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Climate Change, Human Mobility, and Climate Finance: Potential Linkages and Challenges

ABSTRACT

The aim of this Article is to explore the probable approaches that can be considered by developing countries to secure finance from the existing funds for climate-related human mobility. With this goal in

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mind, this Article critically analyses the UNFCCC regime, especially those provisions in the Paris Agreement, which can potentially be applicable to human mobility in the context of climate change. It also examines the existing climate funds which are created to support the efforts of vulnerable developing countries to combat the challenges of climate change. It is argued that in the absence of specific legal protection in international law and international environmental law, linking human mobility with existing financial commitments of the developed countries will allow vulnerable developing countries to find a viable financial solution meeting the needs for the protection of climate-related human mobility. How the linkage can be established and what might be the legal basis and scope of such linkage will be analyzed in this Article. This Article will contribute to the literature by emphasizing the importance of linking climate finance with migration, with attention to adaptation and loss and damage, and will help to outline policy challenges and design of adaptation funding in the future.

INTRODUCTION

Climate change is considered "one of the greatest challenges of our time."[1] The interrelationship between climate change and human mobility is widely recognized by a number of research studies.[2] While climate change, environmental degradation, and migration constitute a complex nexus,[3] international organizations, including the Intergovernmental Panel on Climate Change (IPCC), the Office of the United Nations High Commissioner on Refugees (UNHCR) and the International Organization for Migration (IOM), confirm that climate change-related disasters play a significant role in triggering human displacement and provide estimates of the people likely to be displaced

1 *G20 Leaders' Communiqué Antalya Summit*, 2015 TURKEY G20 6 (Nov. 2015), http://www.g20.utoronto.ca/2015/151116-communique.pdf [https://perma.cc/2DBH-FF5W].

2 *See* MOSTAFA M. NASER, THE EMERGING GLOBAL CONSENSUS ON CLIMATE CHANGE AND HUMAN MOBILITY 39–45 (Routledge, 2021); INTERNAL DISPLACEMENT MONITORING CENTRE, GLOBAL REPORT ON INTERNAL DISPLACEMENT (2021), https://www.internal-displacement.org/sites/default/files/publications/documents/grid2021_idmc.pdf [https://perma.cc/YT9P-29P2] [hereinafter GLOBAL REPORT ON INTERNAL DISPLACEMENT].

3 Ingrid Boas et al., *Climate Migration Myths*, 9 NATURE CLIMATE CHANGE 901, 901 (2019); Mostafa Mahmud Naser, *Climate Change, Environmental Degradation, and Migration: A Complex Nexus*, 36 WM. & MARY ENV'T L. & POL'Y REV. 713, 717–32 (2012).

because of the worsening climatic conditions.[4] However, the figures for predicted displacement vary depending on differing timeframes and scenarios.[5] Also, regarding the predictions of potential displacements because of climate-related events, the migration researchers fall into two groups: "alarmists" and "skeptics."[6] The alarmists present a staggering scenario of climate-related displacement with predictions that climate change could force hundred millions to 1 billion people by the end of the century.[7] On the contrary, the skeptics raise concern about the "inaccurate portrayal of migration."[8] Boas et al. published a Nature Climate Change Commentary that challenged traditional alarmists' views about climate migration. Specifically, Boas et al. noted that because of climate impacts, the assumption that a large number of people will cross an international border and move from the Global South to the Global North requires further empirical scientific basis.[9]

Notwithstanding these methodological and conceptual differences, IPCC's latest report (2022) confirms that climate-related events such as sea level rise, floods, cyclones, and droughts are likely to affect the

4 *See* THE WHITE HOUSE, REPORT ON THE IMPACT OF CLIMATE CHANGE ON MIGRATION 4 (2021), https://www.whitehouse.gov/wp-content/uploads/2021/10/Report-on-the-Impact-of-Climate-Change-on-Migration.pdf [https://perma.cc/H4YT-Y4HY] [hereinafter REPORT ON MIGRATION]; INTERNATIONAL ORG. FOR MIGRATION, CLIMATE CHANGE AND MIGRATION IN VULNERABLE COUNTRIES 25 (2019), https://publications.iom.int/system/files/pdf/climate_change_and_migration_in_vulnerable_countries.pdf [https://perma.cc/A5W8-QHEL]; INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE, IMPACTS OF 1.5°C OF GLOBAL WARMING ON NATURAL AND HUMAN SYSTEMS *in* GLOBAL WARMING OF 1.5°C 200 (2018), https://www.ipcc.ch/site/assets/uploads/sites/2/2022/06/SR15_Chapter_3_LR.pdf [https://perma.cc/7U9X-7XU3].

5 *See generally* Elizabeth Ferris, *Climate Change Is Displacing People Now: Alarmists vs. Skeptics*, BROOKINGS (May 21, 2014), https://www.brookings.edu/blog/planetpolicy/2014/05/21/climate-change-is-displacing-people-now-alarmists-vs-skeptics/ [https://perma.cc/DL4A-MZ5Q].

6 *Id.*

7 Robert A. McLeman & Lori M. Hunter, *Migration in the Context of Vulnerability and Adaptation to Climate Change: Insights from Analogues*, 1 WILEY INTERDISC. REVS.: CLIMATE CHANGE 450, 457 (2010); KANTA KUMARI RIGAUD ET AL., GROUNDSWELL: PREPARING FOR INTERNAL CLIMATE MIGRATION (2018), https://openknowledge.worldbank.org/handle/10986/29461 [https://perma.cc/8REK-LJTJ].

8 David Durand-Delacre et al., *Climate Migration: What the Research Shows Is Very Different from the Alarmist Headlines*, THE CONVERSATION (Oct. 7, 2020), https://theconversation.com/climate-migration-what-the-research-shows-is-very-different-from-the-alarmist-headlines-146905 [https://perma.cc/GBH2-ZXZ9].

9 Boas et al., *supra* note 3, at 901–03.

communities and thus influence human mobility.[10] Wyman has highlighted two important matters that influence the lack of funding for climate migrants.[11] First, currently, there is no globally recognized estimate of costs required for the protection of climate migrants.[12] Second, since most of the displacement will occur internally, mostly in developing countries, it is primarily the responsibility of those countries to extend protection and assistance to their citizens within the borders.[13] However, the developing countries require assistance including technological, logistic, and financial resources from the international community to manage dignified migration and planned relocation in the context of climate change.[14]

Despite the lack of legal protection as well as any dedicated fund for climate-related migration and displacement, in the last decade, human mobility in the context of climate change has increasingly been discussed and incorporated in multiple international policy areas such as climate change, human rights, refugee and migration and disaster management.[15] Human mobility issues have gradually been given more consideration in the United Nations Framework Convention on Climate Change (UNFCCC)[16] COP meetings, side events, and intracommittee meetings.[17] Notable developments within the UNFCCC framework in recent years include the adoption of the historic Paris Agreement (PA)[18] in 2015, the establishment of the Task Force on Displacement (TFD) within the purview of the Warsaw International Mechanism (WIM),[19]

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10 *See* INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE, SUMMARY FOR POLICYMAKERS, *in* CLIMATE CHANGE 2022: IMPACTS, ADAPTATION AND VULNERABILITY (2022), https://www.ipcc.ch/report/ar6/wg2/downloads/report/IPCC_AR6_WGII_SummaryForPolicymakers.pdf [https://perma.cc/87LZ-E777] [hereinafter IPCC: SUMMARY FOR POLICYMAKERS] (discussing generally the current state of trends related to human-induced climate change).

11 Katrina Miriam Wyman, *Responses to Climate Migration*, 37 HARV. ENV'T L. REV. 167, 181–85 (2013).

12 *Id.*

13 *Id.*

14 Rina Kuusipalo, *Exiled by Emissions—Climate Change Related Displacement and Migration in International Law: Gaps in Global Governance and the Role of the UN Climate Convention*, 18 VT. J. ENV'T L., 614, 634–35 (2017).

15 NASER, *supra* note 2, at 39–43.

16 *See* United Nations Framework Convention on Climate Change, May 9, 1992, 1771 U.N.T.S. 107 [hereinafter UNFCCC].

17 NASER, *supra* note 2, at 40–52.

18 Paris Agreement to the United Nations Framework Convention on Climate Change, Dec. 12, 2015, T.I.A.S. No. 16-1104 [hereinafter Paris Agreement].

19 The WIM was brought into being by the Conference of the Parties (COP) to the UNFCCC. It was established under the Cancun Adaptation Framework in November 2013

and especially the operation of the Green Climate Fund (GCF).[20] Furthermore, the advanced economies have already committed to jointly mobilizing $100 billion annually in the GCF by 2020.[21] The PA, although lacking specific provisions on climate change and human mobility, refers to the protection of the rights of "migrants" in its Preamble.[22] Further, the TFD has made several innovative and practical recommendations for "integrated approaches" to "avert, minimize and address loss and damage" related to the adverse impacts of climate change.[23] However, the implementation of those recommendations depends on the flow of finance required for managing the human mobilities in the context of climate change.

Given these circumstances, the developing countries that require finance for managing the human mobilities should find a viable way to link migration with the existing funds available under the UNFCCC framework. Arguably, there are two recourses within the UNFCCC framework. The first one is covertly linking migration with the existing funds dedicated to adaptations, such as the GCF, Global Environment Facility (GEF), and the Adaptation Fund (AF). Article 9 of the PA particularly endorses these funds, and the developed countries have committed to continue providing financial resources to assist developing countries in achieving both mitigation and adaptation goals.[24] Since one of the purposes of these funds is to implement adaptation globally,[25] developing countries must characterize migration as a legitimate component of an adaptation strategy to use this fund for climate displacement. The second option is linking migration with the

to address the loss and damage associated with the adverse impact of climate change. *See* 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 [https://perma.cc/DNG2-CWGK].

20 The GCF is the main financing institution established under the UNFCCC with an aim to make a significant contribution in combating the impacts of global climate change. It receives contributions from the developed countries and other alternative sources. The developing countries can access this fund through some accredited entities. *See* discussion *infra* at note 178. Yulia Yamineva, *Climate Finance in the Paris Outcome: Why Do Today What You Can Put Off Till Tomorrow?*, 25(2) RECIEL 174, 176–78 (2016).

21 *Climate Finance Provided and Mobilised by Developed Countries in 2016-2020*, OECD 3 (2022), https://doi.org/10.1787/286dae5d-en [https://perma.cc/7526-G28S].

22 Paris Agreement, *supra* note 18, preamble.

23 Rep. of the Exec. Comm. of the Warsaw Int'l Mechanism for Loss and Damage Associated with Climate Change Impacts, U.N. Doc. FCCC/SB/2019/5/Add.1 (Nov. 15, 2019).

24 Paris Agreement, *supra* note 18.

25 Yamineva, *supra* note 20, at 177–78.

"loss and damage" (L&D) framework calling for "compensation" from the industrialized countries, thereby characterizing migration as the result of their environmental externalities.

Against this backdrop, the aim of this Article is to explore the probable approaches that can be considered by developing countries to secure finance from the existing funds for climate-related migrants. With this goal in mind, this Article critically analyzes the UNFCCC regime, especially those provisions in the PA which can potentially be applicable for human mobility in the context of climate change. It also examines the existing climate funds, which are created to support the efforts of vulnerable developing countries to combat the challenges of climate change. Arguably, in the absence of specific legal protection in international law and international environmental law, linking human mobility with the financial commitments of the developed countries will allow vulnerable developing countries to find a viable financial solution meeting the needs for the protection of climate-related migrants. How the linkage can be established and what might be the legal basis and scope of such linkage are analyzed in this Article.

In this Article, we have argued that if migration can be framed as adaptation, vulnerable developing countries would be able to apply and use adaptation funding to better address their climate-related migrants. Also, while migration can be a source of loss and damage because of the damage suffered by the migrants in the course of migration, climate migrants should be entitled to compensation under the loss and damage mechanism within the UNFCCC. This Article will contribute to the literature by emphasizing the importance of linking climate-related human mobility with climate finance for adaptation and loss and damage.

I
THE NECESSITY OF FUNDING FOR THE PROTECTION OF CLIMATE-RELATED MIGRATION, DISPLACEMENT, AND PLANNED RELOCATION

Climate change has been recognized as a potential driver of migration for several decades.[26] Mayer shows that the relevance of climate change in migration became conspicuous in the late 1980s.[27]

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26 Demola Okeowo, *Examining the Link: Climate Change, Environmental Degradation and Migration*, 15 ENV'T L. REV. 273, 281–82 (2013).

27 Benoit Mayer, *Migration in the UNFCCC Workstream on Loss and Damage: An Assessment of Alternative Framings and Conceivable Responses*, 6 TRANSNAT'L ENV'T L. 107, 110 (2017).

Before that, migration was typically attributed to economic and social conditions.[28] Two schools of thought have emerged in explaining the nexus between climate change and human migration, namely "maximalist" and "minimalist." Maximalists are mostly composed of environmental scholars and believe that the natural environment is distinguishable from the economic, social, and political context.[29] They are reluctant to consider the multicausality of migration.[30] By contrast, minimalists, led by migration experts such as Castle and Piguet, emphasize that the effects of climate change are not the sole cause of displacement or migration. They believe the number of displacements also depends on the social, economic, and political situation of a threatened zone.[31] For example, Castle stresses that "there is little evidence that climate change has caused much cross-border displacement so far."[32] Black et al. identified five key drivers of migration, namely economic, political, demographic, social, and environmental.[33] The minimalists show that environmental drivers alone rarely trigger people to move. The idea is also supported by the literature. For example, in a survey conducted in Tuvalu, only 5% of respondents cited climate change "as a reason to migrate internationally".[34] Interestingly, the Foresight report shows that though people rarely migrate due to environmental factors, environmental drivers such as climate change have a substantial influence upon all

28 For an influential example, *see* Everett S. Lee, *A Theory of Migration*, 3 DEMOGRAPHY 47–57 (1966).

29 *See* Walter Kälin & Nina Schrepfer, *Protecting People Crossing Borders in the Context of Climate Change Normative Gaps and Possible Approaches*, LEGAL AND PROT. POL'Y RSCH. SERIES 11 (Feb. 2012), https://www.unhcr.org/4f33f1729.pdf [https://perma.cc/W4F6-KQWK].

30 *Id.* at 12.

31 Etienne Piguet, *Climate Change and Forced Migration*, UNITED NATIONS HIGH COMM'R FOR REFUGEES POL'Y DEV. & EVALUATION SERV., Jan. 2008, at 3, https://www.unhcr.org/47a316182.pdf [https://perma.cc/7TDU-9FGR].

32 Stephen Castles, *Afterword: What Now? Climate-Induced Displacement After Copenhagen*, *in* CLIMATE CHANGE AND DISPLACEMENT: MULTIDISCIPLINARY PERSPECTIVES 239, 244 (Jane McAdam ed., 2010).

33 Richard Black et al., *The Effect of Environmental Change on Human Migration*, 21 GLOB. ENV'T CHANGE S3, S5 (2011).

34 United Nations Econ. and Soc. Council, Econ. and Soc. Comm'n for Asia and the Pac., Migration and Climate Change in Asia and the Pac., U.N. Doc. E/ESCAP/GCM/PREP/5, at 6 (Sept. 5, 2017).

other drivers of migration.[35] For example, sea level rise leads to coastal flooding and increased erosion, which ultimately leads to loss of agricultural land and fish production.[36] Thus, the country has to bear an economic loss. Political drivers are also affected by climate change because states promote migration or relocation in the face of complete inundation of land by flood or salinity.[37] Resource scarcity and diseases stemming from land degradation and floods can potentially hamper social and demographic structure. Thus, although climate change may not be the sole trigger for displacement or migration, it does intensify the consequences of underlying environmental, social, and governance challenges.

It is confirmed by a number of studies that climate change migration and displacement will be mostly internal.[38] Given that the opportunity for both cross-border and long-distance permanent displacement is limited, it seems more practicable to build peoples' capacities by strengthening adaptation programs, enabling people to stay in their original areas and cope with adverse environmental situations. However, there may be some extreme situations when it is impossible for them to continue their livelihoods in their original place. In such situations, people either need to be relocated to new areas, or the adaptation program itself should support migration as part of the coping strategy. The Guidance on Planned Relocations, developed by a group of states, international organizations, and experts, provides some overarching principles to be followed by states and other actors while adopting planned relocations. These principles include (1) formulating appropriate legal frameworks and complying with them; (2) understanding and addressing the rights, needs, and vulnerabilities of relocated persons and other affected persons; (3) ensuring consultation with, securing the participation of, and providing information to affected populations; (4) addressing complexities related to land issues such as suitability of land and resolving disputes over land; and (5) undertaking risk assessment

35 GOV'T OFF. FOR SCI., FORESIGHT: MIGRATION AND GLOBAL ENVIRONMENTAL CHANGE 9 (2011), https://eprints.soas.ac.uk/22475/1/11-1116-migration-and-global-environmental-change.pdf [https://perma.cc/5YTG-5FPT] [hereinafter FORESIGHT].

36 Marie-Caroline Badjeck et al., *Impacts of Climate Variability and Change on Fishery-Based Livelihoods*, 34 MARINE POL'Y 375, 376–77 (2009).

37 *See* FORESIGHT, *supra* note 35, at 53.

38 *See* REPORT ON MIGRATION, *supra* note 4, at 20.

before making the decision to relocate and monitoring and evaluating the planned relocation outcome.[39]

Given the range of the likely effects of climate change and their likely impacts on human mobility, developing countries require a substantial amount of climate change financing, especially adaptation financing, for the measures, including planned relocation and adaptation-facilitating migration. This ranges from the allocation of land and housing for resettlement to compensation and skills training for those relocated in the face of climate change.[40] McAdam suggests a planned relocation, which involves "affected communities; includes sufficient lead time to enable careful, participatory planning processes; provides for appropriate land acquisition; and ensures sustained and sufficient financing to resettle people in a way that improves rather than deteriorates living standards."[41]

The TFD, since its inception in 2017, has made significant progress in promoting the climate-related migration and displacement agenda and made recommendations suggesting measures to be taken to support those displaced by climate change. The TFD 2018 Report acknowledges that financial support is required for the actual implementation of the recommended activities, including strengthening the preparedness of countries to avert displacement.[42] Therefore, the TFD recommends "allocating a fixed percentage of adaptation funding for risk assessments" and monitoring of thresholds that results in forced displacement.[43] In the second phase of TFD, the TFD Plan of Action 2019-2021 set the goal of exploring opportunities for accessing exiting funds, including GCF and other funds and donors for averting, minimizing, and addressing displacement associated with climate

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39 BROOKINGS INST. ET AL., GUIDANCE ON PROTECTING PEOPLE FROM DISASTERS AND ENVIRONMENTAL CHANGE THROUGH PLANNED RELOCATION 10–13 (2015), https://www.brookings.edu/research/guidance-on-protecting-people-from-disasters-and-environmental-change-through-planned-relocation/.

40 *Climate Change, Human Rights and Forced Human Displacement: Case Studies as Indicators of Durable Solutions* 1, 4 (Meeting Paper on the Occasion of the 60th Anniversary of the Universal Declaration of Human Rights and International Human Rights Day, Canberra, 2008), http://www.displacementsolutions.org/files/documents/Climate_Change_Displacement_Meeting_Paper.pdf [https://perma.cc/7EP5-RRHF].

41 Jane McAdam, *Historical Cross-Border Relocations in the Pacific: Lessons for Planned Relocations in the Context of Climate Change*, 49 J. PAC. HIST. 301, 305 (2014).

42 REP. OF THE TASK FORCE ON DISPLACEMENT, at 6–7 (Sept. 17, 2018), https://unfccc.int/sites/default/files/resource/2018_TFD_report_17_Sep.pdf [https://perma.cc/FBE9-LP83] [hereinafter TASK FORCE ON DISPLACEMENT].

43 *Id.* at 16.

change.[44] The TFD also aimed to develop guidance on preparing a project proposal for securing access to finance. The fourth meeting summary of the TFD held in September 2020 includes six financing proposals undertaken by TFD members, who include the International Labour Organization (ILO), IOM, UNHCR, and Platform for Disaster Displacement (PDD).[45] For instance, "[a] joint proposal on addressing drivers and facilitating safe, orderly and regular migration in the contexts of disasters and climate change in the IGAD[46] region ha[s] been approved by the UN Network on migration Multi Partner Trust Fund in February 2021 (ILO, IOM, UNHCR, UNOPS, PDD) and started in March 2022."[47] The ILO and IOM have been implementing the "labour mobility for sustainable development and climate resilience in the Pacific project" in the Pacific countries including Vanuatu, Fiji, Solomon Islands, Kiribati, and Tuvalu with the Migration Multi-Partner Trust Fund's (MPTF) financial assistance.[48] Thus, the TFD not only highlighted the importance of financing for human mobility in the context of climate change, it initiated projects to secure finances from the existing funding mechanism to explicitly address wider dimensions of human mobility in the context of climate change.[49]

II
POTENTIAL SOURCES OF FUNDING FOR MANAGING CLIMATE-RELATED MIGRATION, DISPLACEMENT, AND PLANNED RELOCATION

The importance of protecting climate-related migrants is increasingly acknowledged in the literature as well as in the UNFCCC processes, COP meetings, and side events. However, no funding mechanism has

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44 Rep. of the Exec. Comm. of the Warsaw Int'l Mechanism for Loss and Damage Associated with Climate Change Impacts, *supra* note 23.

45 *Fourth Meeting of the Task Force on Displacement (TFD4) Summary*, UNITED NATIONS CLIMATE CHANGE 5 (2020), https://unfccc.int/sites/default/files/resource/Summary_TFD4_update%20for%20Excom%2012.pdf [https://perma.cc/D9AH-6TRX].

46 The IGAD is an eight-country trade bloc in Africa. It includes governments from the Horn of Africa, Nile Valley, and the African Great Lakes; the countries include Djibouti, Ethiopia, Somalia, Eritrea, Sudan, South Sudan, Kenya, and Uganda. *See* The IGAD Region, https://igad.int/the-igad-region/ [https://perma.cc/5KG9-G86X].

47 *Task Force on Displacement: Plan of Action for 2019–2021 with Progress Updates on Implementation*, UNITED NATIONS CLIMATE CHANGE (2021), https://unfccc.int/sites/default/files/resource/tfd_poa-update_2021_0.pdf [https://perma.cc/X4LL-CY4H].

48 Labour Mobility for Sustainable Development and Climate Resilience in the Pacific Project, https://www.ilo.org/wcmsp5/groups/public/---asia/---ro-bangkok/---ilo-suva/documents/publication/wcms_863518.pdf [https://perma.cc/UZU8-9N4S].

49 *See Fourth Meeting of the Task Force on Displacement*, *supra* note 45, at 1–5.

been developed so far specifically for migration, displacement, and planned relocation in the context of climate change. Wyman has identified four sources of funding that could be used for human mobility in the context of climate change.[50] The potential sources are (a) existing funds for migration, such as the IOM's Development Fund; (b) disaster relief resources, which include the United Nations Central Emergency Response Fund and the ADB's Asia Pacific Disaster Response Fund; (c) development assistance (by developed countries); and (d) climate change funds financing adaptation.[51] These sources of funding, except the fourth, are principally nonclimate funds that have specific goals and mandates for the allocation and disbursement of funds.[52] For example, the main purpose of development assistance is to support the economic, environmental, social, and political development of developing countries.[53]

On the contrary, one of the views, though not dominant, is that "[t]he UNFCCC-governed funds are products of extensive negotiations with wide South participation and are often viewed as representing not traditional aid but 'restitution and compensation for damages inflicted by those countries most responsible for . . . greenhouse gases.'"[54] Therefore, Wyman argues that the developing countries may be more accepting of the use of climate adaptation funds rather than nonclimate funds, specifically development assistance funds, as developing countries have more institutional control over them.[55] Thus, these climate change funds can be specifically claimed for the migration in the context of climate change. Wyman argues that, because of the extensive mandates of these funds, their boards may consider establishing a "substructure" or "facility" to "provide the first dedicated multilateral source of funding for climate migration."[56]

Wyman has expressed concern that "using non-climate funds to meet needs related to climate change might be regarded as undermining the idea that developed countries have special obligations due to their responsibility for climate change."[57] This obligation to "assist the

50 Wyman, *supra* note 11, at 182.

51 *Id.* at 182–85.

52 *Id.*

53 ORG. FOR ECON. COOP. AND DEV., CLIMATE FINANCE FROM DEVELOPED TO DEVELOPING COUNTRIES: PUBLIC FLOWS IN 2013-17 (2018).

54 Kuusipalo, *supra* note 14, at 641–42.

55 Wyman, *supra* note 11, at 212–13.

56 *Id.* at 185.

57 *Id.* at 215.

developing country Parties that are particularly vulnerable to the adverse effects of climate change in meeting costs of adaptation to those adverse effects" is particularly imposed by Article 4(4) of the UNFCCC.[58] Furthermore, "[t]he developed country Parties and other developed Parties included in Annex II shall provide new and additional financial resources to meet the agreed full costs incurred by developing country Parties in complying with their obligations under Article 12, paragraph 1."[59]

Scientific reports repeatedly confirm that human migration is one of the greatest effects of climate change. In its very first report in 1990, IPCC confirmed that "[t]he gravest effects of climate change may be those on human migration."[60] Thus, Kuusipalo argues that in accordance with common but differentiated responsibilities (CBDR) and stronger developed-country requirements, if climate migration is considered to be an adverse consequence under Article 4(4), Article 4 obligations may potentially include financial aid for climate-induced migration.[61] In this context, Kuusipalo emphasized the role of international climate law, more specifically the UNFCCC, to develop funding mechanisms "considering that the UNFCCC institutionally already encompasses redistributive architecture to channel funds and other assistance to help communities most affected by climate change to adapt, build resilience, and potentially receive remedy on loss and damage."[62]

The overall aim of this Article is to explore ways to link migration to these climate change funds for adaptation. To begin, this section illustrates the existing funding mechanisms within the UNFCCC.

A. Existing International Climate Change Finance Architecture

Climate finance is a key part of the international climate change framework.[63] Future climate change developments depend significantly on climate finance since both the mitigation and adaptation actions of the global climate regime require sufficient

58 UNFCCC, *supra* note 16, art. 4.4.

59 UNFCCC, *supra* note 16, art. 4.3.

60 THE INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE, CLIMATE CHANGE: THE 1990 AND 1992 IPCC ASSESSMENTS, IPCC FIRST ASSESSMENT REPORT OVERVIEW AND POLICYMAKER SUMMARIES (1990).

61 Kuusipalo, *supra* note 14, at 639.

62 *Id.* at 635.

63 Jorge Gastelumendi & Inka Gnittke, *Climate Finance*, *in* THE PARIS AGREEMENT ON CLIMATE CHANGE: ANALYSIS AND COMMENTARY 239 (Daniel Klein et al. eds., 2017).

funding.[64] However, climate finance has become a highly controversial part of global climate change policy negotiations in recent years,[65] and, in particular, was the most contentious issue and determining factor in reaching a global agreement on climate change in Paris.[66] Climate finance has evolved from the establishment of the UNFCCC in 1992 to the adoption of the PA in 2015. This evolving nature of climate finance architecture makes it a complex mechanism to monitor. Several financial mechanisms and funds are associated with the UNFCCC regime with the object of transferring resources from the developed world toward the developing world and other actors.[67]

Article 11 of the UNFCCC required the establishment of a financial resource mechanism on a grant or concessional basis, and accordingly, the Convention entrusted the operation of the financial mechanism to one or more existing international entities.[68] Article 11.3 called for the "[d]etermination . . . of the amount of funding necessary and available for the implementation of this Convention."[69] Nevertheless, developed countries have always been reluctant to act on this provision because of reservations regarding the significant sums demanded by developing countries.[70] Despite this reluctance, Article 11 of the UNFCCC established a range of climate-related financial instruments: the UNFCCC Financial Mechanism to the Global Environment Facility (GEF); the Special Climate Change Fund (SCCF); the Least Developed Countries Fund (LDCF); the Adaptation Fund (AF); and the Green Climate Fund (GCF).[71] This section gives a brief account of each of these funding mechanisms.

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64 Alessandro Antimiani et al., *The Green Climate Fund as an Effective Compensatory Mechanism in Global Climate Negotiations*, 77 ENV'T. SCI. POL'Y 49, 49–51 (2017).

65 Lianbiao Cui & Yuran Huang, *Exploring the Schemes for Green Climate Fund Financing: International Lessons*, 101 WORLD DEV. 173, 174 (2018).

66 Gastelumendi & Gnittke, *supra* note 63, at 240–42.

67 Charlene Watson & Liane Schalatek, *The Global Climate Finance Architecture*, CLIMATE FUNDS UPDATE. 1, 2 (Feb. 2019).

68 See UNFCCC, *supra* note 16, art. 11.

69 *Id.* art. 4.3.

70 Margaretha Wewerinke-Singh, *State Responsibility for Human Rights Violations Associated with Climate Change*, *in* HANDBOOK OF HUMAN RIGHTS AND CLIMATE GOVERNANCE 75, 88–91 (Sébastien Jodoin et al. eds., 2017).

71 Charlene Watson & Liane Schalatek, *The Global Climate Finance Architecture*, CLIMATE FUNDS UPDATE 1, 1–6 (Feb. 2020).

1. Global Environment Facility (GEF)

The GEF was created to provide concessional funding and grant aid to developing countries to support them not just with climate change actions but also in a range of areas, including biological diversity, international waters, and ozone layer depletion.[72] The GEF operates as the financial mechanism for the major international environmental conventions and agreements, including the UNFCCC, to meet their objectives.[73] According to Article 9(9) of the PA, the GEF, as an operating entity of the Financial Mechanism of the UNFCCC, is required to "ensure efficient access to financial resources through simplified approval procedures and enhanced readiness support for developing country Parties, in particular for the least developed countries and small island developing States, in the context of their national climate strategies and plans."[74] Since 2001, the GEF has funded more than 440 adaptation projects in 120 countries, including all Least Developed Countries (LDCs) and thirty-three Small Island Developing States (SIDS), with more than $2 billion in grant funding and close to $10 billion from other sources.[75] These projects, are directly decreasing the vulnerability of 62 million people.[76] More than 13 million hectares of productive and natural landscapes have been better managed as a result of GEF-funded adaptation projects in order to better withstand the effects of climate change. By offering various types of adaptation training to close to two million individuals, climate adaptation investments from the GEF have also laid the foundation for extensive climate adaptation. The LDCF and the SCCF, together, have funded 130 initiatives promoting access to better climate information services. Additionally, they will aid in the creation or improvement of nearly 3,500 policies, plans, and procedures aimed at identifying, prioritizing, and incorporating adaptation methods across the most vulnerable industries in developing nations.[77]

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72 W. Conard Holton, *Trusting in a Better Future: the Global Environment Facility*, 108 ENV'T. HEALTH PERSP. A316, A319 (2000).

73 *See* Watson & Schalatek, *supra* note 67, at 2.

74 Paris Agreement, *supra* note 18, art. 9.9.

75 *Climate Change Adaptation*, GLOBAL ENV'T FACILITY, https://www.thegef.org/what-we-do/topics/climate-change-adaptation [https://perma.cc/7NLS-LSBK] (last visited Apr. 8, 2023).

76 *Id.*

77 *Id.*

2. Adaptation Fund (AF)

In addition to the GEF, the AF, a new financing institution, was created in 2001 to finance concrete adaptation programs and projects that help developing countries that are particularly vulnerable to the adverse effects of climate change.[78] The AF is considered unique in the sense that it focuses explicitly on vulnerable communities, promotes innovative practices, tools and mechanisms, and funds relatively small projects.[79] The AF is an innovative source of finance. It is financed through a tax imposed on the profits, which amounts to two percent, from the Clean Development Mechanism (CDM).[80] Up to November 2022, the AF has committed $923 million to 130 concrete, localized adaptation projects serving more than 33 million beneficiaries in developing countries.[81] Though the future of Kyoto Protocol is debatable, the country parties to the PA at COP24 in Poland, recognizing the fund's high trust and credibility earned within the international climate finance architecture, decided that the "Adaptation Fund shall serve the Paris Agreement under the guidance of, and be accountable to, the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement with respect to all matters relating to the Paris Agreement, effective 1 January 2019."[82]

3. Green Climate Fund (GCF)

In the overall international climate finance structure, the most significant achievements between the adoption of the UNFCCC in 1992 and the PA in 2015 are the Copenhagen Accord 2009 and the Cancun Agreements 2010.[83] The Copenhagen Accord established the

78 Britta Horstmann, *Operationalizing the Adaptation Fund: Challenges in Allocating Funds to the Vulnerable*, 11 CLIMATE POL'Y. 1086, 1088 (2011).

79 JULIA GRIMM ET AL., *The Future Role of the Adaptation Fund in the International Climate Finance Architecture*, GERMANWATCH (Oct. 11, 2018), https://www.germanwatch.org/sites/germanwatch.org/files/The%20%20future%20role%20of%20the%20Adaptation%20fund%20in%20the%20internatinal%20climate%20finance%20architecture_1.pdf [https://perma.cc/5KVC-684S].

80 Asa Persson & Elise Remling, *Equity and Efficiency in Adaptation Finance: Initial Experiences of the Adaptation Fund*, 14 CLIMATE POL'Y 488, 488 (2014).

81 *See Adaptation Fund Impact*, ADAPTATION FUND, https://www.adaptation-fund.org/ [https://perma.cc/XN9E-N6PE] (last visited Mar. 31, 2023).

82 Conference of the Parties Serving as the Meeting of the Parties to the Paris Agreement, *Report of the Conference of the Parties Serving as the Meeting of the Parties to the Paris Agreement on the Third Part of Its First Session, Held in Katowice from 2 to 15 December 2018*, U.N. Doc. FCCC/PA/CMA/2018/3/Add.2 (19 March 2019).

83 Cui & Huang, *supra* note 65, at 173–75.

GCF, and developed countries promised $30 billion for the period 2010–2012 as "first-start finance" and committed to mobilizing $100 billion a year "new" and "additional" funds by 2020 to help developing countries combat climate change.[84] In the Cancun Agreements, this target was formalized, and a further institution, the Standing Committee on Finance (SCF), was established to assist the COPs on transparency, efficiency, and effectiveness in the delivery of climate finance.[85] Despite certain perceived victories for developed countries in climate finance negotiations, the GCF, with a goal of reaching $100 billion per year, is still viewed as a "premium multilateral climate fund" and a "timely saviour" to developing countries.[86] However, the Climate Finance Delivery Plan report published by the UK Government on 20 October 2021 indicates that the annual $100 billion promised by the developed countries will not be delivered until at least 2023.[87] In COP27, the developing countries expressed serious concern that the goal has not been met yet, and in addition to developed countries, the multilateral development banks and international financial institutions are urged to mobilize climate finance.[88]

Surprisingly, the PA does not refer to the Copenhagen mobilization goal of $100 billion per year. Bodansky considered such omission as a success for the developed countries.[89] However, the decision accompanying the PA extends the existing goal to mobilize $100 billion up to 2025 and urges that parties "shall set a new collective quantified goal from a floor of USD 100 billion per year."[90]

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84 Lavanya Rajamani, *The Making and Unmaking of the Copenhagen Accord*, 59 INT'L & COMPAR. L.3Q. 824, 828 (2010).

85 Gastelumendi & Gnittke, *supra* note 63, at 241.

86 Jale Samuwai & Jeremy Maxwell Hills, *Gazing Over the Horizon: Will an Equitable Green Climate Fund Allocation Policy Be Significant for the Pacific Post-2020?*, 25. PAC. JOURNALISM REV. 158, 158–59 (2019).

87 *UK COP26 Presidency Publishes Climate Finance Delivery Plan Led by German State Secretary Flasbarth and Canada's Minister Wilkinson Ahead of COP26*, GOV.UK (25 Oct. 2021), https://www.gov.uk/government/news/uk-cop26-presidency-publishes-climate-finance-delivery-plan-led-by-german-state-secretary-flasbarth-and-canadas-minister-wilkinson-ahead-of-cop26.

88 *COP27 Reaches Breakthrough Agreement on New "Loss and Damage" Fund for Vulnerable Countries*, U.N. CLIMATE CHANGE (Nov. 20, 2022), https://unfccc.int/news/cop27-reaches-breakthrough-agreement-on-new-loss-and-damage-fund-for-vulnerable-countries [https://perma.cc/8RUY-KQLP].

89 Daniel Bodansky, *The Paris Climate Change Agreement: A New Hope*, 110 AM J. INT'L L. 288, 310 (2016).

90 Yamineva, *supra* note 20, at 181.

The PA and related COPs decision affirmed that the GCF and the GEF, as well as the SCCF and the LDCF, shall serve the PA.[91] Though the PA does not give the GCF any special standing, it has become synonymous to climate finance, especially to the Small Island Developing States (SIDS).[92] The reason is very clear—the purpose of the GCF is not only to limit global emissions but also to enhance resilience and adaptive capacity of developing countries.[93] The GCF aims to achieve a 50:50 balance between adaptation and mitigation financing over time.[94]

While the global financing mechanisms within the international climate change finance architecture, as mentioned above, are mandated to provide financial resources to developing countries to assist their endeavors in both mitigation and adaptation,[95] none of them "explicitly include the funding of human mobility issues."[96] The TFD has confirmed that "[r]elevant financing agreements and mechanisms such as the Green Climate Fund (GCF) and the Global Environmental Facility (GEF) do not make explicit references to human mobility in the context of the adverse effects of climate change nor do they exclude the use of funds for human mobility."[97] However, an IOM Report observed that there were indications of integrating human mobility aspects at the project level in twenty-one ongoing GCF projects in 2018.[98] Yet only a small number of programs and projects under the major climate finance mechanisms mentioned above specifically address migration and human mobility issues, and only a few highlight the relationship between climate change and human mobility "as an overall priority."[99]

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91 Paris Agreement, *supra* note 18, art. 9.8.

92 Samuwai & Hills, *supra* note 86, at 159.

93 *Id.*

94 Steven R. Brechin & Maria I. Espinoza, *A Case for Further Refinement of the Green Climate Fund's 50:50 Ratio Climate Change Mitigation and Adaptation Allocation Framework: Toward a More Targeted Approach*, 142 CLIMATE CHANGE 311, 311 (2017).

95 Paris Agreement, *supra* note 18, at art. 9.

96 TASK FORCE ON DISPLACEMENT, *supra* note 42.

97 *Id.*

98 INTERNATIONAL ORGANIZATION FOR MIGRATION, MAPPING HUMAN MOBILITY (MIGRATION, DISPLACEMENT AND PLANNED RELOCATION) AND CLIMATE CHANGE IN INTERNATIONAL PROCESSES, POLICIES AND LEGAL FRAMEWORKS (2018) [hereinafter IOM].

99 EMILY WRIGHT ET AL., GERMAN ENVIRONMENT AGENCY, MIGRATION, ENVIRONMENT AND CLIMATE CHANGE: RESPONDING VIA CLIMATE CHANGE ADAPTATION POLICY (2020).

III
LINKING HUMAN MOBILITY WITH THE INTERNATIONAL CLIMATE FINANCE ARCHITECTURE

As illustrated in section II of this Article, there is no specific funding mechanism to address human mobility in the context of climate change. Therefore, "innovative approaches" are required to enable an adequate flow of funding for human mobility in the context of climate change. Acknowledging the importance of financial assistance for managing climate migration and displacement, scholars have suggested numerous proposals for climate migration finance. However, the establishment of a new designated fund, with global reach, is politically and practically difficult. Designing a new fund requires, inevitably, a lengthy and cumbersome process of negotiations.[100] Furthermore, given the existing range of climate finance actions, finding an additional source of finance for a new fund would be a challenge for the global community. In this sense, for facilitating migration as adaptation and planned relocation, accessing finance from the existing funds that are associated with the climate change regime is considered more pragmatic.[101]

A. Access to the Climate Change Adaptation Funds

Adaptation funding could play a vital role in assisting climate-related displaced persons.[102] Where migration is viewed as an adaptation to climate change, the costs of migration and planned relocation should come from international adaptation funding mechanisms.[103] The potential source of adaptation funding and proper distribution of available funds remain ambiguous in the PA and therefore, to implement the PA effectively, it is argued that "more robust information on adaptation needs, costs, and finance is needed to guide and inform the successful implementation of the Paris Agreement."[104] In the absence of any reliable estimate for the global cost of adaptation, the Adaptation Finance Gap Report predicted that

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100 AVIDAN KENT & SIMON BEHRMAN, FACILITATING THE RESETTLEMENT AND RIGHTS OF CLIMATE REFUGEES: AN ARGUMENT FOR DEVELOPING EXISTING PRINCIPLES AND PRACTICES 100 (2018).

101 *Id.* at 106.

102 Elizabeth Burleson, *Climate Change Displacement to Refuge*, 25 J. ENV'T. L. 19, 19–34 (2010).

103 John Campbell, *Climate Change and Population Movement in Pacific Island Countries*, *in* CLIMATE CHANGE & MIGRATION S. PAC. PERSP. 29, 34–37 (Bruce Burson ed., 2010).

104 Daniel Puig et al., *The Adaptation Finance Gap Report*, *in* U.N. ENV'T PROGRAMME (UNEP, 2016).

the true cost of adapting to climate change in developing nations could be between $140 and $300 billion annually in 2030 and between $280 and $500 billion annually in 2050.[105] However, the current financial mechanisms for climate change adaptation are limited and only certain funding priorities might be used to address the growing need to cope with climate-related displacement. The adaptation fund programs primarily encompass water resources management, agriculture, health, infrastructure development, and disaster risk reduction. Climate Policy Initiative shows that almost all adaptation finance was funded by public actors.[106] The report also shows that 78% of total adaptation finance was distributed across three sectors—namely, water and wastewater management (32%), agriculture and land use (24%), and disaster risk management (22%).[107] In 2018, adaptation finance was mainly focused on the water sector. Positive news for migration is that the funding for disaster risk management initiatives climbed 128% from an annual average of $2.9 billion in 2015/2016 to $6.6 billion in 2017/2018.[108] This reflects that governments are increasingly recognizing the importance of rapid response systems to protect against extreme weather events that force people to migrate by rendering their territory uninhabitable. Internationally, the adaptation fund has allocated nearly $800 million to the developing world, yet this fund has not included planned relocation.[109] Similarly, GCF could also support planned relocation but the formalities regarding accessibility and timeliness are considered barriers, particularly for least-developed countries. A recent review of the nature of funding instruments for planned relocation reveals that funding is mainly donated by federal or national-level sources and most of these funding instruments are intended for post-disaster contexts.[110] According to IDMC, these funding mechanisms frequently lack the predictability and durability of funding necessary

105 *Id.*

106 Barbara Buchner et al., *Global Landscape of Climate Finance*, CLIMATE POL'Y INITIATIVE (Nov. 7, 2019), https://www.climatepolicyinitiative.org/publication/global-landscape-of-climate-finance-2019/ [https://perma.cc/J4EV-2UMK].

107 *Id.*

108 *Id.*

109 Jonathan Boston et al., *Designing a Funding Framework for the Slow-Onset Impacts of Climate Change: Insights from Recent Experiences with Planned Relocation* 11 (Grantham Research Institute on Climate Change and the Environment, Working Paper No. 343, 2020).

110 *Id.* at 9.

for a well-designed and strategically planned preemptive location.[111] More predictable, designed and longer-term funding approaches need to be devised nationally and internationally for implementing planned relocation.

Against this background, we contend that linking migration with the existing funds dedicated to adaptation—for example, the GCF and AF—may be one viable approach for vulnerable developing countries, whose populations are at risk of climate displacement. Some of the existing climate change funds—notably GCF and GEF—particularly address adaptation to climate change. These funds are fully operational and accessible to developing countries that need money to meet the costs of managing climate-related migration and planned relocation. Currently, countries seeking adaptation finance from the GCF need to demonstrate, in their funding proposal, how their proposed programs can achieve adaptation objectives—namely,

> (a) increased resilience and enhanced livelihoods of the most vulnerable people, communities, and regions; (b) increased resilience of health and well-being, and food and water security; (c) increased resilience of infrastructure and the built environment to climate change threats; and (d) improved resilience of ecosystems and ecosystem services.[112]

However, in the context of the adverse effects of climate change, financial instruments like the GCF and GEF neither explicitly mention nor disallow the use of funds for human mobility.[113] It is argued that, since migration is inseparably linked to the direct impacts of climate change, and building adaptive capacity can help "avert, minimize and address" displacement, migration can be addressed within the framework of adaptation.[114] Many arguments have been made in favor of framing migration as an adaptation. Kent and Behrman see no difference between assisting people to adapt to failed crops, rising sea levels, or unemployment on the one hand and the need to address

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111 *Id.*

112 Green Climate Fund, GCF/B.07/11, *Decisions of the Board – Seventh Meeting of the Board, 18-21 May 2014* (Mar. 2, 2020), https://www.greenclimate.fund/sites/default/files/document/gcf-b07-11.pdf [https://perma.cc/X7WB-V7HM].

113 Task Force on Displacement Stakeholder Meeting, *Recommendations for Integrated Approaches to Avert, Minimize and Address Displacement Related to the Adverse Impacts of Climate Change*, PLATFORM ON DISASTER DISPLACEMENT (May 14–15, 2018), https://unfccc.int/sites/default/files/resource/20180913%20TFD%20Stakeholder%20Meeting%20Report%20%28FINAL%29.pdf [https://perma.cc/ZT9D-5HJK] [hereinafter Meeting Report].

114 *Id.*

climate migrants on the other.[115] If migration can be linked with adaptation, vulnerable countries will have the opportunity to incorporate the cost of management of climate-related migration from existing climate funds. Wyman suggests using adaptation funding sources under the UNFCCC "to finance resettlement and relocation costs, assuming again that it is possible to tie these costs to climate change."[116] Emphasizing the need for international financial assistance for Bangladesh, McAdam and Saul observe that improving international financial and technical support for Bangladesh's climate change adaptation could be crucial in limiting further displacement.[117] By providing alternate means of subsistence, offering technical assistance, and promoting disaster risk reduction, such assistance could aid in the development of community resilience.[118]

Thus, in order to link migration with existing adaptation funding, vulnerable countries must frame migration as an adaptation since "adaptation funding is limited to addressing only vulnerability to climate change impacts."[119] In other words, developing countries should justify that migration can be better defined as an adaptive response to climate change and at the same time show that planned migration can fulfill one of the four objectives of adaptation identified above.

B. Framing Migration as Adaptation

Adaptation is not defined in the PA. The definition of adaptation has evolved over time in the course of UNFCCC negotiations.[120] During the inception of UNFCCC, the IPCC defined adaptation as "measures to reduce the impact of global climate change."[121] A decade later, the IPCC redefined adaptation as an "adjustment in natural or human systems in response to actual or expected climatic stimuli or their effects, which moderates harm or exploits beneficial opportunities."[122]

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115 KENT & BEHRMAN, *supra* note 100, at 107.

116 Wyman, *supra* note 11, at 213.

117 Jane McAdam & Ben Saul, *Displacement with Dignity: International Law and Policy Responses to Climate Change Migration and Security in Bangladesh*, 53 GERMAN Y.B. INT'L L. 233 (2010).

118 *Id.*

119 Wyman, *supra* note 11, at 213.

120 Nina Hall, *What Is Adaptation to Climate Change? Epistemic Ambiguity in the Climate Finance System*, 17 INT'L ENV'T AGREEMENTS: POL., L. & ECON. 37, 37–38 (2017).

121 *Id.* at 43.

122 *Id.*

This definition was later modified by the IPCC, which defined adaptation as "initiatives and measures to reduce the vulnerability of natural and human systems against actual or expected climate change effects."[123] In the absence of an internationally agreed conception of adaptation, for the purpose of climate finance, the UN Standing Committee on Finance (SCF) has endorsed adaptation activities as "reducing vulnerability of, and maintaining and increasing the resilience of, human and ecological systems to negative climate change impacts."[124] The adaptation literature has noted an extensive range of adaptation measures and strategies.[125] A comprehensive list of potential adaptation measures is neither possible nor desirable, as none of the adaptation initiatives are appropriate in all circumstances.[126] Scholars have argued that, though the narrow conception of adaptation includes only technical responses which target a specific impact of climate change, the broad end of the spectrum adaptation could also encompass development activities that aim at underlying vulnerabilities and equalities.[127] Therefore, adaptation can also be seen as development against any expected or actual climate change effects.[128] Ultimately, increasing resilience and reducing vulnerability are the principal objectives of climate change adaptation. As of May 2021, of 191 parties to the Paris Agreement, eighty-seven (including the twenty-seven EU nations) have submitted their revised NDCs in 2020–2021 so far (up to May 31, 2021) and twenty-five (29%) of the eighty-seven nations in some way addresses human mobility; 64% of these refer to displacement, 56% to migration, and planned 48% to relocation.[129]

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123 IPCC, CLIMATE CHANGE 2007: SYNTHESIS REPORT (2008), https://www.ipcc.ch/site/assets/uploads/2018/02/ar4_syr_full_report.pdf [https://perma.cc/Q43T-YN88] (contribution of Working Groups I, II and III to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change).

124 UNFCCC STANDING COMMITTEE ON FINANCE, 2014 BIENNIAL ASSESSMENT AND OVERVIEW OF CLIMATE FINANCE FLOWS REPORT (2014), 19 (Table 1), https://unfccc.int/files/cooperation_and_support/financial_mechanism/standing_committee/application/pdf/2014_biennial_assessment_and_overview_of_climate_finance_flows_report_web.pdf [https://perma.cc/2YZC-FPFE].

125 MARK PELLING, ADAPTATION TO CLIMATE CHANGE: FROM RESILIENCE TO TRANSFORMATION 39–47 (2011).

126 *See Strategies for Climate Change Adaptation*, EPA (Nov. 4, 2021), https://www.epa.gov/arc-x/strategies-climate-change-adaptation [https://perma.cc/7263-V9Y2].

127 Hall, *supra* note 120, at 44.

128 *Id.* at 43–44.

129 *Briefing Note: Human Mobility in Nationally Determined Contributions. Human Mobility in the Context of Climate Change*, SLYCAN TR. (2021), https://www.preventionweb.net/publication/human-mobility-nationally-determined-contributions [https://perma.cc/LMV7-4WJ5].

Throughout history, human migration has been a legitimate adaptive response to environmental and climatic events.[130] Migration has the proven potential to reduce vulnerability and increase resilience in the communities affected by natural disasters. In this sense, many academics and nonacademic organizations, such as the IOM, framed migration as adaptation.[131]

Migration is a coping strategy that creates new opportunities and resources, and it has a critical impact on rural livelihood. Several scholars have identified that there are some vulnerable areas where remittances sent by migrants have long been a key element in food security. Drawing on case studies from Tanzania, Bolivia and Senegal, Tacoli showed that "the most vulnerable households are those that do not receive remittances."[132] "In poorer areas, remittances are often as food rather than cash."[133] Overall, migration has become a significant aspect of rural livelihood strategies in the face of soil degradation, temperature changes, and desertification in these countries.[134]

Transfers of resources by migrants, including not just financial but also human capital transfers, contribute to educational attainment, and reduce poverty, inequality and vulnerability in the communities affected by natural disaster. For example, Jamal and Amal have investigated empirically the relationship between education attainment levels and international migration in rural Morocco and found that children belonging to remittance-receiving households complete "significantly more years of schooling" than children living in nonmigrant households.[135] A 2006 study suggested that Malian

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130 Jürgen Scheffran et al., *Migration as a Contribution to Resilience and Innovation in Climate Adaptation: Social Networks and Co-Development in Northwest Africa*, 33 APPLIED GEOGRAPHY 119, 119–20 (2012).

131 Kayly Ober & Patrick Sakdapolrak, *How Do Social Practices Shape Policy? Analysing the Field of 'Migration as Adaptation' with Bourdieu's 'Theory of Practice,'* 183(4), GEOGRAPHICAL J. 359, 361 (2017).

132 Cecilia Tacoli, *Not Only Climate Change: Mobility, Vulnerability and Socio-Economic Transformations in Environmentally Fragile Areas in Bolivia, Senegal and Tanzania* 19 (International Institute for Environment and Development, Working Paper, Rural-Urban Interactions and Livelihood Strategies - 28, 2011), https://pubs.iied.org/sites/default/files/pdfs/migrate/10590IIED.pdf [https://perma.cc/8EQA-DPSG].

133 *Id.*

134 *Id.* at 18.

135 Jamal Bouoiyour & Amal Miftah, *Migration, Remittances and Educational Levels of Household Members Left Behind: Evidence from Rural Morocco*, 12 EUR. J. COMPAR. ECON. 21, 21 (2015).

"remittances reduce poverty rates by 5% to 11% and the Gini coefficient[136] by about 5%."[137]

Furthermore, social networks created by migrants in host communities can help to build social capital which increases social resilience in home communities.[138] For example, the emigrants of Bouanze, a village in Mauritania, formed an organization AFUB (Association des Feres Unis of Bouanze) in France and established a branch in Spain, with a view to fostering development initiatives in their home region through investment in water supply, infrastructure, and healthcare projects.[139] AFUB has initiated several major development projects in cooperation with NGOs and aid organizations.[140] Similarly, a 2004 study conducted on Malian emigrants in France found that forty-two migrant organizations with eleven thousand members have implemented 250 developmental projects in Mali.[141] Economists have found that international migration propels economic development sharply in both home and host countries.[142] An important reason for sustainable economic growth in these countries lies in the fact that migration raises the productivity of labor.[143] "The average migrant is much more productive economically in the country of destination than in the country of origin."[144] Because of the widening productivity differences across countries, even small population shifts have a significant impact on the world economy.[145]

These massive economic productivity benefits generate economic development gains in both home and host communities. For communities affected by climate change, the development implications are crucial. For sustainable development, affected countries need to

136 The Gini coefficient is a statistical measure to gauge economic inequality.

137 Flore Gubert et al., *Do Remittances Affect Poverty and Inequality? Evidence from Mali* 4 (Institute of Research Development, Working Paper No. DT/2010/08, 2010), https://dial.ird.fr/wp-content/uploads/2021/10/2010-08-Do-remittances-affect-poverty-and-inequality-Evidence-from-Mali.pdf [https://perma.cc/WXP6-39AH].

138 Scheffran et al., *supra* note 130, at 121.

139 *Id.* at 124.

140 *Id.*

141 *Id.* at 125.

142 MICHAEL A. CLEMENS, UN DEPARTMENT OF ECONOMIC AND SOCIAL AFFAIRS POPULATION DIVISION, MIGRATION IS A FORM OF DEVELOPMENT: THE NEED FOR INNOVATION TO REGULATE MIGRATION FOR MUTUAL BENEFIT 1, 6, No. 2017/8 (2017), https://www.un.org/en/development/desa/population/migration/publications/technicalpapers/docs/TP2017-8.pdf [https://perma.cc/6QGB-ZJS7].

143 *Id.*

144 *Id.*

145 *Id.*

build resilient communities and minimize negative forms of migration, such as forced and unplanned migration. Integrating migration in climate change adaptation strategies can contribute to building community resilience and contribute to sustainable development.[146] The integration of international migration, mobility, and migrants into the UN's Sustainable Development Goals (SDGs) confirms the international community's recognition of the linkage between international migration and the development of migrants and their families in both countries of origin and of destination.[147]

As mentioned earlier, adaptation as a concept is seen as initiatives and measures to reduce the vulnerability of the people and increase the resilience of the climate change-affected communities. Broadly, the conception of adaptation also includes development activities targeting vulnerabilities and inequalities. Seen from this angle, migration is an important element of adaptation strategies, and migration can be better defined as an adaptive response to climate change or environmental transformations.

It must be acknowledged that, despite many attempts to implement climate change adaptation measures, many vulnerable communities cannot be protected from the devastating impacts of climate change, including sea level rise, droughts, floods, and the human cost of death and displacement.[148] Until 2013, no international mechanism had been created to address loss and damage arising from such impacts.[149] In 2013, state parties to the UNFCCC put in place an institutional mechanism known as the WIM to respond to "loss and damage" (L&D).[150] Although developed countries resisted the inclusion of L&D in the PA, small-island, low-lying coastal states and African states

146 UN SYSTEM TASK TEAM ON THE POST-2015 UN DEVELOPMENT AGENDA, MIGRATION AND HUMAN MOBILITY 9 (May 2012), https://www.un.org/millenniumgoals/pdf/Think%20Pieces/13_migration.pdf [https://perma.cc/96M6-VYDT].

147 UN DEPARTMENT OF ECONOMIC AND SOCIAL AFFAIRS POPULATION DIVISION, POPULATION FACTS: INTEGRATING MIGRATION INTO THE 2030 AGENDA FOR SUSTAINABLE DEVELOPMENT, No. 2015/5, at 2 (Dec. 2015), https://www.un.org/en/development/desa/population/publications/pdf/popfacts/PopFacts_2015-5.pdf [https://perma.cc/3RKW-YARZ].

148 IPCC, *supra* note 123.

149 Birsha Ohdedar, *Loss and Damage from the Impacts of Climate Change: A Framework for Implementation*, 85 NORDIC. J. INT'L L. 1, 2–3 (2016).

150 M.J. Mace & Roda Verheyen, *Loss, Damage and Responsibility After COP21: All Options Open for the Paris Agreement*, 25 REV. EUR. CMTY. & INT'L ENV'T L. 197, 201 (2016).

successfully pushed to incorporate a provision on L&D in the PA.[151] As a result, the PA recognizes the WIM for L&D associated with climate change impacts. Thus, another climate financial approach for vulnerable developing countries is to link migration with "loss and damage," calling for compensation from industrialized countries by defining climate migration as an environmental externality.

C. Linking Climate-Related Migration and Displacement to Loss and Damage Mechanism

Climate-related human mobility is "well-recognized as having the clearest connection to non-economic losses," including threats to health and wellbeing and loss of culture and agency.[152] Although Ratzel's *Anthropogeographie* lays the groundwork for the role of the natural environment in migration in 1882,[153] the 2007 adoption of the Bali Action Plan, as well as the establishment of the Ad Hoc Working Group on Long-Term Cooperative Action (AWGLCA), is considered the first attempt to integrate human migration under the UNFCCC negotiations.[154] At COP14 in 2008, the AWGLCA incorporated references to human mobility in its assembly text to facilitate further negotiations.[155] These references led to the inclusion of subparagraph 14(f) in the 2010 Cancún Agreements (COP16) which recognized the impacts of migration and climate change displacement, inviting all parties to take "[m]easures to enhance understanding, coordination, and cooperation with regard to climate change induced displacement, migration and planned relocation, where appropriate, at national, regional and international levels."[156]

Acknowledging the importance of migration, the COP decision on L&D in the Doha conference (COP18) called for "enhancing the understanding of how the impacts of climate change are affecting

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151 *Id.*

152 Adelle Thomas & Lisa Benjamin, *Non-economic Loss and Damage: Lessons from Displacement in the Caribbean*, 20 CLIMATE POL'Y 715, 718 (2019).

153 Etienne Piguet, *From "Primitive Migration" to "Climate Refugees": The Curious Fate of the Natural Environment in Migration Studies*, 103 ANNALS ASS'N AM. GEOGRAPHERS 148, 149 (2013).

154 Koko Warner, *Human Migration and Displacement in the Context of Adaptation to Climate Change: The Cancun Adaptation Framework and Potential for Future Action*, 30 ENV'T. & PLAN. C: GOV'T & POL. 1061, 1065 (2012).

155 IOM, *supra* note 98.

156 UNFCCC, *Outcome of the Work of the Ad Hoc Working Group on Long-Term Cooperative Action Under the Convention*, ¶ 14(f), Draft decision -/CP 16 (2010), http://unfccc.int/files/meetings/cop_16/application/pdf/cop16_lca.pdf#page=3 [https://perma.cc/W29V-Z8ZA].

patterns of migration, displacement and human mobility."[157] In the same vein, the initial two-year work plan of the WIM asked for enhancing "the understanding of and expertise on how the impacts of climate change are affecting patterns of migration, displacement and human mobility[,] and the application of such understanding and expertise."[158]

The confirmation of L&D via a dedicated article (Article 8) represented unprecedented breakthroughs in the history of global climate policy-making.[159] As noted earlier, the decision to adopt the PA mandated the creation of a task force under the aegis of the Executive Committee of the Warsaw International Mechanism for Loss and Damage associated with Climate Change Impacts (WIM Excom) to look specially at the nexus between climate change and displacement and to provide recommendations "for integrated approaches to avert, minimize and address displacement related to the adverse impacts of climate change."[160] A five-year rolling working plan was approved by COP22 in Marrakesh.[161]

As noted above, L&D is linked closely to issues of liability and compensation. The only provision on loss and damage, Article 8, uses the words "support" and "should" in order to indicate the nonbinding nature of the Article.[162] While the provision on "support" includes "financial assistance," the L&D provisions lack a direct link to the financial mechanisms of the Convention.[163] Conversely, the instrument

157 UNFCCC, *Report of the Conference of the Parties on Its Eighteenth Session, Held in Doha from 26 November to 8 December 2012-Addendum-Part Two: Action Taken by the Conference of the Parties at Its Eighteenth Session*, U.N. Doc. FCCC/CP/2012/8/Add.1, Decision 3/CP.18 (28 Feb. 2013).

158 UNFCCC, *Initial Two-Year Workplan of the Executive Committee of the Warsaw International Mechanism for Loss and Damage Associated with Climate Change Impacts* (2014), https://unfccc.int/sites/default/files/resource/docs/2014/sb/eng/04.pdf [https://perma.cc/HW2G-FVZP].

159 IOM, *supra* note 98.

160 UNFCCC, *Report of the Conference of the Parties on Its Twenty-First Session, Held in Paris from 30 November to 13 December 2015*, ¶ 49, U.N. Doc. FCCC/CP/2015/10/Add.1, https://unfccc.int/resource/docs/2015/cop21/eng/10a01.pdf [https://perma.cc/U3JJ-DKE2].

161 UNFCCC, *Warsaw International Mechanism for Loss and Damage Associated with Climate Change*, Decision -/CP.22, https://unfccc.int/files/meetings/marrakech_nov_2016/application/pdf/auv_cop22_i7_wim1.pdf [https://perma.cc/7RUZ-FSAD].

162 CLIMATE FOCUS, LOSS AND DAMAGE IN THE PARIS AGREEMENT, BRIEFING NOTE (Dec. 2015), https://climatefocus.com/wp-content/uploads/2022/06/20160214-Loss-and-Damage-Paris_FIN.pdf [https://perma.cc/2PHV-H23E].

163 Linda Siegele, *Loss and Damage (Article 8)*, *in* THE PARIS AGREEMENT ON CLIMATE CHANGE: ANALYSIS AND COMMENTARY 224, 229 (Daniel Klein et al., eds., 2017).

establishing the WIM consistently urges to "enhance," "facilitate," "mobilise," or "provide" finance or resources for loss and damage.[164] The five-year rolling work plan of the Executive Committee of the WIM aims to explore how the "availability of finance" can be "facilitated" or "enhanced" to address loss and damage associated with the adverse effects of climate change at the regional and national levels.

Despite the lack of apparent linkage between the financial mechanisms within the UNFCCC and loss and damage provisions, the broad interpretation of the WIM instruments reveal a "clear" intention to "generate and disperse additional finance for loss and damage."[165] Siegele argues that a broad reading of the Agreement's provisions about the applicability of the whole financial mechanism may be used to cover "loss and damage."[166] Resonating with this approach, the TFD within the WIM on L&D also suggested innovative, "integrated and long-term" approaches to facilitate access to climate finance for human mobility.

However, in COP27, held in November 2022, in Egypt, the state parties concluded a breakthrough agreement to create specific new funding arrangements for "loss and damage" as well as a dedicated fund to assist vulnerable developing countries affected by worst impacts of climate disasters in responding to loss and damage.[167]

CONCLUSION

The latest projection about carbon emission and the global temperature is illustrated in the report of the Working Group I of the 6th Assessment Report published on August 2021. Global surface temperature will continue to increase until at least the mid-century under all emissions scenarios considered. Global warming of 1.5°C and 2°C will be exceeded during the twenty-first century unless deep reductions in carbon dioxide (CO2) and other greenhouse gas

164 UNFCCC, *Non-economic Losses in the Context of the Work Programme on Loss and Damage*, U.N. Doc. FCCC/TP/2013/2 (Oct. 9, 2013).

165 Jonathan Gewirtzman et al., *Financing Loss and Damage: Reviewing Options Under the Warsaw International Mechanism*, 18(8) CLIMATE POL'Y 1076, 1079 (2018).

166 Siegele, *supra* note 163, at 229.

167 UNFCCC, *COP27 Reaches Breakthrough Agreement on New "Loss and Damage" Fund for Vulnerable Countries*, U.N. CLIMATE CHANGE UNFCC (Nov. 20, 2022), https://unfccc.int/news/cop27-reaches-breakthrough-agreement-on-new-loss-and-damage-fund-for-vulnerable-countries [https://perma.cc/S3SC-KVUT].

emissions occur in the coming decades.[168] The most vulnerable regions due to climate-related impacts include coastal zones, low-lying small island states, mega deltas, and regions subject to excessive rainfall and drought. According to the 2021 global report on internal displacement, at least 7 million people were internally displaced by disasters in 104 countries and territories as of December 3, 2020, of which 98% were weather-related disasters.[169] While not all weather-related disasters and their associated displacement are directly related to climate change, an IDMC study found that climate change plays an important and often direct role in driving displacement.[170] The relevance of the climate-human mobility correlation is confirmed by contemporary climate science. There is broad agreement among scientists that climate change in combination with other related factors is likely to increase human displacement over the twenty-first century.[171]

Migration has opportunities to seize, challenges to meet, and risks to avoid.[172] Migration has the proven potential to reduce vulnerability and increase resilience in the communities affected by natural disaster. But migration can be an effective coping mechanism only when it is properly planned. However, the initiation and execution of policies for managing migration and displacement in the context of climate change involve significant costs since migration will create significant economic burdens for individuals, communities, and economies.[173] The IDMC 2021 estimates "the global cost of one year of displacement was nearly $20.5 billion in 2020, a figure that covers support for IDPs' housing, education, health and security needs, and accounts for their loss of income.[174] Due to a lack of both financial and logistical resources, the developing countries vulnerable to the impacts of climate change need human, technological, and financial resources from

168 Summary for Policymakers *in* CLIMATE CHANGE 2021: THE PHYSICAL SCI. BASIS. CONTRIBUTION OF WORKING GROUP I TO THE SIXTH ASSESSMENT REP. OF THE INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE, IPCC (Valérie Masson-Delmotte et al. eds., 2021).

169 GLOBAL REPORT ON INTERNAL DISPLACEMENT, *supra* note 2.

170 *Id.*

171 CLIMATE CHANGE 2014: SYNTHESIS REPORT. CONTRIBUTION OF WORKING GROUPS I, II, AND III TO THE FIFTH ASSESSMENT REPORT OF THE INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE, IPCC (2014), https://www.ipcc.ch/report/ar5/syr/ [https://perma.cc/G2K3-D98Z].

172 DINA IONESCO ET AL., THE ATLAS OF ENVIRONMENTAL MIGRATION 70 (2017).

173 Ruben Carlo Asuncion & Minsoo Lee, *Impacts of Sea Level Rise on Economic Growth in Developing Asia* 1–7 (ADB Economics Working Paper Series 507, Jan. 2017).

174 GLOBAL REPORT ON INTERNAL DISPLACEMENT, *supra* note 2.

developed countries for a broad range of measures, including relocation and adaptation that facilitate migration.

Under international law, if a state is found to violate international legal principles, such as the no-harm principle, then it is obliged to compensate affected states for the damage caused, either directly or indirectly.[175] Article 30 and 31 of the International Law Commission's (ILC) Draft Articles on State Responsibility (DASR) enunciated the legal consequences of a state found responsible for causing transboundary harm.[176] The state responsible for the internationally wrongful act is under an obligation to cease the wrongful act and to make full reparation for the injury caused.[177] Further, the "polluter-pays" principle[178] obliges industrialized countries to assist developing countries to redress "the loss and damage suffered, measured in terms of total cumulative emissions rather than current aggregate or per capita emissions."[179] Thus, the polluter must pay according to the principle of "common but differentiated responsibilities and respective capabilities" (CBDR&RC) articulated in the UNFCCC. Under Article 4 of the UNFCCC, the developed country assumed obligation to provide "funding, insurance and the transfer of technology, to meet the specific needs and concerns of developing country Parties arising from the adverse effects of climate change . . . . "[180]

The PA took the principle of CBDR&RC even further. This principle fosters the historic PA by overcoming negotiating deadlock between developed and developing countries.[181] As a result, this principle has taken place on several occasions in the PA. For example, Article 2.2 contains a statement reflecting that the Agreement "will be implemented to reflect equity and the common but differentiated responsibilities and respective capabilities, in the light of different national circumstances."[182] Apart from other Articles, differentiation is

175 *See* ILC, *Draft Articles on the Responsibility of States for Internationally Wrongful Acts*, Art. 36, in ILC Report 53rd Sess., at 31, U.N. Doc. A/56/10 (2001).

176 *See id.* art. 30–31.

177 *Id.*

178 This principle already serves as a basis for liability and compensation for trans-boundary pollution in international law. The alternative proposition is the "beneficiary pays" principle.

179 Robyn Eckersley, *The Common but Differentiated Responsibilities of States to Assist and Receive 'Climate Refugees,'* 14 EUR. J. POL. THEORY 481, 485 (2015).

180 UNFCCC, *supra* note 16, art. 4.

181 Jacqueline Peel, *Re-Evaluating the Principle of Common but Differentiated Responsibilities in Transnational Climate Change Law*, 5 TRANSNAT'L ENV'T L. 245, 252 (2016).

182 Paris Agreement, *supra* note 18.

found in the Article on adaptation (Article 7), which establishes that the implementation of the Agreement should take into account "the urgent and immediate needs of those developing country Parties that are particularly vulnerable to the adverse effects of climate change."[183] Article 9, the provision of finance, explicitly recognizes that "(d)eveloped 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."[184]

Significant international cooperation needs to be extended to strengthen adaptation programs in developing countries to support the human mobilities likely to arise from climate change. The UNFCCC emphasizes the notion of cooperation by stating that "the global nature of climate change calls for the widest possible cooperation by all countries" and establishes a framework for international cooperation on climate change.[185] The Convention imposes obligations on developed countries to consider the "specific needs and special circumstances" of developing countries.[186] The concept of international cooperation is also endorsed in the post-2012 negotiations, which are titled "long-term cooperative action under the Convention."[187] An intersession panel discussion at Human Rights Council (HRC) held in 2017 emphasized on ensuring a rights-based approach to efforts addressing climate migration and that "the human rights framework should guide the work of relevant bodies under the UNFCCC and WIM including the work of the TFD in relation to 'finance, adaptation and mitigation measures.'"[188]

Thus, the climate change framework including the UNFCCC, the Kyoto Protocol, and COP decisions confirms that the developed countries bear obligations to assist developing countries—particularly

183 *Id.*

184 *Id.*

185 UNFCCC, *supra* note 16, preamble.

186 *Id.* art. 3 ¶ 2.

187 UNFCCC, *Decision 2/CP.17: Outcome of the Work of the Ad Hoc Working Group on Long-Term Cooperative Action Under the Convention* (Mar. 2012), https://unfccc.int/resource/docs/2011/cop17/eng/09a01.pdf [https://perma.cc/GGC8-C7P9].

188 Human Rights Counsel, *Report of the Office of the United Nations High Commissioner for Human Rights, Summary of the Panel Discussion on Human Rights, Climate Change, Migrants and Persons Displaced Across International Borders*, U.N. Doc. A/HRC/37/35 (Nov. 14, 2017).

the vulnerable and least developed ones to adapt to the changing environment by transferring finances, resources, and technology.

Looking at the broad context of COP climate change discussions, the human mobility issue has evolved from discussions within the context of "climate risk management" to more specific inclusion in the adaptation framework in Cancun, and later in the loss and damage framework.[189]

The existing climate financing only provides "financial resources to assist developing countries with respect to mitigation and adaptation."[190] Historically, mitigation of carbon emissions has always received priority attention; therefore, most climate funds are disbursed for mitigation efforts.[191] During 2017–2018, mitigation activities accounted for 93% of climate finance, and the rest global climate finance is allocated for adaptation.[192] The OECD Report on climate finance from developed to developing countries reveals that only about 20% of bilateral and 27% of multilateral climate finance went to adaptation programs.[193]

Given that addressing climate mobility has implications for climate adaptation, the international climate finance funds or financial mechanisms can address climate mobility more systemically within their projects and programs for adaptation. The stakeholders meeting of the TFD recommended that "efforts should be made to promote additional financing to fund measures to avert, minimize and address climate related human mobility, including migration, displacement, and planned relocation."[194] Taking into account the stakeholder's recommendation, it is expected that future UNFCCC discussions and, in particular, the WIM EXCOM will explore innovative and integrated approaches to secure adequate flow of finance, specifically for the migration, displacement, and planned relocation in the context of climate change.

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189 Koko Warner, *Coordinated Approaches to Large-Scale Movements of People: Contributions of the Paris Agreement and the Global Compacts for Migration and on Refugees*, 39s POPULATION ENV'T 384, 388 (2018).

190 Paris Agreement, *supra* note 18, art. 9.1.

191 *See* Gewirtzman et al., *supra* note 165, at 1083.

192 *See* Buchner et al., *supra* note 106.

193 *See* ORG. FOR ECON. COOP. AND DEV., *supra* note 53.

194 *See* Meeting Report, *supra* note 113.