

Loss and Damage Financing in the Climate Justice Debate

Chris O. Ikporukpo

La Villa Academia, 1 Villa Academia Way Odimodi, Forcados Terminal,
Nigeria & Department of Geography, University of Ibadan, Ibadan, Nigeria

Ninane Nina Ikporukpo

Department of Commercial and Industrial Law
University of Lagos, Lagos Nigeria

ABSTRACT

The concept of Loss and Damage (L & D) emerged as a contentious issue during the negotiations for the United Nations Framework Convention on Climate Change (UNFCCC). The framing of the concept and the demand for a Loss and Damage Fund were both controversial. It is these controversial dimensions of the climate change regime that are analysed in this article. The data were obtained from mainly publications of UNFCCC Secretariat, the Intergovernmental Panel on Climate Change, climate negotiation blocs and civil society organisations. Based on a sample of thirty-six sources, the varied conceptualisations of L & D are examined. The concept was politicised. Be that as it may, it was in the demand for L & D financing that the influence of politics was particularly apparent. The demand brought into conflict the Global South and the Global North. The basic argument of the Global South in its demand for a L & D Fund was based on the need for climate justice. In spite of the fact that the demand started as early as 1991, it was only in 2022 during COP 27 in Egypt that the Global North accepted in principle, based on an understanding that liability and compensation were not involved. The Fund was formally established during COP 28 in Dubai in 2023. However, issues of effective funding remain.

Keywords: Climate Change, Concept of Loss and Damage, Loss and Damage Financing, Climate Justice, Global North - Global South Climate Conflict.

INTRODUCTION

Anthropogenic Climate Change (ACC) is one of the most significant challenges of humanity. In the 2023 ranking of global risks by the World Economic Forum ACC-related challenges emerged as second, fourth and seventh in the short term (World Economic Forum 2023). These challenges were respectively extreme weather events, failure to mitigate climate change, and failure of climate change adaptation. ACC challenges were much more significant over a long-term period. These issues were ranked first, second and third. They were failure to mitigate climate change, failure of climate change adaptation, and extreme weather events, in this order. Indeed, two other challenges which are partly due to ACC, biodiversity loss/ecosystem collapse and largescale involuntary migration, were ranked fourth and fifth respectively.

In spite of the fact that ACC and its adverse consequences, in one way or another, affect all parts of the globe, there are regional differences. In other words, ACC impacts some regions and groups more than others (IPCC 1998; Richard et al. 2003; Thomas et al. 2018). Sub-Saharan Africa, Central and South Asia, and parts of East Asia are the most impacted regions. Generally, the developing countries are more vulnerable and more impacted than the developed ones. Similarly, some groups, particularly the poor in the developing countries, are the most impacted (Leiter et al. 2017; Garscha gen et al. 2021; German-Watch 2021). Paradoxically, it is the relatively less impacted developed countries that have through their predominant greenhouse gas emissions in their process of industrialisation and development over centuries that are much more responsible for the ACC crisis (Den Elzen et al. 2005; Friman & Strandberg 2014; Oxfam 2022). There is thus the perspective that those who have created the crisis must be responsible for addressing it, and that even if others must be involved, there must be differentiated responsibilities where most of the action must be taken by the developed countries (Harris 1999; Pauw 2014; Jolly & Trivedi 2021; Kiessling & Alosa 2022).

The disproportionate adverse impact of ACC on some regions and groups threw up issues of justice which ultimately led to the emergence of the climate justice movement (Shue 2014; Alves & Mariano 2018; Chapman & Ahmed 2021; Ikporukpo 2022; Newell 2022).

The tenets of climate justice, though accepted and pursued by developing countries and several international non-governmental organisations (NGOs) are largely unacceptable to the governments of many developed countries. However, climate change impact financing from a perspective of assistance or aid to developing countries for mitigation and adaptation is acceptable to the developed world and has formed a bedrock of climate action by the Global North (Ackerman 2009; Chowdhury & Sundaram 2022; Goldar & Dasgupta 2022). Financing on the basis of liability or reparation continues to be rejected. The phraseology on the aspect of Loss and Damage (L & D) of the 2022 Conference of the Parties (COP) 27 decisions is indicative. Paragraphs 22-25 (UNFCCC 2022) declared that the Conference of the Parties

Notes with grave concern, ... the growing gravity, scope and frequency in all regions of loss and damage associated with the adverse effects of climate change ... Expresses deep concern regarding the significant financing costs associated with loss and damage for developing countries ... Welcomes the consideration, for the first time, of matters related to funding arrangements responding to loss and damage ... Further welcomes the adoption of decision -/CP.27 and -/CMA.4, establishing the institutional arrangements of the Santiago network for averting, minimizing and addressing loss and damage ... including supporting its mandate role in catalysing technical assistance ... in developing countries that are particularly vulnerable.

The discussions and decisions on finance in COP 27 emphasised assistance for climate mitigation and adaptation.

Loss and Damage (L & D) financing was a controversial issue in COP 27 and before it. Indeed, it has been one of the most contested issues in climate discourse and climate action. The term itself is controversial. This paper examines the emergent case for and the case against L & D financing. It also analyses the different contextual uses of the term in climate change discourse.

Furthermore, the trajectory in the controversial emergence of the idea from the beginning of United Framework Convention on Climate Change (UNFCCC) to COP 28 in 2023 is examined.

SOURCES OF DATA/INFORMATION

The data/information were obtained from four main sources. These included:

1. Reports/Documents of Climate Change - focused organisations;
2. Publications of Climate Change - Interest Organisations;
3. Publications of Climate Change Researchers; and
4. Websites, Bulletins, News Letters and Press Releases of Climate Change-Interest Media.

Reports/Documents of the UNFCCC Secretariat and IPCC provided information on policies and perspectives of the UN and different UNFCCC Party Groups. The proceedings of the COPs, provided by the COPs Secretariats and the UNFCCC Secretariat were useful sources of information on the status and decisions on L & D. Reports on the COPs, in some cases, also provided information on the perspectives of Party Groups.

Several organisations interested in issues of ACC, that from time to time produce documents related to L & D, were also useful sources. These organisations included mainly United Nations Environment Programme (UNEP), United Nations Development Programme (UNDP), World Meteorological Organisation (WMO), Oxfam, Action Aid, CarbonBrief, World Resources Institute, Climate Action Network, Third World Network and Green Peace. Various publications of these organisations provided information on the status of L & D, the perspectives of different groups and the conceptualisation of L & D, among others. Given the increasing attention to ACC, consequent on its challenge, there are ever increasing research and publications on it. Some of these in recent years, addressed the issue of L & D. These served as useful sources of information, particularly on various perspectives of countries, groups and individuals. Some of these on localised issues were particularly useful.

Data/information were also obtained from several media, both electronic and print. The media publications that were sources of information included Earth Negotiations Bulletin, CarbonBrief, Climate Policy Brief and EcoWatch. For instance, the Earth Negotiations Bulletin provided daily coverage of COP negotiations, and distributed digital and print summaries. This organ of the International Institute for Sustainable Development, also published in-depth summaries and analyses of COPs. The media, collectively, were meaningful sources of information on the status, the perspectives of several groups and individuals, and the conceptualisation of L & D.

Employing the data/information from these various sources, the next section discusses the conceptualisation of L & D by various Climate Change - focused and Climate Change - interest organisations and researchers. Subsequent sections examine perspectives on the need for, or otherwise, of L & D, and the evolution of L & D financing.

CONCEPTUALISING L & D

There is currently no official and generally accepted definition or conceptualisation of L & D. Several definitions and conceptualisations have emerged over the years. It is not only the definition/conceptualisation that is controversial, but also the approach to addressing the

challenge. For instance, contending perspectives have been presented by the Global North and the Global South (Pandit-Chhetri et al. 2021; Blanco 2021; Jensen 2022; Climate Action 2023). The non-existence of an official generally acceptable definition/conceptualisation and the contentious nature of defining L & D are evident in Table 1.

Table 1: Samples of Conceptualisations/Definitions of Loss & Damage from Climate Change

S/No.	Conceptualisations/Definitions	Source
1	Loss and Damage essentially refers to those effects that would not have happened in a world without climate change which have not been mitigated and which cannot be (or have not been) adapted to.	Action aid 2011.
2	Loss and Damage represents the actual and/or potential manifestation of climate impacts that negatively affect human and natural systems.	Kakakhel 2012.
3	Loss and Damage refers to negative effects of climate variability and climate change that people have not been able to cope with or adapt to.	Warner & Van, der Geest 2013.
4	Loss and Damage now forms a unique concept, relating to the detriment sustained because of anthropogenic climate change.	Mayer 2014.
5	Loss and Damage involves more than that which can be reduced by adaptation.	UNFCCC 2014.
6	Loss and Damage refers to adverse effects (of Climate Change) that have not been mitigated, and that are beyond adaptation.	Van der Geest & Warner 2015.
7	Loss and Damage refers to adverse effects of Climate-related stressors that have not been or cannot be avoided through mitigation and adaptation efforts.	Van der Geest & Warner 2015.
8	Loss and Damage is considered to be intrinsically linked to mitigation and adaptation and can be characterized as avoided (through mitigation and adaptation), unavoids (through inadequate mitigation and adaptation efforts) or unavoidable which is the case when loss and damage results from climate change impacts that cannot be adapted to such as sea level rise or ocean acidification.	Suarez et al. 2015.
9	Loss and Damage relates to the desire of vulnerable countries to secure formal recognition from the international community that these are adverse impacts of human-induced climate change that cannot be avoided by mitigation or adaptation, or that will not be avoided in the future by adaptation due to insufficient resources, and that must be addressed at the international level under the climate regime due to the equities involved.	Mace & Verheyen 2016.
10	The phrase loss and damage can refer to permanent loss or reparable damage caused by the manifestations of climate change.	Taraska 2015
11	Loss and damage are a term that is used to describe total losses, such as death and land lost due to climate induced sea-level rise, and repairable damage, such as destroyed infrastructure.	Thuringer 2016.
12	Loss and Damage has been described as impacts which are beyond adaptation, or as residual damage.	Ohdedar 2016.
13	Loss and Damage are actions dealing with the residual adverse impacts of climate change which remain after mitigation and adaptation measures have been adopted.	Mace & Verheyen 2016.
14	Loss and Damage is an additional mechanism to address risk from climate change, alongside adaptation, disaster risk reduction and humanitarian work.	Boyd et al. 2017.
15	All climate change impacts are potentially loss and damage, and these can be avoided through mitigation and adaptation.	James et al. 2017.
16	Loss and Damage refers to climate-related impacts which cannot be avoided through mitigation or adaptation.	James et al. 2017.
17	Loss and Damage usually refers to the residual effects of climate change that cannot (or will not) be avoided through mitigation and adaptation.	Kreienkamp & Vanhala 2017.

18	Loss and Damage refers to the actual and/or potential manifestation of impacts associated with climate change in developing countries that negatively affect human and natural systems.	UNHCR, 2017
19	Loss and Damage refers to climate-related impacts and risks from both sudden onset extreme events such as flooding and cyclones and slow onset events, including sea level rise, glacial retreat, desertification and others.	Mechler et al. 2019.
20	Losses and Damages refer broadly to observed impacts and projected risks from climate change.	Byrnes & Surminski 2019.
21	Loss and Damage recognizes two categories of harm. One category involves permanent harm, or irrecoverable loss, ... The second category involves repairable or recoverable damage.	Doelle & Seck 2019.
22	Loss and Damage is a third pillar in the global effort to address the adverse effects of climate change, alongside adaptation and mitigation.	Pandit-Chhetri, Schafer & Watson 2021.
23	The term Loss and Damage is usually understood to refer to the harmful economic and non-economic impacts of both slow onset and extreme weather events.	Herbert Smith Freehills 2021.
24	The term Loss and Damage has been defined as the residual impacts of climate change which mitigation and adaptation efforts are insufficient to prevent or alleviate.	Appadoo 2021.
25	Loss and Damage (are) the unavoidable impacts of Climate Change that countries cannot adapt to.	Serdeczny et al. 2021.
26	Loss and Damage refers to the adverse impacts of climate change resulting from slow onset (e.g., sea level rise) and extreme weather events (e.g., cyclones) and affecting both human and natural systems.	Ryder & Callian 2022.
27	Loss and Damage is a term used to describe how climate change is already causing serious and, in many cases, irrevocable impacts around the world - particularly in vulnerable communities.	Carbon Brief 2022.
28	The term losses and damages (lower case) refer to harm from (observed) impacts and (projected) risks and can be economic or non-economic. <i>Note:</i> IPCC made a distinction and defined Loss and Damage, (i.e., the capitalized letters) as the political debate under the UNFCCC following the establishment of the Warsaw Mechanism on Loss and Damage in 2013, which is to address loss and damage associated with impacts of climate change, including extreme events and slow onset events, in developing countries that are particularly vulnerable to the adverse effects of climate change.	IPCC 2022.
29	Loss and Damage is conceptualized as adverse consequences of climate impacts when adaptation does not happen, or fails and even as resulting from a longer chain of failures to mitigate, adapt, and sustainably develop globally.	Dorkenoo, Scown & Boyd 2022.
30	Loss and Damage refer to the negative consequences of climate change on human societies and the natural environment.	London School of Economics & Grantham Research Institute 2022
31	Loss and Damage are the impacts of climate change that have not been, or cannot be, avoided through mitigation or adaptation efforts.	Jensen 2022
32	Loss and Damage is sometimes understood as all negative consequences of climate change.	Jensen 2022
33	Loss and Damage normally refers to the destructive impacts of climate change that cannot be or have not been avoided by what is known as 'mitigation' (reducing greenhouse gas emissions) or "adaptation" (adjusting to and building resilience against current and future impacts).	Chatham House 2022.
34	Loss and Damage is a general term used in UN climate negotiations to refer to the consequences of climate change that go beyond what people can adapt to, or when options exist but a community doesn't have the resources to access or utilize them.	Bhandari et al. 2022/

		World Resources Institute.
35	Loss and Damage is often categorized as either economic or non-economic. Economic Loss and Damage are negative impacts that we can assign a monetary value to. Non-economic Loss and Damage are negative impacts where it is difficult or infeasible to assign a monetary value to.	Climate Action 2023.
36	Loss and Damage is a term used to describe the unstoppable harm caused by climate disaster	CarbonBrief 2023

Source: Compiled by Authors. Source/author of each is provided in full in reference list.

There are two strands in the definitions/conceptualisations. These are one which relates L & D to mitigation/adaptation and another that regards all the harmful impacts of ACC as L & D. This categorisation is apparent in the literature.

The diverse definitions and conceptualisations by UN-affiliated organisations, UNFCCC Secretariat (serial number 5), United Nations High Commission on Refugees (number 18), IPCC (number 28) and Climate Action (number 35) are indicative of his lack of an official definition.

The controversial nature and the politicisation of L & D are also apparent from a number of definitions/conceptualisations in Table 1. For instance, Mace & Verheyen (number 9) defined it taking into consideration equities, UNHCR (number 18) in terms of developing countries and CarbonBrief (number 27) considered vulnerable communities. Some perspectives reflect demands by NGOs and the Global South. IPCC's conceptualisation (number 28), more than any other, clearly reflected the political dimension. Two aspects of L & D are identified; one of which is defined "as the political debate under the UNFCCC".

Typologies on the character of L & D are identifiable and several schemes have been proposed (Ohdedar 2016; Serdeczny et al. 2016; Doelle & Seck 2019; Mechler et al. 2019; Freehills 2021; Dorkenoo et al. 2022). The classificatory scheme, are based on the process, time and the character of what is lost or damaged. The categories, some of which overlap, include:

1. Slow onset and Rapid onset L & D.
2. Avoidable and Unavoidable L & D.
3. Economic and Non-economic L & D.
4. Material and Non-material L & D.
5. Tangible and Intangible L & D.
6. Human and Non-human L & D.
7. Reversible & Irreversible L & D.

The slow onset loss and damage is that consequent on slow onset events such as sea level rise and desertification while the rapid onset ones result from rapidly occurring events such as hurricanes and floods. The second category is related to mitigation and adaptation. The avoidable are those that could be or have been avoided through mitigation and adaptation processes while the unavoidable are those that have resulted or will result from the non-application or ineffective application of mitigation and adaptation measures. Economic L & D are those that could be quantified in economic terms, for instance the loss or damage of a building while the non-economic by their very nature cannot be quantified, such as the loss of cultural heritage. The material/immaterial, tangible/intangible and the human/non-human are self-evident.

The framing of L & D by the developing countries and their supporting NGOs and climate change activists, particularly during COPs, has made the concept extremely contentious from the perspective of the Global North. The framing has been guided by the principles of common but differentiated responsibilities and historical responsibility for climate change of the Rio Declaration on Environment and Development (United Nations 1992a) and the UNFCCC (United Nations 1992b). Principle 7 of the Rio Declaration declared thus:

States shall cooperate in a spirit of global partnership to conserve, protect and restore the health and integrity of the Earth's ecosystem. In view of the different contributions to global environmental degradation, States have common but differentiated responsibilities. The developed countries acknowledge the responsibility that they bear in the international pursuit of sustainable development in view of the pressures their societies place on the global environment and of the technologies and financial resources they command.

Similarly, the preamble of the UNFCCC (UN 1992b) stated as follows:

The global nature of climate change calls for the widest possible cooperation by all countries and their participation in an effective and appropriate international response, in accordance with their common but differentiated responsibilities and respective capacities and their social and economic conditions.

These global laws clearly reinforced earlier declarations by the developing countries, such as the Caracas Declaration of 1989. This Declaration by the G77, a developing countries' group, asserted that:

Since developed countries account for the bulk of the production and consumption of environmentally damaging substances, they should bear the main responsibility in the search for long-term remedies for global environmental protection and should make the major contribution to international efforts to reduce consumption of such substances (Quoted in Mayer 2014: 271).

Based on the principles of common but differentiated responsibilities (Harris 1999; Atapattu & Gonzalez 2015; Kiessling Alonson 2022) and historical responsibility (Michel et al. 2005; Rocha et al. 2015; Zahar 2022), the developing countries and their supporting NGOs and climate activists have argued in COPs and other fora that the developed countries, having caused the climate crisis, are liable and should therefore financially compensate the developing countries for loss and damage. The liability and compensation perspective has been a major source of controversy, particularly in COPs; for, the developed countries reject this perspective (Weisbach 2012; Callian 2016; Vanhala & Hestbaek 2016).

Indeed, the idea of liability and compensation was rejected in the 2015 Paris Agreement as it was explicitly stated that accepting to assess further the issue of loss and damage did not imply liability and compensation. Indeed, it was only after the President of COP 27 in Sharma el-Sheikh, Egypt, assured the developed countries that there will not be any reference to liability and compensation that L & D was put on the agenda. Why have the developing countries been pursuing the financing of Loss and Damage? Why have the developed countries been

vehemently against loss and damage, and its financing? These issues on the case for, and the case against L & D financing are addressed next. However, in order to provide a contextual background to the analysis, the next section examines the agitation for, and the progress in, L & D financing over the decades.

DEMAND FOR, AND PROGRESS IN, L & D FINANCING

In a number of COPs, the issue of financing from a perspective of liability and compensation has been a limiting factor of the negotiation process. COP 15, in Copenhagen, Denmark in December 2009, is a good example of where there was considerable conflict about liability. In a report on the Conference, entitled *Global Climate: The Copenhagen Collapse*; Shamsuddoha (2010) of an NGO in Bangladesh, asserted thus about a Conference that did not adopt any acceptable Accord because of disagreement between the developed and the developing countries:

The attempt by developed countries to strengthen and expand the “pledge and review” model under the guise of the Copenhagen Accord would have allowed them to evade their responsibility and the carbon debt that they owe to developing countries for their historic and excessive use of the Earth’s atmospheric space.

The advocacy for the financing of L & D, though usually intense during COPs, is also evident outside the fora of the annual Conferences, particularly at the approach of a COP. The negotiations and disputes are usually at the levels of the various negotiating blocs. The blocs include G77 and China (the largest), European Union, Umbrella Group, African Group, BASIC Group, Alliance of Small Island States (AOSIS) Group, Environmental Integrity Group, ALBA Group, Arab States Group, Like-Minded Developing Countries (LMDC) Group, Cartagena Dialogue (CD) Group, Allied for Climate Transformation by 2025 (ACT 2025) Group, and Least Developed Countries (LDC) Group. Other Groups that have shown considerable interest in L & D at the negotiations include the Independent Alliance of Latin America and the Caribbean (ALAC), Climate Vulnerable Forum (CVF) and the Vulnerable Twenty Group (V 20) of Ministers of Finance of the Climate Vulnerable Forum. The Groups overlap and usually align on the basis of interest. Based on interests and alignment, there are usually two main opposing Groups; the Developed Countries Group and the Developing Countries Group, during the climate negotiations.

The demand for the financing of L & D has been contentious and long standing. The demands have come from the developing countries, particularly G77 plus China, and AOSIS, NGOs such as WWF, Greenpeace and Climate Action Network, and individual climate activists. The significance of finance which is the very basis of the demand by the developing countries to address L & D, was underscored by G77 and China in its Statement in the opening plenary of COP 27 in which the issue of L & D was emphasised (G77 and China 2022). The Statement declared thus:

Developed countries must provide adequate and predictable means of implementation (of Loss and Damage) including finance ... Finance remains the key to achieving the objectives of the Convention and the Paris Agreement.

The very foundations of the demand for addressing L & D, when AOSIS suggested in 1991 during negotiations for UNFCCC, the setting up of a system of insurance payments to the

developing countries by the developed ones (AOSIS 1991), were embedded in finance. AOSIS also emphasised finance in other instances such as in 2007, 2008, 2012 and 2013. The submission of 2012, which was a recommendation to COP 18 in Doha, was particularly explicit. It suggested the setting up of an international mechanism to address L & D that will have the following three mutually-reinforcing components:

1. An insurance component to help vulnerable developing countries to manage financial risk from extreme weather events;
2. A rehabilitation/compensatory component to address slow onset events such as sea-level rise, increasing land and ocean temperatures, and ocean acidification; and
3. A risk management component for risk assessment and management.

Indeed, all the submissions to COPs on L & D, such as those of ACT 2025 (ACT 2022), the Conference of Pacific Civil Society Organisations and Grassroots Group of 2022 (Council of Pacific Affairs 2022) and African Group of Negotiators in 2023 (AGN 2023) all placed emphasis on finance. For instance, all the five demands of the Pacific Civil Society Organisations and Grassroots Group in their Kioa Climate Emergency Declaration of 2022, were all related to financing.

In spite of the emphasis on finance, other issues necessary for an effective functioning of L & D financial schemes have also received some attention in the demands. These include an appropriate institutional framework, the transfer of climate-related technology from the Global North to the Global South and capacity building in the developing countries. For instance, in its demand during COP 27 (in 2022), G77 and China asserted that,

It is also imperative (apart from financing) that the institutional structure and operational modalities needed to catalize technical assistance through the Santiago Network for Loss and Damage are finalized in a deliberate manner.

It is remarkable that a submission by the Least Developed Countries Group to the Ad Hoc Working Group on the Durban Platform for Enhanced Action (LDC 2012), in spite of the opportunity to raise issues on financing, focused entirely on non-financial issues. The emphasis was on capacity building for L & D assessment, the need for equity and fairness, the need for effective information flow on L & D, the need for coordinated action on L & D, and the role of UNFCCC.

Evidently, since the first proposal by AOSIS in 1991, there have been several instances of demand by the developing countries and several international and national civil society organisations on L & D financing. These demands have resulted in conflicts, particularly during COPs, between the Global North and the Global South. The Global North has generally been against the demands (Callian 2016; Calliari et al. 2020; Blanco 2021; Pandit-Chhetri et al. 2021; Falzon et al. 2023). The reaction of the Global North and the associated progress in L & D financing may be divided into three phases. These are rejection, L & D modification, and reluctant acceptance of modified L & D phases. The first phase was when the developed countries totally rejected the idea of L & D finance and ignored the submissions/demands by the developing countries. The rejection phase characterised by little or no attention on L & D financing is apparent in Table 2.

Table 2: Attention to Loss and Damage Financing in UNFCCC Meetings, 1991-2023

S/No.	Type of Meeting	Venue	Date	Nature of Attention/Outcome
1	Intergovernmental Negotiating Committee Sessions on UNFCCC	Geneva, Switzerland	Feb. 1991 - May 1992	The UNFCCC, which became the basis for negotiations on L & D, was adopted on 9 May 1992 and came into force on 21 March 1994. A submission on L & D, financing by AOSIS was rejected.
2	Conference of the Parties (COP) 1	Berlin, Germany	28 March - 7 April 1995	N.A.
3	COP 2	Geneva, Switzerland	8-19 July 1996	N.A.
4	COP 3	Kyoto, Japan	1-11 Dec. 1997	N.A.
5	COP 4	Buenos, Aires, Argentina	2-14 Nov. 1998	N.A.
6	COP 5	Bonn, Germany	25 Oct. - 5 Nov. 1999	N.A.
7	COP 6	The Hague Netherlands & Bonn, Germany	13-24 Nov. 2000 & 13-27 July 2001	N.A.
8	COP 7	Marrakech, Morocco	29 Oct. - 10 Nov. 2001	N.A.
9	COP 8	New Delhi, India	23 Oct. - 1 Nov. 2002	N.A.
10	COP 9	Milan, Italy	1-12 Dec. 2003	N.A.
11	COP 10	Buenos, Aires, Argentina	6-17 Dec. 2004	N.A.
12	COP 11	Montreal, Canada	28 Nov. - 9 Dec. 2005	N.A.
13	COP 12	Nairobi, Kenya	6-17 Nov. 2006	N.A.
14	COP 13	Bali, Indonesia	3-15 Dec. 2007	Bali Action Plan to address L & D impacts in developing countries was established.
15	COP 14	Poznan, Poland	1-12 Dec. 2008	A multi-window mechanism on L & D was proposed by AOSIS.
16	COP 15	Copenhagen, Denmark	7-18 Dec. 2009	N.A.
17	COP 16	Cancun, Mexico	28 Nov. - 10 Dec. 2010	A work programme to strengthen international cooperation and technical assistance was accepted.
18	COP 17	Durban, South Africa	28 Nov. - 9 Dec. 2010	Decided on Continuation of work programme.
19	COP 18	Doha, Qatar	26 Nov. - 7 Dec. 2012	It was decided that there was a need to establish/strengthen institutional arrangements on L & D.
20	COP 19	Warsaw, Poland	11-23 Nov. 2013	The Warsaw International Mechanism for Loss and Damage (WIM) was established. It is meant to

				promote the implementation of approaches to address L & D.
21	COP 20	Lima, Peru	1-12 Dec. 2014	An initial two-year workplan of the Executive Committee of Warsaw International Mechanism was approved.
22	COP 21	Paris, France	30 Nov. - 12 Dec. 2015	Emphasised the need for averting, minimising and addressing L & D Article 8 of the Paris Agreement was specifically on L & D.
23	COP 22	Marrakech, Morocco	7-18 Nov. 2016	Marked the first review of WIM. It was recommended that the Executive Committee should establish an expert group on action of support.
24	COP 23	Bonn, Germany	6-17 Nov. 2017	N.A.
25	COP 24	Katowice, Poland	13-14 Dec. 2018	Provided for the inclusion of L & D in the biennial transparency reports. Parties were urged to develop policies, plans and strategies to avert, minimize and address L & D.
26	COP 25	Madrid, Spain	2-13 Dec. 2019	Santiago Network on L & D meant to provide technical assistance was set up.
27	COP 26	Glasgow, Scotland	31 Oct. - 13 Nov. 2021	A mechanism, "Glasgow Dialogue" to explore ways of funding L & D was established. It expressed the need for increased financial and technical support specially to developing countries to address L & D.
28	COP 27	Sharm El Sheikh, Egypt	6-20 Nov. 2022	The Parties expressed great concern about the challenge of L & D in all parts of the world, particularly the impact on the finances of developing countries. This was the first time L & D was included in the agenda. The setting up of an L & D fund was accepted in principle; although the modalities were to be worked out over the next year.
29	COP 28	Dubai, United Arab Emirates	30 Nov. - 12 Dec. 2023	Loss and Damage Fund was formally established. The Fund which is separate and independent of other types of Funds is to be managed by a 26-member Board.

Note: N.A. means little or no attention. Source: Compiled by Authors.

After the initial rejection of a proposal for L & D financing presented by AOSIS, several other submissions were made especially by G77 and AOSIS which did not receive any attention. As Table 2 indicates, from COP 1 in 1995 to COP 12 in 2006 L & D financing received little or no attention. The developed countries tactically opposed the demands of the developing countries, as Falzon et al. (2023) asserted, through four obstruction strategies. These included limiting the scope of the agenda items thus excluding L & D, reducing transparency by failing to monitor the problem, manipulating the meaning of the language, and pushing for non-transformative solutions.

The uncooperative stance of the developed countries has largely been due to the framing of L & D financing in terms of liability and compensation by the Global South. This is an issue that has been raised during several COPs, particularly by the USA. For instance, the lead negotiator of the USA during COP 21 in Paris in 2015 (Todd Stern) expressed this concern clearly thus:

We are in favour of support, technical and financial support, going to countries with loss and damage ... There is one thing that we don't accept ... which is the notion that there should be liability and compensation for loss and damage. Virtually all developed countries [agree] (Quoted in Falzon et al. 2023: 1).

The modification phase became apparent from COP 13 in Bali (2007), to COP 26 in Glasgow in 2021 where the framing of L & D financing dropped the toga of liability and compensation. As Table 2 shows L & D consequently received some attention. The Paris Agreement that emerged from COP 21 in 2015 and the associated decisions of the Parties provide a typical example of the modified form in the framing of L & D finance. Article 8(1) of the Agreement declared that "Parties recognize the importance of averting, minimizing and addressing loss and damage associated with the adverse effects of climate change ..." (United Nations 2015a). However, Decision 51 of the Conference asserted that the Parties agreed "that Article 8 of the Agreement does not involve or provide a basis for any liability or compensation" (United Nations 2015b).

COP 27 in Sharm el-Sheikh, Egypt, in 2022 marked the beginning of a reluctant acceptance of L & D financing based on non-inclusion of the liability and compensation provision. The negotiations in Sharm el-Sheikh were tedious and the outcome where L & D financing was accepted emerged after two more days of negotiation beyond the planned duration (Chatterjee 2022; IISD 2022; UNFCCC 2022). The disagreement between the developed and the developing countries started right at the beginning of the Conference over the inclusion of L & D in the agenda. The Global North, particularly the USA, strongly opposed the inclusion, insisting that the Global South must accept that its inclusion must not imply liability and compensatory payment. Following the acceptance of the position of the Global North, L & D finance was discussed and accepted in principle. The final decision was that workshops and dialogues should be organised, similar to the Glasgow Dialogue, over 2022 and 2023 to work out the details. A Transitional Committee was set up and given the responsibility. Based on the recommendations of the Transitional Committee, a L & D Fund was formally established during the 2023 COP (COP 28) in Dubai. It is noteworthy that it was approved during the opening session. The fund, which is an independent entity under the financial mechanism of the UNFCCC, has its own Board and will be housed in the World Bank for at least four years. Through the insistence of the U.S.A., which rejected the name Loss and Damage, a new name is expected to be decided by the Board (CarbonBrief 2023).

Why was the Global South consistently demanding the financing of L & D? Why did the developed world reject L & D financing over the decades? Although some of the reasons are implicit in the last section, a full analysis is provided in the next section.

THE CASE FOR, AND THE CASE AGAINST, L & D FINANCING

As earlier indicated, the earliest demand for L & D financing was in 1991 by AOSIS. Since that demand, several perspectives have emerged for, and against the idea. One of the major perspectives in support of L & D financing is that it will enthrone climate justice. As the President of Vanuatu, a member of AOSIS put it, "Our young people are demanding climate justice ..." (Vanuatu 2022). The climate justice argument L & D financing is based on three main fronts. These are the principle of "No Disproportionate Climate Burden", the "Polluter Pays Principles" and the "No Harm Rule". Employing the Principle of "No Disproportionate Climate

Burden”, the developing countries, through the G77 and China Bloc and other subgroups such as AOSIS, posit that the developed countries have historically and currently been the main cause of climate change through their greenhouse gas emissions in their development process while the developing countries have been much more impacted. Consequently, it is asserted, the developed countries should pay compensation (Weisbach 2012; Callian 2016; Pottier et al. 2017; Venn 2021; Ikporukpo 2022). In other words, the developed countries owe the developing ones a climate debt or a carbon debt that must be paid through financial compensation or reparation (Pickering & Barry 2012; Venn 2021; Bolton et al. 2023). Several examples of this disproportionate climate burden have been cited. For instance, the developed countries were responsible for at least 75% of the total anthropogenic greenhouse gas emissions between 1750 and 2005 (page 2008), although the overwhelming burden was on the developing countries. Mozambique accounts for 73.5 times less carbon emissions compared to USA but bears a lot of climate change burden. It had to borrow 118 million dollars from the International Monetary Fund to address the damages of the 2019 cyclones (Burton 2022). Africa which is the most vulnerable continent, with about 17% of world’s population, accounts for only 2-3% of the global emissions but its Sahelian zone now experiences more and more severe droughts and many of its water bodies are drying up (United Nations 2006).

Indeed, there is a significantly positive relationship between greenhouse gas emissions and Gross National Product (GNP) and a negative relationship between GNP and vulnerability to climate change (Althor et al. 2016). The basis for L & D financing based on disproportionate climate change burden was put by the G77 and China Bloc (G77 and China 2013) thus:

At the heart of the challenge of loss and damage is comprehensively addressing the needs and aspirations of communities and people, who have contributed least to the causes of climate change, yet are among its first and worst victims ... We call for an approach that considers needs to address loss and damage in order to develop the functions and modalities of the international (finance) mechanism.

The polluter pays basis for L & D finance is similar to that of disproportionate burden in terms of why the developed countries should be responsible. The argument is that a predominant proportion of the greenhouse gas emissions is by the developed countries. Consequently, the developed countries should pay to address the adverse impact of climate change (Luppi et al. 2012; Heine et al. 2020; Zahar 2020; Pinto-Bazurco 2022). However, the argument unlike that of disproportionate burden is that a party responsible for pollution must pay for the costs from all the consequent damages and the losses. Thus, this principle within the climate regime is similar to the argument of liability and compensation. The “Principle of Common but Differentiated Responsibilities” enshrined in the UNFCCC and the Paris Agreement also provide a basis for this perspective.

Apart from the “Principle of Common but Differentiated Responsibilities”, the developing countries have also cited Principle 16 of the Rio Declaration in support of a polluter-pays perspective on the need for L & D financing. The principle states thus:

National authorities should endeavor to promote the internalization of environmental costs ... taking into account the approach that the polluter should in

principle, bear the cost of pollution, with due regard to the public interest and without distorting international trade and investment (United Nations 1992a).

The perspective of “No Harm” is based on the idea of due diligence in the activities of States, such that their actions do not result in harming the environment of other States. In the context of climate justice, it requires that States and their citizens do not during all their activities generate greenhouse gases that will lead to climate change whose consequences will lead to phenomena that will harm other States. Roht-Arriaza 2010; Mayer 2016; Maliean-Dubois 2021; Mintz-Woo 2023). As Vanuatu asserted in its statement at COP 27 in 2022,

Vanuatu is of the view that States have existing legal obligations under a range of international laws to protect the rights of present and future generations from the adverse impacts of climate change ... In this regard, the objective of Vanuatu's initiative is to transform the legal contexts in which we all act to protect human rights from climate harm (Vanuatu 2022).

Provisions of the Rio Declaration (United Nations 1992a) and of the UNFCCC (United Nations 1992b) have been employed by the developing countries, Climate CSOs and Climate activists in their demand for climate justice based on the “No-Harm Principle”. The relevant provision of the Rio Declaration is Principle 2 which states that

States have, in accordance with the United Nations and the principles of international law, ... the responsibility 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.

In the case of the UNFCCC, the relevant section is paragraph 8 of the preamble which is a repetition of Principle 2 of the Rio Declaration.

The “No-Harm Principle” requires that where there is harm, there should be restitution and a discontinuation of the activity causing the harm. The restitution requirement is the basis for L & D financing. The nature of anthropogenic climate change is such that immediate discontinuation is not possible. Given the circumstances, restitution will continue as long as greenhouse emissions continue.

Apart from the climate justice argument, a related basis for the demand for L & D finance is that principles of morality must apply. In other words, it is argued that it is morally wrong to avoid the financing of L & D and at the same time for some States to dominate the use of the global atmospheric resources (Pottier et al. 2017; Wallimann-Helmer et al. 2019; Mintz-Woo 2023). The morality argument is one of social justice and is often couched in terms of human rights and natural justice (Savaresi 2016; Beauregard 2021; Vanuatu 2022). Based on the need for morality and natural justice in the climate regime, the developing countries and their supporting CSOs have argued that there must be fairness and equity. They assert that the development trajectory of the developed countries was based on, and facilitated by, resources such as fossil fuels; therefore, the developing countries, particularly the least developed ones, whose contribution to the global greenhouse gas emissions is insignificant, should be allowed

to use their abundant fossil fuel resources for their development. These countries call on the developed ones to technologically help in reducing the climate change - inducing character of fossil fuels. The demand in this case is financing to avoid L & D. The Secretary General of the African Petroleum Producers Organisation put this perspective at a Conference of African Energy Ministers and Stakeholders that held in Cape Town, South Africa, in November 2021, thus:

With 17% of the world's population, Africa's total contribution to greenhouse gases, the main culprit for climate change, is just around 3% ... It is only fair that the world, especially the parts with the necessary technology works with the African continent to finance fossil fuels in the most sustainable manner, especially as it is a fact that technologies exist to make fossil fuel environmentally friendly ... The way forward for Africa in the (energy) transition is to make the most of its existing energy resources. Abandoning fossil fuels at this time is tantamount to abandoning our guaranteed source of energy that is needed for the continent's development (Zal 2021).

In order to ensure fairness and equity in the use of the atmosphere and reduce the need for L & D financing, the developing countries argue that the developed ones must drastically reduce their greenhouse gas emissions, while at the same time assisting the developing countries financially and technologically to manage their emissions. The perspective is that the developed countries, both in the past and currently, have unfairly used the atmospheric resources and polluted the atmosphere to the disadvantage of the developing countries. China and India, as leaders of the G77 and China have consistently pushed this position in several COPs. They have argued that in order to ensure fairness, it is not the gross emission of each country that should be the basis for negotiation. Rather, it should be the per capita emissions. They have therefore promoted the "Principle of Right to Equal Per Capita Emissions" (Singer 2002; Michaelowa & Michaelowa 2011; Yu et al. 2011; Pottier et al. 2017).

The "Beneficiary Pays Principle" has also been employed as a basis for L & D financing based on a moral stance. It is argued that developed countries have benefitted from carbon emissions since the industrial revolution; for, the use of fossil fuels has been the basis of their industrialisation and development. In other words, since they are the beneficiaries of greenhouse gas emissions, which have led to anthropogenic climate change, they must be responsible for paying to address the adverse consequences of climate change (Pottier et al. 2017; Atkins 2018; Mintz-Woo 2023). The benefit of the past is within the orbit of the "Principle of Historical Responsibility" while that of the present is covered by the "Principle of Differentiated Responsibilities"; principles that are now part of the global climate regime. These principles are commonly cited in the demands by the developing countries. For instance, in a proposal made on the eve of the Kyoto negotiations, Brazil asserted that the distribution of obligations should be based on the historical responsibilities of countries in inducing global warming (Pottier et al. 2017).

There is also the argument that the payment for L & D should be based on the "Principle of Ability to Pay". The argument here is that the cost of addressing L & D, indeed, climate change, is so enormous that the most vulnerable States and individuals are not capable. It is thus the prosperous developed world that should pay the bill (Caney 2010; Knight 2011; Mintz-Woo

2023). It is also asserted that the poor developing countries that already have a huge debt burden will get poorer if given the burden. The perspective of ability to pay may be more acceptable to the developed countries given the fact that a major objection to L & D financing by the Global North is the view that such payments are liabilities and compensatory.

As the U.S.A. Secretary of State, John Kerry, declared in November 2015

We are not against it (Loss and Damage). We are in favor of framing it in a way that doesn't create a legal remedy, because Congress will never buy into an agreement that has something like that, after witnessing what happened in Kyoto. If you really want to get something done, don't go down that road (We are) not rebelling against it in terms of whether we have some responsibility or not - the impact of it would be to kill the deal. And we don't want to do that (Quoted in Blanco 2021: 21).

Indeed, in the text proposed by the U.S.A. for inclusion in the Paris Agreement, the emphasis was on support to developing countries on a cooperative and facilitative basis “that does not involve ... a basis for liability or compensation ...” (Blanco 2021). Although, this stance of the U.S.A. was rejected, it continued to be the policy of USA and the developed countries.

Given the fact that climate change is an existential challenge in some parts of the World, the demand for L & D financing is also based on this consideration. A typical example of where the impacts of climate change have threatened the very existence of people and communities is the small islands of the Pacific Ocean which have been described as “the frontline of the battle against climate change” (United Nations 2019; Parsons 2022). Devastating cyclones and ocean surge have become more frequent and coastal erosion has become a major challenge. However, sea level rise due to climate change is the greatest threat. Several small islands have been totally submerged, with the region becoming an area of “disappearing islands” (Allen 2018; De La Sierra 2018; Thomas 2020). Understandably, the threat to their existence has been a major theme in the demands by AOSIS and the individual States. For instance, in a submission to the Executive Committee of the Warsaw International Mechanism for Loss and Damage in 2018, Vanuatu lamented thus

Vanuatu, like other Pacific Islands, is among the most vulnerable countries in the world to the effects of climate change, be it from slow onset hazards like rising sea levels or extreme weather events. Vanuatu is already facing loss and damage at a scale that is well beyond our coping capacity (Vanuatu 2018).

Similarly, in a presentation in a side event during COP 27 in 2022, the Coordinator of the Climate Finance Unit of the Pacific Community, after lamenting the climate crisis the region was facing, declared thus:

Pacific countries feel very strongly that money should be made for loss and damage to compensate for ... economic and non-economic losses that are unavoidable and that they cannot adapt to and that will continue to affect communities for decades (Quoted in Bafana 2022).

The developing countries and several international CSOs also argue that the funding for mitigation and adaptation is not enough to address L & D; hence there must be separate funding facility for L & D. Remarkably, WWF conceptualised L & D as “when climate change impacts exceed our capacity to respond” (WWF 2020). It asserted that,

With inadequate mitigation action and adaptation support, losses and damages are increasing. Loss and damage from climate change are not a distant issue for many vulnerable countries, their people and nature.

The organisation therefore demanded the following:

1. Ensure full operationalization of the Santiago Network on L & D;
2. Establishment of a L & D finance facility different from other climate funds;
3. The adaption of a decision to make L & D as a permanent agenda item in COPs;
4. The provision of a guideline to ensure that countries include L & D in their climate change strategies and Nationally Determined Contributions; and
5. Ensuring the inclusion of L & D in the discussions on the new finance goal that comes into effect from 2025.

The argument on the inadequacies of Adaptation Finance being a basis for L & D financing is a reaction to the position of the developed countries.

The issue of whether or not L & D should be addressed through adaptation finance has been a contentious one and has attracted heated debates in several COPs (Taub et al. 2016; Allan 2017; Calliari et al. 2020). The developing countries have consistently demanded that L & D should have a separate funding facility independent of adaptation and additional to adaptation fund. On the other hand, the developed countries insisted before COP 27 in 2022 that L & D should be placed within the frameworks of adaptation and disaster risk management approaches; thus, it does not require independent funding. The position of the developed world kept L & D out of the agenda items in COPs until COP 27 in Egypt in 2022. For instance, in Article 8 of the Paris Agreement, “Parties recognize(d) the importance” of averting, minimizing and addressing “loss and damage”. However, in the next Article (Article 9), which addressed financing, only adaptation and mitigation funding was addressed. As the Article 9 put it,

Developed country Parties shall provide financial resources to assist developing country Parties with respect to both mitigation and adaptation in continuation of their existing obligations under the Convention.

The issue of employing adaptation funds to address L & D has not been the only reason why the developed world continued to reject L & D finance. The Global North and some organisations/individuals have also made a case against L & D finance based on the “Principle of Excusable Ignorance” (Bell 2011; Zellentin 2014; Tan 2023). The argument is that the assertion of the developing countries that compensation should be paid based on “Historical Responsibility” is not tenable; compensation should not be based on past greenhouse gas emissions. The emissions of the past, such as those during the industrial revolution, were not intentionally done to cause anthropogenic climate change. It is asserted that the individuals at the time did not know that such emissions will result in adverse consequences in the future. It is argued that given the fact that they were ignorant of the future consequences, the past

generations are expected to be excused of any responsibility. Therefore, the actions of the past should not be a basis for compensatory payments.

A related argument is that it will be generational injustice to hold future generations accountable for past misdeeds. In the context of intergenerational relationship, it is the present generation in the developed countries that serves as the “future generation” of the past ones. The present generation in the developed world is also impacted by climate change. Within a climate justice perspective, the present generation has suffered injustice in relation to the past ones. The present generation which has already suffered injustice cannot be made to pay for the emissions of the past through a perspective of “historical responsibility” (Gonzalez-Ricoy & Rey 2019; Davies 2020; Gadjil et al. 2022).

There is also the argument that the demand for separate and additional funding for L & D is an unnecessary distraction from effective climate action. An extreme form of this argument is that from an editorial of the Las Vegas Review Journal on COP 27 of 2022, titled “The Folly of Climate Reparation”. It asserted that the impacts of climate change on the developing countries are self-inflicted. In spite of this, it added, the United States has done so much for these countries through foreign aid. It expressed disappointment that some developed countries, such as Scotland and Denmark accepted the view of the developing countries and declared thus:

Ultimately, the idea of climate reparation is as absurd as the United States seeking tribute for the many medical, technological, economic and other advances developed here in the past two centuries that have reduced poverty, raised living standards and life expectancies for people throughout the world (Las Vegas Review Journal 2022).

CONCLUSION

In spite of the existence of deniers and sceptics, anthropogenic climate change and its consequences have been established to be real. However, controversies remain in the climate regime. Loss and Damage has been one of such contentious issues that divided the Global North and the Global South. For instance, there is no general agreement on what L & D entails. The most controversial aspect of L & D has been that of having its separate funding facility.

There is no doubt that from its first emergence during the negotiations for the UNFCCC through various COPs, such as that in Egypt in 2022 to the 2023 COP in Dubai, a lot of effort was involved. The dilemma is whether L & D can be effectively funded. This doubt is informed by the experiences in the funding of climate change adaptation. Where will the funding come from? There is ample evidence that given the reluctance or inability of the developed countries, funding gaps continue to exist in climate adaptation (Ciplet et al. 2013; Olhoff et al. 2014; UNEP 2022). The emerging scenario is one where both adaptation and L & D may be underfunded.

Furthermore, the opposition of the USA to the use of the term “Loss and Damage” and the insignificant amount of money pledged for the L & D Fund when it formally emerged during COP 28 are an indication of future challenges. The United States, which had over the decades opposed the emergence of the fund, insisted during COP 28 that “Loss and Damage” was not an acceptable term and consistently used the term “Climate Impact Response Fund”. This opposition necessitated the decision that the Board of the Fund should subsequently choose an

acceptable and appropriate name (CarbonBrief 2023). The United Arab Emirates, the host of COP 28, and Germany pledged 100 million dollars each when the Fund was approved. However, U.S.A. committed only 17.5 million dollars, the U.K. 60 million pounds (about 75 million dollar), part of which was for “other arrangements” and Japan only 10 million dollars. According to a report by The Guardian dated 6 December 2023, the total pledged was less than 0.2% of the losses the developing countries suffer annually. The insistence by the U.S.A. on a change of name and the pledge by the U.K. which was not entirely for the Loss and Damage Fund seem to suggest that some developed countries continue to believe that the Adaptation Fund can effectively address Loss and Damage.

References

- Hughes J.D. (2010) Climate Change: A History of Environmental Knowledge, in *Capitalism, Nature, Socialism*. DOI: 10.1080/10455752.2010.508619.
- Le Treut H.R. et al. (2007) Historical Overview of Climate Change, in Solomon S. et al. (eds.) *Climate Change 2007: The Physical Science Basis* (IPCC Publication), Cambridge: Cambridge University Press, Chapter 1, 95-127.
- Weart S.R. (2009) The Idea of Anthropogenic Global Climate Change in the 20th Century. *Wiley International Reviews*, 1: 67-81.
- IPCC (2021) *Climate Change 2021: The Physical Science Basis*. Cambridge: Cambridge University Press.
- World Economic Forum (2023) *The Global Risks Report 2023, 18th Edition*. Cologny/Geneva, Switzerland: World Economic Forum.
- Newell P. (2022) Climate Justice. *Journal of Peasant Studies*, 49: 915-923.
- Ikporukpo C. (2022) Climate Justice: Whose Justice? *Advances in Social Sciences Research Journal*, 9: 113-148.
- Potter L. et al. (2020) Climate Justice in a Climate Changed World. *Planning Theory and Practice*. 21: 293-321.
- Berberian A.G. et al. (2022) Racial Disparities in Climate Change-Related Health Effects in the United States, *Current Environmental Health Report*, 9: 451-464.
- Dorkenoo K., Scown M. & Boyd E. (2022) A Critical Review of Disproportionality in Loss and Damage from Climate Change. *WIREs Climate Change*, 13(4): e770.
- Voelker J. et al. (2018) Assessing Vulnerability to Urban Heat: A Study of Disproportionate Heat Exposure and access to refuge by Socio-demographic Status in Portland, Oregon. *International Journal of Environmental Research and Public Health*, 15: 640.
- Hsu A. et al. (2021) Disproportionate Exposure to Urban Heat Island Intensity Across Major US Cities. *Nature Communications*, 12: 2721.
- Shteynberg E. et al. (2023) Unequal Burden: Exploring the *Disproportionate Impacts of Climate Change on Marginalized Communities*. Climate Equity Group Report 1, 01-39.
- Islam S.N. & Winkel J. (2017) Climate Change and Social Inequality. DESA Working Paper No.152.
- India Climate Justice Forum (2002) *Delhi Climate Justice Declaration*. New Delhi, India.
- United Nations (2019) *Pacific Island have Unique Moral Authority to Speak Out on Climate Change, Secretary General Emphasizes at Forum Leaders' Meeting*. Press Release, 15 May 2019.

Thomas A. et al. (2020) Climate Change and Small Island Developing States, *Annual Review of Environment and Resources*, 45: 1-27.

Larsen J. (2018) *Disappearing Islands: A Climate Change Wake-up Call*. Climate Change Unit, Population Connection.

Campbell J. & Warrick O. (2014) *Climate Change and Migration Issues in the Pacific*. Suva, Fiji: United Nations Economic and Social Commission for Asia and the Pacific.

De la Sierra L.S. (2018) *Climate Change, Migration and Disappearing States: The Case of Pacific Island Countries*, Policy Report, United Nations University.

Allen E. (2018) Climate Change and Disappearing Island States: Pursuing Remedial Territory. *Brill Open Law*, 2018: 1-23.

Mary Robinson Foundation (2013) *Declaration on Climate Justice*. Mary Robinson Foundation.

Pan African Climate Justice Alliance (2010) *African Climate Justice Manifesto*. All Africa Conference of Churches.

United Nations (1992a) *United Nations Framework Convention on Climate Change*, UN.

United Nations (2015) *Paris Agreement*. New York: UN.

United Nations (1992b) *Report of the United Nations Conference on Environment and Development (Rio de Janeiro, 3-14 June 1992), Annex 1, Rio Declaration on Environment and Development*, UN.

AOSIS (2008) *AOSIS Input into the Assembly Paper on Financing*, AOSIS.

LDCs (2008) *LDCs Presentation on International Air Passenger Adaptation Levy*, LDCs Bloc.

Khan M.R. (2015) Polluter Pays Principle: The Cardinal Instrument for Addressing Climate Change. *Laws*, 4: 638-653.

Climate & Clean Air Coalition (2023) *SIDS and SLCPs: The Disproportionate Climate Risk Faced by Small Island Developing States*. Nairobi: UNEP.

Mayer B. (2016) The Relevance of the No-Harm Principle to Climate Change Laws and Politics. *Asia Pacific Journal of Environmental Law*, 19: 79-104.

Maljean-Dubois S. (2021) The No-Harm Principle as the Foundation of International Climate Law in Mayer B. & Zahar A. (eds.) *Debating Climate Law*, Cambridge: Cambridge University Press, 15-28.

Roht-Arriaza N. (2010) First, Do Not Harm, Human Rights and Effort to Combat Climate Change. *Georgia Journal of International & Comparative Law*, 38: 593-612.

Vanuatu (2022) *Vanuatu Statement at UNFCCC COP 27 By His Excellency Nikenike Vurobaravu*.

Cordova T., Bravo J. & Acosta-Cordova J.M. (2022) Environmental Justice and the Alliance for a Just Transition: Grist for Climate Justice Planning. *Journal of Planning Literature*, 38: <https://doi.org/10.1177/08854122221121120>

La Via Campesina (2018) *La Via Campesina in Action for Climate Justice*. Berlin: Heinrich Boll Foundation.

Porta D.D. & Parks L. (2014) Framing Processes in the Climate Movement: From Climate Change to Climate Justice, in Dietz M. & Garrelts (eds.) *Routledge Handbook of the Climate Change Movement*, 19-30.

Grosse C. (2019) Climate Justice Movement Building: Values and Cultures of Creation in Santa Barbara, California. *Social Science*, 8: 79.

Joshi N. (2023) Radical Movements as a Call to Climate Action: A Space-Time Connection. *Climate Action*, 2: 35.

Gulliver R.E., Vachette A. & Boddington S. (2023) How Australian Non-Governmental Organisations Frame and Enact Climate Justice, *Climate Action*, 18: <https://doi.org/10.1038/s44168-023-00049-2>

Drieschova A. (2021) *The Social Media Revolution and Shifts in the Climate Change Discourse*, Research Paper No.29, University of Duisburg-Essen, Germany.

Mohamed S.H.S. (2018) Climate Change: Social Media Influences and Public Awareness. *International Journal of Interdisciplinary Research and Innovations*, 6: 36-42.

Schafer M.S. & Schlichting I. (2014) Media Representation of Climate Change: A Meta-Analysis of the Research Field. *Environmental Communication*, 8: 142-160.

Mungai E.W. (2021) *Coverage of Climate Change Issues in Kenyan Print Media: A Case of Daily Nation and Standard Newspapers*, MA Thesis, The Aga Khan University, Nairobi, Kenya.

Culloty E. et al. (2019) *Climate Change in Irish Media*. EPA Research Report, Environmental Protection Agency, Johnstown Castle, Westford.

Mooseder A. et al. (2023) Social Media Logics and Visualizing Climate Change Images on Twitter. *Social Media Society*, January-March: 1-14.

Schafer M.S. & Painter J. (2021) Climate Journalism in a Changing Media Ecosystem: Assessing the Production of Climate Change-related News Around the world. *Wiley Interdisciplinary Reviews: Climate Change*. 12(1): e675

Kamboh S.A. & Ittegaq M. (2022) *Advocacy Journalism and Climate Justice in a Global Southern Country*, School of Communication Studies, James Madison University, Faculty Scholarship, 6.

Taylor L. & Elks S. (2021) Three Years of Greta Thunberg's Activism: Still Time to Change Our Climate Future. *Thomson Reuters Foundation News*, 20 August 2021.

Chen K. et al. (2023) How Climate Movement Actions and News Media Frame Climate Change and Strike: Evidence from Analyzing Twitter and News Media Discourse from 2018 to 2021. *International Journal of Press/Politics*, 28: 384-413.

Smiles T. & Edwards G.A.S. (2021) How Does Extinction Rebellion Engage with Climate Justice? A Case Study of XR Norwich. *Local Environment*, DOI: 10.1080/13549839.2021.1974367

Chia J. (2021) social media and the Global Climate Strike: A Tool for Youth Climate Change Activists and Politicians. *Sojourners*, 18-39.

Shim D. (2023) *Visualizing Climate Activism on social media: How Does Fridays for Future Germany Picture Climate Action?* Working Paper No.33, University of Duisburg-Essen, Germany.

Ackerman E. (2009) *Financing the Climate Mitigation and Adaptation Measures in Developing Measures in Developing Countries*, G24 Discussion Paper No.57, United Nations, New York.

Allan J. et al. (2017) *From Bali to Marrakech: A Decade of International Climate Negotiations*, International Institute for Sustainable Development, New York.

Colenbrander S., Dodman G. & Mitlin D. (2017) Using Climate Finance to Advance Climate Justice: The Politics and Practice of Channelling Resources to the Local Level. *Climate Policy*. DOI: 10.1080/14693062.2017.1388212.

- Garrison J.A. (2017) *Overcoming Obstacles in Global Climate Action from Copenhagen to Paris: Issue Framing as a Tool to Understand Opportunities for Policy Change*. KFG Working Paper, Berlin.
- Fernandez-Zubietta et al. (2023) Digital Activism Masked - The Friday for Future Movement and the Global Day of Climate Action: Testing Social Function and Framing Typologies of Claims on Twitter. *Social Sciences*, 12: 676.
- Ikporukpo C.O. & Ikporukpo N.N. (2022) Spatial Hierarchy of Climate Injustice. *Advances in Social Sciences Research Journal*, 9: 354-370.
- Global Campaign to Demand Climate Justice (2023) *COP 28 is Running into Overtime, But Your Time is Up to Deliver Climate Justice*. Statement by Climate Activists. Dubai, 12 December 2023.
- India Climate Justice Forum (2002) *Delhi Climate Justice Declaration*. Delhi, India.
- Jensen L. & Roniger J. (2023) *International Climate Finance: Status Quo, Challenges and Policy Perspectives*, Briefing, European Parliament.
- Biagini B. & Dobardzic S. (2011) *Accessing Resources Under the Special Climate Change Fund*. Global Environmental Facility.
- Callian E. (2016) Loss and Damage: A Critical Discourse Analysis of Parties' Positions in Climate Change Negotiations. *Journal of Risk Research*. DOI: 10.1080/13669877.2016.1240706
- Calliari E., Serdeczny O. & Vanhala L. (2020) Making Sense of the Politics in the Climate Change Loss & Damage Debate. Global Environmental Change. *Global Environmental Change*. DOI: 10.1016/j.gloenvcha.2020.102133
- Falzon D. et al. (2023) Tactical Opposition: Obstructing Loss and Damage Finance in the United Nations Climate Negotiations. *Global Environmental Politics*. <https://doi.org/10.1162/glep-a-00722>
- Venn A. (2021) Legal Claims for Reparation of Loss and Damage in Mayer B. & Zahar A. (eds.) *Debating Climate Law*. Cambridge: Cambridge University Press, 329-348.
- Pottier A. et al. (2017) A Survey of Global Climate Justice: From Negotiation Stance to Moral Stakers and Back. *International Review of Environment and Resource Economics*, 11: 1-53.
- Allan J. et al. (2017) *From Bali to Marrakech: A Decade of International Climate Negotiations*, International Institute for Sustainable Development.
- CarbonBrief (2023) *COP 28: Key Outcomes Agreed at the UN Climate Talks in Dubai*. Carbonbrief.org
- Alves M.W.F. & Mariano E.B. (2018) Climate Justice and Human Development: A Systematic Literature Review. *Journal of Cleaner Production*, 202: 360-375.
- Beauregard C. et al. (2021) Climate Justice and Right-Based Litigation in a Post-Paris World. *Climate Policy*, 21: 652-665.
- Bhandary R.R., Gallagher K.S. & Zhang F. (2021) Climate Finance Policy in Practice: A Review of the Evidence. *Climate Policy*, 21: 529-545.
- Chaudhury A. (2020) Role of Intermediaries in Shaping Climate Finance in Developing Countries - Lessons from the Green Climate Fund. *Sustainability*, 12: 5507.
- Dietz S. et al. (2018) The Economics of 1.5°C Climate Change. *Annual Review of Environment and Resources*, 43: 455-480.

IEA (2021) *Net Zero By 2050: A Road Map for the Global Energy Sector*, IEA, Paris.

IPCC (2021) *Climate Change 2021: The Physical Science Basis (Summary for Policy Makers)*, Cambridge University Press, Cambridge.

Marquardt J. (2020) Fridays for Future's Disruptive Potential: An Inconvenient Youth Between Moderate and Radical Ideas. *Frontiers in Communication*, 5: 48.

Pichardo N.A. (1988) Resource Mobilization: An Analysis of Conflicting Theoretical Variations. *The Sociological Quarterly*, 29: 97-110.

Pickering J. & Barry C. (2012) On the Concept of Climate Debt: Its Moral and Political Value. *Critical Review of International Social and Political Philosophy*, 15: 667-685.

Pottier A. et al. (2017) A Survey of Global Climate Justice: From Negotiation Stances to Moral Stakes and Back. *International Review of Environment and Resource Economics*, 11: 1-53.