132 Central African Republic 'NDC – Revised version' October 2021 8 & 24, https://unfccc.int/sites/default/files/NDC/2022-06/CDN%20Revisée%20RCA.pdf (accessed 30 September 2023).

Comoros,[133] Malawi,[134] Mauritius,[135] Nigeria[136] and Zimbabwe,[137] to mention but a few.

Some NDCs recognised displacement as an impact of climate change and pointed to responses to climate and disaster displacement as a priority area for adaptation. The Republic of Congo, for instance, underlined enhancing gender sensitivity in resettlement, awareness raising on the impacts of climate displacement on customary land, and consultations with displaced persons and host communities in resettlement.[138] It provided an estimate of adaptation needs for addressing displacement specifically.[139] The Democratic Republic of the Congo (DRC) highlighted the health implications of climate displacement.[140] Egypt underlined the loss of coastal land and associated loss of livelihoods and migration from coastal areas.[141] Gabon mentioned anticipatory measures as an adaptation measure in the face of the risks of increased climate displacement and regional instability.[142] Kenya highlighted the scale of displacement engendered by floods in 2018: 230 000 persons, including 150 000 children, were displaced, 700 schools were shut, roads and infrastructure destroyed, and crops and livestock lost. Liberia underscored the need for adaptation in the context of forced migration as a climate health hazard.[143] Malawi referred to migration leading to human rights violations, instability and conflict as a key risk of the increasing incidence of extreme weather events.[144] Seychelles aimed at improving the health and gender responsiveness of adaptation measures with respect to displacement.[145] Sierra Leone identified population displacement as an impact

133 Comoros 'Updated NDC' (2021) 3, https://unfccc.int/sites/default/files/NDC/2022-06/CDN_révisée_Comores_vf.pdf (accessed 30 September 2023).
134 Malawi 'Updated nationally determined contributions' July 2021 VII, https://unfccc.int/sites/default/files/NDC/2022-06/Malawi%20Updated%20NDC%20July%202021%20submitted.pdf (accessed 30 September 2023).
135 Mauritius 'Update of the nationally determined contribution' October 2021 22, https://climate-laws.org/document/mauritius-first-ndc-updated-submission_07cf (accessed 30 September 2023).
136 Nigeria 'Nationally determined contribution – 2021 update' July 2021 10-11, https://unfccc.int/sites/default/files/NDC/2022-06/NDC_EN_Final.pdf (accessed 30 September 2023).
137 Zimbabwe 'Revised NDC' (2021) 12, https://unfccc.int/sites/default/files/NDC/2022-06/Zimbabwe%20Revised%20Nationally%20Determined%20Contribution%202021%20Final.pdf (accessed 30 September 2023).
138 The Republic of Congo 'Updated NDC' 2021 27, https://unfccc.int/sites/default/files/NDC/2022-06/CDN_Congo.pdf (accessed 30 September 2023).
139 Republic of Congo (n 138) 38.
140 The Democratic Republic of the Congo 'Revised nationally determined contribution' October 2021 30, https://unfccc.int/sites/default/files/NDC/2022-06/CDN%20Revisée%20de%20la%20RDC.pdf (accessed 30 September 2023).
141 Egypt 'Second updated nationally determined contribution' June 2023 6, https://unfccc.int/sites/default/files/NDC/2022-06/CDN%20Revisée%20de%20la%20RDC.pdf (accessed 30 September 2023).
142 Gabon 'Second nationally determined contribution' 2021 23, https://unfccc.int/sites/default/files/NDC/2022-07/20220706_Gabon_Updated%20NDC.pdf (accessed 30 September 2023).
143 Liberia 'Updated NDC' July 2021 36, https://unfccc.int/sites/default/files/NDC/2022-06/Liberia%27s%20Updated%20NDC_RL_FINAL%20%28002%29.pdf (accessed 30 September 2023).
144 Malawi (n 134) 51.
145 Seychelles 'Updated nationally determined contribution' July 2021 36, https://unfccc.int/sites/default/files/NDC/2022-06/Seychelles%20-%20NDC_Jul30th%202021%20_Final.pdf (accessed 30 September 2023).

of climate change.[146] Somalia alluded to the effects of the loss of livelihoods in driving internal displacement and humanitarian crises, compounding conflicts and vulnerabilities of resource-dependent communities.[147]

Few NDCs made explicit mention of loss and damage. Mozambique affirmed that the loss and damage sustained as a result of climate change hampered economic development and poverty eradication.[148] It pointed to the costs necessary for reconstruction in the aftermath of extreme weather events during the rainy season, taking into account classrooms, health, agriculture, infrastructure and assistance.[149] Similarly, Senegal acknowledged the effects of loss and damage on economic development.[150] South Africa invoked the need for support from developing countries in the context of climate action and loss and damage.[151] Uganda identified addressing loss and damage as a priority area.[152]

Cabo Verde made express reference to the displacement of coastal communities in the context of loss and damage.[153] It also affirmed risks to all priority sectors, resulting in permanent loss of territory due to sea level rise, food insecurity, detrimental impacts on tourism, loss of cultural and spiritual land, increased risks of deaths and injuries from disasters as well as increasing outbreaks of infectious diseases. It advanced the importance of international support in the implementation of risk management measures. Further, it committed to enhanced livelihood protection policies for assisting vulnerable persons in recovering from the damages associated with extreme weather events and providing support to displaced persons and host communities.[154] Kenya committed to addressing loss and damage, particularly advancing innovative livelihood strategies to build the climate resilience of local communities.[155]

146 Sierra Leone 'Updated NDC' July 2021 32, https://unfccc.int/sites/default/files/NDC/2022-06/210804%202125%20SL%20NDC%20%281%29.pdf (accessed 30 September 2023).
147 Somalia 'Updated NDC' July 2021 1, https://unfccc.int/sites/default/files/NDC/2022-06/Final%20Updated%20NDC%20for%20Somalia%202021.pdf (accessed 30 September 2023).
148 Mozambique 'Update of the first nationally determined contribution' December 2021 15-17, https://unfccc.int/sites/default/files/NDC/2022-06/NDC_EN_Final.pdf (accessed 30 September 2023).
149 As above.
150 Senegal 'Nationally determined contribution' December 2020 7, https://unfccc.int/sites/default/files/NDC/2022-06/CDNSenegal%20approuvée-pdf-.pdf (accessed 30 September 2023).
151 South Africa 'Updated NDC' September 2021 28, https://unfccc.int/sites/default/files/NDC/2022-06/South%20Africa%20updated%20first%20NDC%20September%202021.pdf (accessed 30 September 2023).
152 Uganda 'Updated NDC' September 2022 16, https://unfccc.int/sites/default/files/NDC/2022-09/Updated%20NDC%20_Uganda_2022%20Final.pdf (accessed 30 September 2023).
153 Cabo Verde 'Update to the first nationally determined contribution' February 2021 32, https://unfccc.int/sites/default/files/NDC/2022-06/Cabo%20Verde_NDC%20Update%202021.pdf (accessed 30 September 2023).
154 Cabo Verde (n 153) 43.
155 Kenya 'Updated NDC' December 2020 14, https://unfccc.int/sites/default/files/NDC/2022-06/Kenya%27s%20First%20%20NDC%20%28updated%20version%29.pdf (accessed 30 September 2023).

4.2 Climate and disaster displacement as loss and damage in climate legislation and policy

Climate laws in the African context are largely framework laws, addressing several aspects of climate change policy holistically, rather than taking a sectoral approach.[156] These framework laws typically provide for the establishment of institutional arrangements such as a national council for serving as a national oversight and coordination mechanism, financial arrangements and various climate change measures and duties. They prescribe the development of policies and action plans that in turn would define national goals, priority areas of intervention and programmes. Since the adoption of the Paris Agreement, a few African countries, such as Kenya, Nigeria, Uganda, South Africa and Mauritius, have developed climate legislation. Most African countries have yet to enact climate laws. Legislative reforms in the area of disaster laws have also proven to be thwarted and delayed.[157]

The 2016 Kenya Climate Change Act, one of the early and most comprehensive climate legislative instruments on the continent, provides extensively for climate change measures and duties, notably mainstreaming climate change responses into sectoral functions and disaster risk reduction into development programmes, access to information and public consultations, and the enforcement of rights relating to climate change.[158] It requires government to develop national climate change action plans for operationalising the Act. The last iteration for the period 2018 to 2022 set out seven priority areas, including disaster risk management and food and nutrition security.[159] Both these priorities emphasise enhancing coping mechanisms and building the resilience of communities to shocks. The 2021 Uganda Climate Change Act similarly provides broadly for climate change measures, duties of the state and private entities, litigation on climate change, and intricate institutional arrangements.[160] It requires the development of a Framework Strategy on Climate Change. Interestingly, it is emphasised that the Strategy is mandated to take into account the loss and damage occasioned by climate change on ecosystems, communities and humankind.[161] It also requires the development of National Climate Change Action Plans.[162] While the National Climate Change Action Plan has not yet been developed, previous policies such as the 2018 National Climate Change Policy focuses on disaster preparedness

156 O Rumble 'Climate change legislative development on the African continent' in P Kameri-Mbote and others (eds) *Law/Environment/Africa* (2020) 33, 43.
157 See, eg, B Mucherera & S Spiegel 'Forced displacement: Critical lessons in the protracted aftermath of a flood disaster' (2022) 87 *GeoJournal* 3855, 3858.
158 Climate Change Act of 2016, Kenya Gazette Supplement 68 (Act 11).
159 Government of the Republic of Kenya 'National Climate Change Action Plan 2018-2022' (2018), https://rise.esmap.org/data/files/library/kenya/Clean%20Cooking/Kenya_NCCAP_2018-2022.pdf (accessed 30 September 2023).
160 National Climate Change Act of 2021.
161 Art 5(3)(f) National Climate Change Act (n 160).
162 Art 6 National Climate Change Act (n 160).

as a key area of intervention.[163] Other relevant climate laws include the Nigeria Climate Change Act, the Mauritius Climate Change Act and the South Africa Climate Change Act, although they have not yet introduced national climate action plans.

Since climate legislation and policy touch scarcely upon displacement and loss and damage, it may be worthy to investigate the scope of IDP instruments developed by some countries since the adoption of the Kampala Convention. For instance, the 2013 Zambia Guidelines for the Compensation and Resettlement of Internally Displaced Persons defines the rights and guarantees relating to the protection and assistance of IDPs during displacement and during return, resettlement or local integration.[164] It recognises that natural disasters are a prominent driver of internal displacement.[165] It establishes the state duty to devise early warning systems and disaster risk reduction and preparedness measures.[166] It requires authorities to avoid displacement where there are feasible alternatives and otherwise to minimise displacement and its effects.[167] Pertinently, it establishes a broad host of obligations on protection during displacement, including prohibition of violence and attacks against IDPs, prohibition of internment in camps, the obligation to inform and consult IDPs of resettlement options, the obligation to establish the fate and whereabouts of missing relatives, the obligation to provide temporal shelter and food rations, the obligation to compensate loss of land, access to psychological services, women's health and reproductive health services, appropriate counselling for victims of sexual abuse and the prevention of infectious diseases.[168] In addition, it specifies that property and possessions of IDPs are protected against destruction and arbitrary appropriation and the duty for the government to assist returnees or resettled IDPs in recovery efforts.[169]

The 2014 Somalia Policy Framework on Displacement within Somalia recognises natural disasters and climate change impacts as causes of internal displacement.[170] It notably establishes preventive measures, such as reducing disaster risks and vulnerabilities of communities, increasing resilience notably of farmers and pastoralists with livelihood dependency in drought prone areas, and establishing monitoring and early warning mechanisms.[171] It also provides for protection in the context of protracted displacement and the improvement of

163 Uganda National Climate Change Policy (2018), https://ccd.go.ug/wp-content/uploads/2018/09/NATIONAL-CLIMATE-CHANGE-POLICY-SUMMARY-VERSION-2018-2.pdf (accessed 30 September 2023).
164 Guidelines for the Compensation and Resettlement of Internally Displaced Persons (2013), https://www.refworld.org/pdfid/5b72a9194.pdf (accessed 30 September 2023).
165 Guidelines (n 164) Introduction.
166 Guidelines (n 164) Guideline 9.
167 Guidelines (n 164) Guideline 10.
168 Guidelines (n 164) Guidelines 13-22.
169 Guidelines (n 164) Guidelines 22 & 26.
170 Policy Framework on Displacement within Somalia (2014), https://www.refworld.org/pdfid/5b682c4c4.pdf (accessed 30 September 2023).
171 Policy Framework (n 170) sec 4.1.

living conditions.[172] On the provision of the conditions for and supporting durable solutions, it underscores the reconstruction of shelter, housing and basic services, the restoration of and access to land, housing and property, the re-establishment of livelihoods or creation of alternative livelihood options, reunification of separated families and access to effective remedies and justice.[173] Moreover, the 2015 Malawi Durable Solutions Framework for Internally Displaced Persons and Flood Affected Populations guides the government and humanitarian partners in supporting durable solutions of disaster affected IDPs.[174] It defines eight criteria for the attainment of durable solutions, including long-term safety and security, adequate standard of living, mechanisms for restoring land and property, access to personal documentation, family reunification, participation in public affairs and access to remedies.[175]

5 Gaps and prospects

A review of NDCs coupled with legislative and policy frameworks in the foregoing part suggests that displacement features inadequately in climate interventions and assessments of the costs and impacts of climate change as well as legislative mechanisms put in place to respond to climate change. Some countries dispose of IDPs guidelines and frameworks, adopted further to the adoption of the Kampala Convention, and mostly prior to the adoption of the Paris Agreement. These instruments remain insightful references, though not always specifically relevant to climate change and natural disasters. While some countries acknowledge the role of climate change and extreme weather events in inducing displacement, they have not drawn these linkages and have not stipulated relevant structures and measures under their climate legislation and policy frameworks. This lacuna is unfavourable as it leads to uncertainty and to the lack of effective, accountable, coordinated and enduring national mechanisms. Domestic legislation is also important for addressing climate change reflecting context-specific and tailored needs and circumstances. It is crucial, therefore, for future legislative responses and legislative reforms to provide for measures in addressing displacement as a result of climate change or to make linkages with other legal instruments relevant to the latter. In this view, a few salient aspects need to be most crucially catered for, as outlined below.

172 Policy Framework (n 170) sec 6.1.
173 Policy Framework (n 170) sec 7.1.
174 Durable Solutions Framework for Internally Displaced Persons (IDPs) and Flood affected Populations in Malawi (2015).
175 Durable Solutions Framework (n 174) para 2.2.

5.1 Reporting the economic and non-economic costs and impacts of climate and disaster displacement

African states should put in place robust mechanisms for monitoring, measuring and reporting the economic and non-economic losses of climate and disaster displacement as well as those associated with averting, minimising and addressing displacement. It is clear from a review of African NDCs that such practice currently is crucially lacking. Where reference is made to climate impacts, they tend to be broad and emphasise economic costs. States' investment and commitment to addressing and reducing displacement are shaped by their knowledge and understanding of its linkages with other structural challenges, as well as the country's longer-term development plans.[176] To this end, they need to double efforts in gathering disaggregated data and evidence on the costs and impacts of climate and disaster displacement, towards developing adequate policies, informing planning and preparedness and enhancing institutional and technical capacities, notably, in the context of the implementation of their national adaptation plans, NDCs and climate-financing instruments.[177] Relevant metrics should include, among others, demographic profiles of those displaced and differentiated impacts on groups, the number and duration of displacement and outcome of durable solutions, the immediate and long-term impacts of displacement on sectors such as education, housing and health and the costs and benefits of responses and investments.[178] This is also crucial for longer-term sectoral planning in addressing displacement risk.[179] Significantly, reporting is equally essential to 'strengthen the business case for action'. Accounting for the impacts of climate and disaster displacement will also help in creating and attracting much-needed national and international political interest and facilitating access to financial and technical support along with galvanising sufficient state prioritisation and action.[180] It thereby serves as a strong foundation for budgeting and fundraising from states, donors and other development and humanitarian stakeholders.[181] This is critical at this juncture where displacement is set to be given priority focus under the Loss and Damage Fund and the broader financing framework.[182] Monitoring and reporting the impacts of displacement also has a pivotal role in promoting better accountability at national and international level.

176 Submission from IDMC to United Nations Secretary-General's High-level Panel on Internal Displacement 2, https://www.un.org/internal-displacement-panel/sites/www.un.org.internal-displacement-panel/files/published_idmc_submission.pdf (accessed 30 September 2023).
177 Submission from IDMC (n 176) 3.
178 Submission from IDMC (n 176) 5.
179 Submission from IDMC (n 176) 3.
180 As above.
181 As above.
182 Biehler and others (n 7).

5.2 Human rights-based approaches to displacement and the durable solutions

Human rights provide a framework within which to consider the challenges of climate and disaster displacement and the policy structures as well as mechanisms required to provide effective responses to the displaced. A human rights-based approach to displacement helps states to develop policies and strategies geared towards equity especially in the implementation of durable solutions to the plight of displaced people. Participatory approaches to decision making are critical to mitigate the negative impact of prolonged displacement by systematically addressing the risks, needs and vulnerabilities of specific groups. If displaced groups remain marginalised and in limbo without a prospect of a lasting solution, this could present challenges for long-term peace, stability, recovery and reconstruction.[183] According to the Guiding Principles on Internal Displacement and the Kampala Convention, internally-displaced persons have a right to a durable solution.[184] These instruments set forth the rights of IDPs to durable solutions and obligations of states in that regard.[185] By virtue of these frameworks, states are required to promote and create satisfactory conditions enabling IDPs to return voluntarily, integrate locally and relocate on a sustainable basis with safety and dignity.[186] In order to realise durable solutions, displaced persons should no longer have any specific assistance and protection needs in relation to their displacement and should be able to exercise their human rights without discrimination on the basis of their displacement.[187] While the primary duty bearer to implement durable solutions for the displaced lays on the state, non-state actors such as humanitarian and development actors have complimentary roles.[188] Mobility decisions and policies regarding durable solutions should mainly be guided by the rights, needs and interests of displaced people.[189] The choice of which durable solutions to pursue should be governed by displaced communities and they should be able to participate in the planning and management of durable solutions in order to make an informed and voluntary choice.[190] Displaced groups that have achieved a lasting solution should continue to receive protection under international human rights law.[191]

183 S Zingg 'Exploring the climate change-conflict-mobility nexus' (2021) Migration Research Series 70, International Organisation for Migration, https://publications.iom.int/books/mrs-no-70-exploring-climate-change-conflict-mobility-nexus (accessed 1 September 2023).
184 See Guiding Principles on Internal Displacement, Principles 28-30 (n 83) and African Union Convention for the Protection and Assistance of Internally Displaced Persons in Africa (n 86) art 11.
185 As above.
186 As above.
187 Inter-Agency Standing Committee (IASC) Framework on durable solutions for internally displaced persons' (April 2010) The Brookings Institution – University of Bern Project on Internal Displacement, 11-15.
188 As above.
189 As above.
190 As above.
191 As above.

5.3 Effective remedy for loss and damage associated with displacement

By virtue of international and regional human right instruments, all persons who experience human rights violations are entitled to a right to effective remedy.[192] Similar to other circumstances, in cases of climate and disaster displacement, states and businesses are accountable for remedying climate-related harms and their failure to provide adequate safeguards.[193] As a result, displaced groups that have sustained loss and damage as a result of displacement should have equal and effective access to remedies.[194] As part of effective remedies, they should be able to access justice without discrimination on the basis of their displacement. In some cases, simple non-judicial approaches might be enough rather than overly complex systems.[195] Besides, displaced groups should also be able to access relevant information regarding the violation of their rights and mechanisms of redress. A failure by states to ensure effective remedies for the harms experienced by displaced groups could lead to additional displacement, thus perpetuating a persistent sense of injustice or bias among displaced groups.[196] Additionally, the provision of effective remedies for loss and damage associated with displacement is critical for long-term peace and stability.[197] In operationalising the right to effective remedy for loss and damage associated with climate and disaster displacement, relevant action should ensure adequate, effective and prompt reparation for harms suffered, in the form of restitution, compensation, rehabilitation, satisfaction and guarantees of non-repetition.[198] States should establish operative and appropriate administrative, judicial, legislative procedures or other appropriate measures that can provide fair, effective and prompt access to justice. In this view, domestic and international climate litigation and human rights grievance mechanisms at the national, regional and international level ought to be leveraged to urge states to redress climate-related harms.[199]

192 See, eg, Universal Declaration of Human Rights (Universal Declaration) adopted by UN General Assembly Resolution 217 A (III) of 10 December 1948 art. 8; International Covenant on Civil and Political Rights (ICCPR) adopted 16 December 1966, entered into force 23 March 1976 999 UNTS 171 art 2(3); African Charter on Human and Peoples' Rights (African Charter) adopted 27 June 1981, entered into force 21 October 1986 21 ILM 58 art 17.

193 IASC Framework (n 187) 45.

194 IASC Framework (n 187) 42.

195 As above.

196 As above.

197 As above.

198 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 21 March 2006 UN Doc A/RES/60/147.

199 See A Savaresi 'Human rights and the impacts of climate change: Revisiting the assumptions' (2021) 11 *Oñati Socio-Legal Series* 231; M Wewerinke-Singh 'The rising tide of rights: Addressing climate loss and damage through rights-based litigation' (2023) 12 *Transnational Environmental Law* 537-566.

6 Conclusion

This article has sought to examine the conceptualisation of climate and disaster displacement in law and policy in Africa, drawing upon which, it identifies current gaps and opportunities for better prioritising displacement as loss and damage in law and policy. Climate and disaster displacement is accelerating in Africa, where it is specially protracted, carries important implications for security and development, and significantly affects vulnerable populations. Despite a relatively more established international and regional framework on displacement and loss and damage, climate legislation and policy across Africa scarcely speak to displacement and its challenges. The article proposes enhanced data collection and reporting on the economic and non-economic costs and impacts of climate and disaster displacement, adopting human rights-based approaches to durable solutions to climate and disaster displacement and the provision of effective remedies for displacement as loss and damage.

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Article 8 of the Paris Agreement – Exploring potentials for Africa: Review of the guest editorial in *Climate Policy* 2020, Vol. 20, No. 6, 661-668

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Abstract: This is an analytical review of the guest editorial in Climate Policy 2020, Vol. 20, No. 6, 661-668, https://doi.org/10.1080/14693062.2020.1778885. The review is timely as it generally contributes to the global discourse towards deepening the debate on Loss and Damage (L&D) occasioned by climate change. The review paper argues that many countries of the Global South, including Africa are yet to harness the benefits of climate finance to address the effects of loss and damage, as a result of minimal efforts made towards reducing the risks and harms on the continent. Thus, there is an urgent need to further expose states in Africa to innovative mechanisms of addressing the challenge of L&D. Effective collaboration and collective responsibility are paramount and can be achieved through civic engagement and knowledge sharing on domestic policies and global instruments.

Key words: civic engagement; climate change; climate finance; loss and damage

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1 Introduction

The International Federation of Red Cross and Red Crescent Societies (IFRC) in 2020 reported that 'if no urgent action is taken, the number of people in need of humanitarian assistance due to the climate crisis could double by 2050'. The IFRC further estimated that the financial costs to respond to these crises would grow from US $3,5 to US $12 billion to US $20 billion per year by 2030.[1] Africa remains vulnerable in this global outlook on the expected humanitarian crisis caused by climate change. The collaboration between governments and civil society actors over the years in addressing the climate governance crisis in Africa has not adequately utilised global opportunities that mitigate climate change loss and damage (L&D). African state actors and their global partners are aware of the L&D associated with the effects of climate change, yet minimal efforts are made towards reducing the risks and harms on the continent. What global opportunities are available for addressing economic and non-economic L&D caused by climate change? As the United Nations Framework Convention on Climate Change (UNFCCC) reiterated, 'the Paris Agreement's targets to strengthen the global response to the threat of climate change by keeping a global temperature rise this century well below 2 degrees Celsius above pre-industrial levels and to pursue efforts to limit the temperature increase even further to 1.5 degrees Celsius'.[2] How could enhanced joint partnerships amplify awareness about the application and domestication of article 8 of the Paris Agreement to ensure reparation and repairs of the impact of climate change?[3]

This article argues that effective collaboration and collective responsibility can be achieved through civic engagement and knowledge sharing on domestic policies and global instruments. One can achieve the desired results by harnessing opportunities that address issues of L&D arising from climate change. This review further reinforces the needed approach that could address the gaps identified by Broberg and Romera in the editorial with regard to the adoption of the L&D (article 8) during the 2015 Paris Agreement without a substantive framework of implementation, using the two authors' *bone and flesh* analogy.

2 Distinction between adaptation and loss and damage

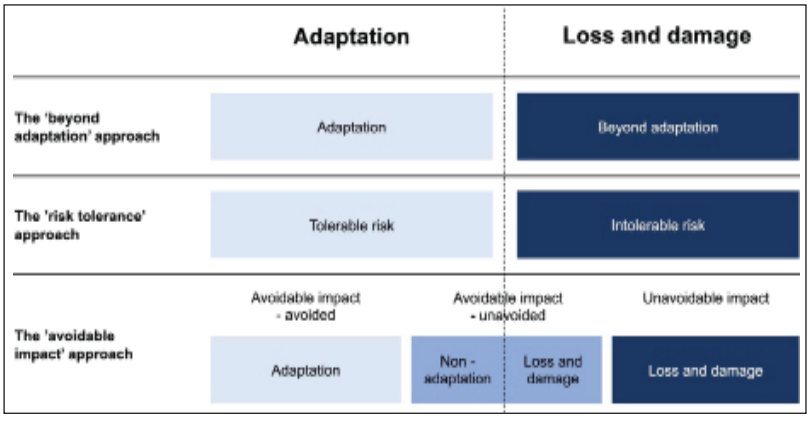
Meanwhile, the trajectory of the provision of article 8 of the Paris Agreement could be traced to the Warsaw International Mechanism (WIM) which was revisited at the 21st Conference of the Parties (CoP) in 2015 and finally resulted in the inclusion of a L&D article in the Paris Agreement. Nevertheless, there

1 IFRC 'World disasters report' (2020), https://www.ifrc.org/document/world-disasters-report-2020 (accessed 15 September 2023); M Broberg & BM Romera 'Loss and damage after Paris: More bark than bite?' (2020) 20 *Climate Policy* 661.
2 Key aspects of the Paris Agreement | UNFCCC (accessed 1 August 2024)
3 United Nations Framework Convention on Climate Change CP/2015/10/Add.1 29 January 2016 Decision 1/CP.21 adoption of the Paris Agreement.

were some concerns about the legal and policy implications for state parties' responsibilities for L&D, given the dwindling global economy particularly as it affects developing countries. To address this challenge, Emma Lees was of the view that for climate L&D as provided in article 8 of the Paris Agreement to be relevant, there is 'the need to develop policy which is sensitive to the fine balance struck in the Paris Agreement between responsibility and liability for L&D and prompts an open discussion as to how such responsibility ought to be allocated'.[4] There was also the contestation about the need for clarity on climate change L&D versus climate change mitigation and adaptation.

On clarity regarding climate change L&D, Broberg and Romera in the editorial posed some puzzles that distinguish the provision of article 8 during the adoption of the Paris Agreement. They raised the important question of the distinction between L&D, and adaptation, and the legal implications of the inclusion of L&D as an article in the United Nations (UN) Climate Change instruments. They further demonstrated in the matrix (Figure 1) below, graphically explaining the three most common ways of distinguishing adaptation and L&D.

Figure 1: The three most common ways of distinguishing 'adaptation' and 'loss and damage'



The graphic meaning in Figure 1 above as presented by Broberg and Romera was to help fill the gap of lack of a clear formal definition of L&D by 'neither the Paris Agreement nor the UN climate change treaty regime'. This in their opinion has led to both practitioners and academics applying diverging definitions that can broadly be divided into three different groups as they are shown in

4 E Lees 'Responsibility and liability for climate loss and damage after Paris' in J Depledge and others (eds) *Climate policy after the 2015 Paris Climate Conference* (2021), https://www.taylorfrancis.com/chapters/edit/10.4324/9781003191582-7/responsibility-liability-climate-loss-damage-paris-emma-lees?context=ubx (accessed 2 September 2023).

Figure 1. According to Broberg and Romera, the initial definition is that L&D cover measures that address the impacts of climate change that are 'residual' to mitigation and adaptation. Here, integrated 'insufficient mitigation' with 'inadequate adaptation' results in L&D. Thus, some other scholars agree that constructing L&D in this way is referred to as the 'beyond adaptation approach'.[5]

Another definition Broberg and Romera presented in the above matrix (Figure1) focuses on what they considered to be the 'tolerable risk'. Here, according to them, adaptation is about keeping risks within the range of what is perceived as 'tolerable', whereas L&D are a response to risks that cannot be kept within that range.[6] The other definition in the matrix, as they defined L&D, is by distinguishing between climate change impacts that are 'avoidable', 'unavoidable', or 'unavoided'. Here, they argued that 'if it is impossible to adapt to an impact so that it becomes unavoidable, it will fall in the L&D category'. They further expressed that 'for impacts that are avoidable, it is necessary to distinguish between those that are avoided and those that are not. If it is possible to adapt to an avoidable impact so that it is avoided, this is a case of adaptation'. On the flip-side, they noted that 'if an avoidable impact is not avoided, it is unclear from this definition whether it is to be categorised as (non-) adaptation, or as L&D'.[7]

Considering the uncertainties or what could be perceived as controversies in the above matrix and definitions due to no universal or accepted interpretation of L&D, it is imperative for the Global South, particularly Africa, to have a home-grown definition based on peculiarities and diverse effects of economic and non-economic L&D.

3 Loss and damage provision in article 8 of the Paris Agreement

Okereke, Baral and Dagnet highlighted the point that the concept of L&D has always been implicit in the UNFCCC but serious negotiations and concrete outcomes surfaced over the years. For them, 'the issue of L&D re-emerged gaining significant attention, unlike adaptation, which took almost a decade to be fully incorporated into UNFCCC negotiations, the issue of L&D gained real traction over a relatively short period of time',[8] whereas, Broberg and Romera in

5 R Mechler and others 'Science for loss and damage: Findings and propositions' in L Mechler and others (eds) *Loss and damage from climate change: Concepts, methods and policy options* (2019) 3-37.

6 K Dow and others 'Limits to adaptation' (2013) *Nature Climate Change* 305-306, https://doi.org/10.1038/nclimate1847 (accessed 2 September 2023).

7 K van der Geest & K Warner 'Loss and damage in the IPCC fifth assessment report (Working Group II): A text-mining analysis' (2019) Climate Policy, https://doi.org/10.1080/14693062.2019.1704678 (accessed 13 September 2023).

8 C Okereke, P Baral & Y Dagnet 'Options for adaptation and loss & damage in a 2015 Climate Agreement' (2014) *Researchgate*, https://www.researchgate.net/publication/268446419_Options_for_Adaptation_and_Loss_Damage_in_a_2015_Climate_Agreement (accessed 2 September 2023).

the editorial expressed that the inclusion of article 8 in the Paris Agreement,[9] introduced into treaty law a longstanding process for the recognition of L&D in the climate change regime. The authors noted that this process started in 1991 when the Alliance of Small Island States (AOSIS) ignited discussions with a proposal for the introduction of a mechanism to address climate change L&D (Intergovernmental Negotiating Committee for a Framework Convention on Climate Change (INC)) during the negotiations that led to the adoption of the UNFCCC in 1992.[10] Ironically, specific emphasis on the effects of climate change L&D on Africa, except the Caribbeans and high-income regions, was missing; rather, the attention was on the Global South in general.

The corollary of the above, therefore, suggests a more deepened understanding of how the issue of L&D as it affects Africa has been handled within the UN system. Sharma demonstrated that 'the interests of the poorest countries, communities and individuals and the most vulnerable are inadequately accommodated in the Paris Agreement'. The argument here is that the Paris Agreement does not satisfy the provisions of UNFCCC article 3.3, which calls for a precautionary approach to addressing the adverse effects of climate change. Further action is needed to strengthen the provisions on mitigation and dealing with the impacts of climate change in the face of uncertainty.[11] Regrettably, this is the reality in Africa where liability and state responsibility have become a threat to addressing the issues of L&D.

4 Challenges of climate change loss and damage

Adequate knowledge and means of accessibility of climate finance for L&D is yet to be maximised across the least developed countries. The limited knowledge about climate finance for L&D has resulted in perpetual ignorance of the vulnerable in developing countries and victims of L&D. There is a need for more awareness and reflections on climate L&D beyond climate adaptation. This, therefore, calls for the reorientation of national and sub-national governments, civil society organisations, and all relevant stakeholders to recognise the growing need to collectively address climate L&D.

Broberg and Romera identified what they referred to as the key gaps in L&D governance: non-economic L&D and slow-onset events. In their view, 'efforts in addressing L&D are often primarily circumscribed to insurance approaches that target economic losses: non-economic L&D (including loss of knowledge, social cohesion, identity, or cultural heritage) as well as slow onset events are largely left unaddressed'. In the case of the small island developing states (SIDs) in the

9 Paris Agreement (n 4).
10 Broberg & Romera (n 1) 661.
11 A Sharma 'Precaution and post-caution in the Paris Agreement: adaptation, loss and damage and finance' *Climate Policy (2017)* 17(1) 33.

Caribbean, as narrated in the editorial, the 2017 hurricane season brought the issue of L&D to the fore when two category five storms passed through the region within two weeks of each other, resulting in severe damage on many islands.[12]

The above argument on economic loss versus non-economic loss in the context of climate change L&D governance should be a concern, particularly in Africa where insurance policy has been receiving inadequate patronage across the continent at an all-time low. Despite the advantages of insurance policy, Africa's aggregate insurance penetration rate in 2019 was only 2,78 per cent, compared to the global average insurance penetration rate of 7,23 per cent.[13] On the one hand, with regard to insurance schemes, Broberg and Romera are of the view that insurance is one of the avenues through which it may be possible to seek remedies for L&D. In this situation, they were of the view that a parametric insurance scheme should be explored because, unlike conventional insurance schemes, it is relatively straightforward to establish objectively whether the conditions for payment have been fulfilled and not necessarily based on assessment.

On the other hand, the authors highlighted Nordlander and others' critically review of the limitations of what they term 'active insurance schemes for L&D'. They contend that despite the popularity of insurance schemes among policy makers, the potential for insurance schemes to deliver appropriate financial responses to L&D is limited. For them, insurance schemes are fundamentally misaligned with the founding principles of the international climate change regime.[14] In the Global South, beyond the push for expanding Africa's insurance market and making it lucrative for inclusive prosperity, there is a need to examine the non-economic L&D resulting from climate change. The lack of social safety nets and programmes that provide palliatives or shock absorbers for victims who lost their identities, cultural heritage, and suffered mental health issues, among others, has remained an obstacle to inclusivity of addressing the non-economic L&D.

The other vital point to note in the editorial is the challenge of L&D litigation. In as much as successful litigation remains an avenue for compensation under L&D, how independent are the domestic justice and legal systems in developing countries? How knowledgeable are the human rights defenders and lawyers on issues of L&D? As cited in the editorial by Broberg and Romera, there is a first set of legal questions coalescing around the topic of L&D litigation, in the context of whether article 8 of the Paris Agreement may be used to force action in order to address L&D from climate change. The complexity of the multilateral approach

12 Broberg & Romera (n 1) 665.
13 Brookings 'Capturing Africa's insurance potential for shared prosperity' (2 July 2021), https://www.brookings.edu/articles/capturing-africas-insurance-potential-for-shared-prosperity/ (accessed 27 September 2023).
14 L Nordlander, M Pill & BM Romera 'Insurance schemes for loss and damage: Fools' gold?' (2019) *Climate Policy*, https:// doi.org/10.1080/14693062.2019.1671163 (accessed 5 September 2023).

needed to legally address climate change L&D positions developing countries on the disadvantaged and dependent side due to lack of adequate knowledge and capacity to litigate and negotiate on issues of L&D.

5 Opportunities for mitigating effects of climate change loss and damage

In the context of novel approaches to L&D, Broberg and Romera observed 'the potential of human rights law, and human rights approaches to provide remedies and thereby fill gaps in the field of climate change law and litigation where other areas of the law do not'. Their argument here is based on the extant literature that labelled climate change as human rights challenge and, in particular, L&D resulting from climate change pose a severe threat to the human rights of affected communities. Remarkably, they further acknowledged the recognition of human rights under the UNFCCC but with an insufficient level of integration of human rights in international climate governance.[15]

Deducing from the review of the editorial by Broberg and Romera, many opportunities duly emerge. For instance, the authors posited that framing L&D through the lenses of human rights and obligations and adopting a human rights-based approach could strengthen the international response to L&D. Accordingly, they reiterated that a human rights-based approach to L&D could remedy the framing of L&D in abstract, state-centric terms as a developing country issue. It could put the spotlight on the fundamental human rights of the individual, including consideration of the intersectionality of L&D impacts, with, among others, questions of race, gender, class, age, and economic well-being.[16]

A review of the aforementioned opportunities using the human rights-based approach presented by Bromberg and Romera further suggests that to effectively address the issue of climate change L&D in Africa, the African Union (AU) human rights system and national human rights institutions require an integrated and collaborative engagement with the civil society actors to further explore and institutionalise legal infrastructure that seeks to address climate change L&D, especially in the areas of compensation and reparation. There is also a need to reinforce psycho-social support systems that would provide succor to victims of mental health resulting from non-economic L&D.

15 Broberg & Romera (n 1) 666.
16 As above.

6 Conclusion

As part of global measures of applying climate finance, COP27[17] in 2022 established a Loss and Damage Fund to respond to the human cost of climate change. This fund, among others, is to support governments to rebuild or rehabilitate communities, health centres, roads, and provide social protection, and so forth, that were damaged or lost by weather events and climate disasters. In more than one year now, how many countries of the Global South, including Africa, have benefited from or even set up required modalities or mechanisms for accessing the fund? Are vulnerable African citizens aware of this fund?

As Broberg and Romera rightly observed, 'with the adoption of the 2015 Paris Agreement, the notion of L&D was given a formal platform within the UN climate change treaty regime'. They reiterate that, whereas article 8 of the Agreement provided the bones for a L&D scheme, there was still an obvious need to put flesh to these bones. In the context of Africa, which was not emphasised in the editorial, this review essay opines that knowledge about L&D in article 8 of the Paris Agreement has not been disseminated and domesticated among many African states. Therefore, there is an urgent need to expose the African continent to innovative ways beyond litigation and negotiation, of addressing the challenge of L&D resulting from climate change.

The lack of adequate knowledge and capacity of states, sub-national government actors and non-state actors, including civil society actors, has continued to make it difficult for developing countries, particularly in Africa, to explore opportunities provided by litigation and negotiations in addressing economic and non-economic L&D occasioned by climate change. Improvement in communication and information sharing in relation to domestic legal and justice systems is paramount in positioning victims of L&D to be able to access avenues of climate finance for their compensation. Continuous intensive advocacy and training for human rights defenders, lawyers and judges are also very key in facilitating the actualisation of litigation on L&D.

17 The Conference of the Parties (CoP) of the UNFCCC described the 2022 United Nations Climate Change Conference or Conference of the Parties of the UNFCCC, also known as COP27, as the 27th United Nations Climate Change conference, held from 6 – 20 November 2022 in Egypt.