

Increasing Human Displacement in Present Scenario: Existing Legal Provisions and Need for Inclusion of Climate Refugees in International Refugee Law

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Abstract

Climate Change is a reality as we witness rising global temperatures, severe storms and hail, increased droughts and increase in the sea level, etc. that has caused unpredictable seasons which adversely affects food production and leads to rise in hunger and poor nutrition. The Environment Refugee or the climate induce Individuals have become one of the most vulnerable individuals having no home left for themselves and are forced to externally migrate outside their country. It has been observed that environment/climate refugees have increased and are predicted to increase more. In 2020 the Ecological Threat Registry (ETR) with the Institute for Economics and Peace (IEP) release on ecological data that by 2040, a total of 5.4 billion people will live in the 59 countries experiencing high or extreme water shortage. By 2050 about 3.5 billion people could suffer from food security. The undermining condition that forces people to abundant their natural habitat to seek better life or survival elsewhere.

This paper tries to look into the struggle of environment/climate refugees and why refuge term is missing for climate induced people from the refugee Convention. This paper will take examples from Global South and evaluate the existing challenge to acknowledge the ongoing struggle.

Keywords: Environmental Refugee, Climate Refugee, Climate Induced People, Climate Displaced Person, Climate/Environment Forced Displacement.

Time immemorial human movement has been the existence of tracing human settlement and their methods of livelihood development. Understanding the human settlement and movement environment has played a crucial role in the history of human migration and shaping population settlement. Movement of humans from one place to another inside a nation-state is known as internal migration and once the same movement occurs from one nation state to another i.e. cross border movement or external movement. People have always moved away from places with harsh or deteriorating conditions or less viable places due to unbearable living condition, unreliable food and water supplies. This is due to the result of frequent floods, sea-level rise, desertification and storms, forcing people to seek refuge in places that are more hospitable and better than their own habitat for survival and livelihood. In other words, there are strong linkages between climate change, environmental

degradation and migration as there is a complex interdependence between migration and environment.

The new reality came in 1990s by the Intergovernmental Panel on Climate Change (IPCC) that “one of the gravest effect will fall on humans due to Climate Change”. In 2007 IPCC’s Fourth Assessment Report it was revealed that Climate change may raise risk of humanitarian emergencies and trigger population movement.¹

The reason for Climate change is believed to be human induced due to global warming, which has led to an increase in the emission of global greenhouse gases caused by human activities for industrialisation, and deforestation to name a few of them.² In fact, it is the human activities that influence the new anthropocene epoch which has led to increasing concentration of greenhouse gases in the atmosphere that has affected not only the entire ecosystems of human survival from food security to human health but also sustainable development.

The last century has witnessed a large wave of forced migration due to climate induced migration. The UNHCR called this ‘global crisis as a human crisis,’³ as they amplify the rivers of forced human displacement within the borders and across for millions of people, thereby increasing their risk of statelessness.⁴ There are different estimates of the numbers of people who have been affected but there’s a consensus on the number being alarming and increasing in the coming years.

The Climate Crisis: its interlinkages of Climate Change with ‘forced displacement’ of people

Climate Change and Displacement or Forced Migration are increasingly interconnected, as extreme and erratic weather conditions worsen all conditions with global heating leading to increase in wildfires. The increase in sea levels leads to an increase in sea levels, melting the snow-capped mountains of the world such as the Arctic, Himalayas causes the sea levels to rise.⁵ As most of the heat from global warming is soaked up by the ocean. The increase in greenhouse gases traps the sun’s heat as a consequence of which leads to erratic weather patterns and disrupts the usual balance of nature through floods and droughts⁶ causing not only loss of livelihoods but also migration and displacement of people to a safer refuge sometimes within and outside the border.

The increase in temperature warms up the ocean to expand not only the volume of the water but also the frequency of tropical storms such as Cyclones, Hurricanes and Typhoons that feed on warm water at the ocean surface. It also makes the ocean more acidic, threatening marine life and coastal communities. Besides, the increased temperature due to Global warming leads to more evaporation of moisture that exacerbates extreme rainfall and flooding, with more destructive storms. It has led

1 IOM International Organization for Migration (2009) Compendium of IOM’S Activities in Migration, Climate Change and the Environment, Geneva: Switzerland.: pg 15

2 According to Fifth Assessment Report from the Intergovernmental Panel on Climate Change (IPCC) between 1970 and 2010 greenhouse gas emission increased steadily. See World Bank Group (2014), “A Wicked Problem: Controlling Global Climate Change”, [Online: Web] accessed on 10 Jan 2026; Available at: URL: <https://www.worldbank.org/en/news/feature/2014/09/30/a-wicked-problem-controlling-global-climate-change>

3 UNHCR, in ‘Focus Areas Strategic Plan for Climate Action 2024-2030-Pg 8

4 How climate change is multiplying risks for displacement (UNHCR, 2020); Global Compact on Refugees (2018) and Unprotected by Climate Change, responding to the growing risk of displacement (Oxfam, 2017).

5 Vikas Meena and Shwera Kukreja (2023) The Third Pole at Risk: How Climate Change is impacting the Himalayas, IORA, (Online: web) Accessed on 20 Jan 2026, Available at <https://ioraecological.com/the-third-pole-at-risk-how-climate-change-is-impacting-the-himalayas/>

6 The NOAA interagency task force reviews every four years to five years on latest research reporting issues and sea level rise. Rebecca Lindsey (2023) Climate Change: Global Sea Level NOAA Climate.gov (Online: web) Accessed on 20 Jan 2026, Available at: <https://www.climate.gov/news-features/understanding-climate/climate-change-global-sea-level>

to loss of species not only in the land but also in water bodies such as rivers, lakes and oceans. It has been estimated that the rate of species extinction to be between 1,000 and 10,000 times higher than the natural extinction rates which is high enough to threaten the important ecological functions such as stable climate, predictable regional precipitation patterns and productive farmland and fisheries that support human life on Earth⁷

The overall effect of Climate Change leads to multiple and overlapping crises leading to loss of homes and livelihoods, increasing poverty, straining peaceful relations between communities, conflicts, threatening human rights, forced displacement and sometimes death.⁸

The Intergovernmental Panel on Climate Change (IPCC) had stated “one of the gravest effects of climate change may be those on human migration.”⁹ in 1990. This statement was substantiated by the IPCC’s Fourth Assessment Report in 2007- “*climate change is likely to raise the risk of humanitarian emergencies and trigger population movements as a result of increasingly intense weather events, sea level rise and accelerated environmental degradation, including coastal erosion and desertification*”. The IPCC projected that about 50-75% of the global population are exposed to periods of “life-threatening climatic conditions” due to extreme heat and humidity by 2100.¹⁰ Therefore displacement or migration of people would be a natural corollary for survival.

Over the years, it has been observed that human mobility and environmental disaster had an interconnectivity wherever environmental disaster has led humans to migrate; In the year 2020, 40.5 million people were relocated with 30.7 million due to natural disasters¹¹, out of which 14 million were due to floods and storms in Asia and Pacific alone.¹² For instance in 2022, the drought in Somalia has displaced more than 1 million and in rural Honduras and Guatemala have moved to cities in the US due to both environmental pressures and its indirect causes.¹³ The indirect cause of environmental disaster due to rising global temperature and climate-related extreme weather conditions has not only led to scarcity of water and shortages of food but also threaten jobs and livelihoods of the people. As a result of which people are displaced and forced migration within national borders and sometimes outside the national borders. It poses an immense challenge to at least 10 of the 17 listed Sustainable Development Goals, namely SDGs 1, 2,3,6,7,9,10,11 and 13. The people who have to flee are often referred to as Climate Migration or Environmental Refugees.

Background history of Environmental/ Climate induced forced Displacement as a Refugee

According to the UN Report, 84 % of the refugees as well as asylum seekers come from climate vulnerable countries while the Internal Displacement Monitoring Center (IDMC) from Norwegian Refugee Council’s MC) had estimated that 28 million people are Internally Displaced Person (IDP) within the borders of state in 2018 due to disasters, conflict and violence.¹⁴ The weather related hazards with storms and tropical cyclones has displaced around 9.3 million while floods displaced 5.4 million.¹⁵

7 WWF, (2026) What is the sixth mass extinction and what can we do about it?. World Wildlife Fund, Washington DC, (Online: web) Accessed on 20 Jan 2026, Available at: <https://www.worldwildlife.org/stories/what-is-the-sixth-mass-extinction-and-what-can-we-do-about-it>

8 <https://www.unhcr.org/what-we-do/build-better-futures/climate-change-and-displacement>

9 Ibid

10 IPCC Report IPCC’s sixth assessment on how climate change impacts the world

11 IPCC (Intergovernmental Panel on Climate Change). AR6 Synthesis Report Climate change. (IPCC, 2023).

12 IDMC (Internal Displacement Monitoring Centre). Global Report on Internal Displacement 2021. (IDMC, Geneva, 2021)

13 <https://www.migrationpolicy.org/article/climate-migration-101-explainer>

14 Global Report on Internal Displacement 2019 (Geneva, Switzerland: Internal Displacement Monitoring Centre, 2019) <http://www.internal-displacement.org/global-report/grid2019>

15 Internal Displacement Monitoring Centre, Global Report on Internal Displacement 2019.

The first person who voiced his opinion on concept of Environmental/Climate Refugees was John Steinbeck who wrote in his 1938 masterpiece, *The Grapes of Wrath*¹⁶ where he documented the environmental decay caused by harvest failures and economic crises of the 1930s Great Depression in the farms of America. The small farmers from the central “great plains” of the US had to face issues of survival as the soil could no longer be productive due to continuous farming. Thousands of farmers were forced to leave the “dust bowl” towards the westwards in search of survival and better livelihoods.¹⁷

Later, William Vogt who first spoke about the ‘Ecological Displaced Persons’ as poor people who are displaced due to their continuous activities of eroding the natural environments and therefore could no longer sustain them. He sees them as “culprits” who caused environmental disturbance and degradation, which led to their own relocation¹⁸. That’s how the concept of climate refugees is derived from environmental refugees which have been used since the 1940s.

The term ‘Environmental Refugees’ was first coined by Lester Brown, an environmental activist and founder of World Watch Institute in the 1970s to describe people who have to flee away from their homes due to environmental degradation¹⁹ The term gain ‘Environmental Refugees’ currency when Essam El-Hinnawi elaborated that the environmental degradation is due to environmental disruption in his paper on the United Nations Environmental Programme (UNEP) where he defined an “Environmental Refugees” in the following words:

*.... “those people who have been forced to leave their traditional habitat, temporarily or permanently, because of a marked environmental disruption (natural and/or triggered by people) that jeopardize their existence and/or seriously affects the quality of their life”. They have to seek refuge due to either physical, chemical and/or biological changes in the ecosystem the resource base..... that render it.....unsuitable to support human life*²⁰

In the next decade of 80s, a researcher from Worldwatch Institute, Jodi Jacobson categorise Environmental Refugees into three main categories according to the severity of environmental disruption and effects of environmental changes²¹ as given below:

1. temporary displaced people due to local environmental disasters (such as earthquakes and avalanches);
2. progressive degradation of the environment which poses a threat to their health and normal functioning in a given territory as a result of which people to resolve to migrate; and
3. people decide to resettle due to irreversible changes in the habitat such as desertification, soil change.²²

A study by the UN agencies of UNEP, UNDP and the Norwegian Refugee Council (NRC) which came out with a report in 1992 which showed that there is increasing linkages between environment, society and economy by Jan Borgen from NRC, Nina Birkeland, Preston Scott, who were working in UNEP and Dr. John Trollalden working in UNDP. The Report concluded a new

16 Steinbeck, J. 1939. *The Grapes of Wrath*. Available online at <http://www.sparknotes.com/lit/grapesofwrath>.

17 Ibid

18 Vogt, W. 1949. *Road to Survival*. London: Gollancz.

19 Brown, Lester R. (2004): *New flows of environmental refugees*. <http://www.peopleandplanet.net/doc.php?id=2134> (18.2.2004)

20 El-Hinnawi, E. (1985). *Environmental Refugees*. Nairobi, Kenya: United Nations Environmental Programme.

21 “Environmental Refugees: Criteria for Living”, 1988 published by Worldwatch

22 J.L. Jacobson, *Environmental Refugees: A Yardstick of Habitability*, Worldwatch Institute, 1998; J.L. Jacobson, “Environmental Refugees: A Yardstick of Habitability”, *Bulletin of Science Technology Society*, vol. 8, no. 3, June 1988, p. 257-258.

element in the definitions of “environmental refugees”- the people are forced to leave their homes as the environment threatens their life for which they seek refuge outside their home country.

Norman Myers, a British environmentalist identified four major environmental factors that led to the cause of environmental refugees namely:

1. long term degradation,
2. Natural disaster
3. Major environmental accidents
4. Environmental disruptions caused by development

So, he defined environmental refugees as “people who feel extremely unsafe in their own territory because of climate-related disasters, such as droughts or deforestation, and have no choice but to seek refuge elsewhere, few hope of returning to their homeland”²³

The most interesting is that all the scholars agree that the environment/climate refugees is led to forced displacement. However, there is little consensus in the magnitude and the severity of the problem as the issue of climate-migration nexus is interdisciplinary in nature and therefore the disciplinary divides defines their respective standpoints²⁴ Climate Change is an issue that is interdisciplinary as it involves environment, economy, industry, policy makers and therefore it is studied both by natural scientists as well as social scientists which, not surprisingly have arrived at different conclusions in studying the cause of forced displacement. While the former have argued climate change as the sole cause in alarming proportion while the latter sees multiple factors in its casualty.²⁵ That is why defining what constitutes a ‘climate refugee’ is a complex task as various terminologies are used to describe people who have been forced to be displaced due to climate or environment related reasons.

The recent term which has gained popularity is ‘environmentally/climate displaced person’, as it is descriptive without any implications for governance with responsibility towards the *Displacees*. The different terminologies to describe the Climate/environment forced displacement used over the years has been compiled in the following table along with their author and definitions:

S..no	Nomenclature	Author/Institutions	Year	Definitions focus on the areas of
1.	Ecological displaced persons	William Vogt	1948	“people who have been displaced as a result of their own continuous activities.”
2	Ecological Refugees	Lester Brown/ Worldwatch Institute	1976	‘They create pressures on areas....to exacerbate the process of land degradations’
3	Economic Refugees	Kathleen Newland	1981	“...people who have been driven from their homes by wars or ecological catastrophes”
4	Environmental Refugees	Essam El-Hinnawi	1985	“Forced to leave their traditional habitat, temporary or permanent because of a marked environmental disruptions”

²³ Myers, N. Environmental Refugees. Population and Environment 19, 167–182 (1997).

²⁴ Rosignoli, Francesca (2022) “Climate Refugees”: Towards the construction of a new subjectivity in Environmental Justice for Climate Refugees; Earthscan from Routledge, London

²⁵ Ibid

5	Environmental Migrant	Astri Suhrke & Annamaria Visentin	1991	“Persons who take a rational decision to leave a region... where environmental deterioration may be one factor among others”
6	Environmentally displaced persons	Reinhard Lohrmann (UNHCR) International Organisation for Migration (IOM)	1996	“Persons who no longer gain a livelihood in their homeland because of soil erosion, deforestation, drought, chemical contamination or other related collapses in natural carrying capacity”
7	Ecomigrants	William B. Wood	2001would also include people who move to new areas to exploit natural resources..... they are forced to leave when the resources are severely destroyed or degraded”
8	Environmental Migrants	IOM	2007	“.....for compelling reasons of sudden or progressive changes in the environment that adversely affect their lives or living conditions”
9	Climate Change Refugees	Bonnie Docherty & Tyler Gianini	2009individuals who is forced to flee his or her home...to relocate temporarily or permanently across national boundary as the result of sudden or gradual environmental disruption ie consistent with climate change & to which humans more likely than not contributed”
10	Climate Refugees	Biermann & Boas	2010	“People who have to leave their habitats....because of sudden or gradual alterations in their natural environments related to at least one of the 3 impacts of climate Change-sea level rise, “extreme weather events and drought or water scarcity

11	Environmentally displaced persons	International Organisation for Migration (IOM)	2011	“Persons displaced within their own country of habitual residence or who have crossed international border...for whom environmental degradation, deterioration or destruction is a major cause of their displacement, although its not the only one”
12	Climate displaced persons	Peninsula Principles	2014	...individuals, households or communities who face or experience climate displacement
13	Environmentally displaced persons	Draft Convention on the International Status of Environmentally Displaced Persons (University of Limoges)	2013	Art 2 of Draft Convention defines as “individuals, families, groups and populations confronted with sudden or gradual environmental disaster.....resulting in forced displacement...or throughout their habitual residence
14	Climate Change migrants	Andrew Baldin	2013	“...either forcibly or voluntarily, migrates either temporarily or permanently from their home as an immediate or indirect result of climate change or possibility of climate change”
15	Disaster displaced persons	Nansen Initiative	2013	“Situation where people are forced or obliged to leaves their homes or places of habitual residence ...due to the affected persons are i. Exposed ii.situation of natural hazard iii. Too vulnerable & lack resilience to withstand the impacts of the hazard
16	Climate Displacements/ Displacees	Simonelli	2015	“Forced to leave their current homes due to continual environmental deterioration.... from the process of climate change, migrating inside or outside their home country

17	Survival Migrants	Betts	2016	“Person who are outside their country of origin because of an existential threat for which they have no access to a domestic remedy or resolution”
18	Climatic Migrants	Byravan and Rajans	2017	“...people who are displaced due to the effects of climate Change.....for example in parts of Africa and Asia where there is drought or severe flooding”
19	Climatic Exiles	Byravan and Rajans	2017	“Special class of climate migrants who have lost their ability to remain well functioning members of political societies in their countries, often though no fault of their own...examples people from Pacific Island etc
20	Displacees	Baldwin, Frohlich & Rothe”outside their home country	2019	...displaced by climate change are defined as displacement of a globalised network of intersecting mobility regimes fuelled by fossil fuel extraction”

Source: Rosignoli, Francesca (2022) “Climate Refugees”: Towards the construction of a new subjectivity in *Environmental Justice for Climate Refugees*; Earthscan from Routledge, London pg.3-6.

Environment has played a crucial role in the history of human migration and shaping population movements. People have always moved away from places with harsh or deteriorating conditions or less viable places due to unreliable food and water supplies. This is because of the frequency of floods and storms, forcing people to seek refuge in places which are more hospitable in more ways than one for their survival and livelihoods. In other words, there are strong linkages between climate change, environmental degradation and migration as there is a complex interdependence between migration and environment.

In the 21st century, Climate Change is a reality as we witness rising global temperatures, severe storms and hail, increased droughts and increase in the sea level, which has caused unpredictable seasons that has adversely affected food production and led to rise in hunger and poor nutrition. The reason for Climate change is due to global warming, which has led to an increase in the emission of global greenhouse gases caused by human activities for industrialisation, and deforestation to name a few of them. In fact, it is the human activities that influence the new anthropocene epoch which has led to increasing concentration of greenhouse gases in the atmosphere that has affected not only the entire ecosystems of human survival from food security to human health but also sustainable development.

The last century has witnessed a large wave of forced migration due to climate induced migration. The UNHCR called this ‘global crisis as a human crisis,’²⁶ as they amplify the rivers of forced human displacement within the borders and across for millions of people, thereby increasing

26 UNHCR, in ‘Focus Areas Strategic Plan for Climate Action 2024-2030-Pg 8

their risk of statelessness.²⁷ There are different estimates of the numbers of people who have been affected but there's a consensus on the number being alarming and increasing in the coming years.

Understanding the Legal Status of Refugee

The 1951 Refugee Convention defines the term Refugee²⁸ shall apply to the person who fulfils the conditions under the Article 1(A)(2):

“Well-founded fear of being persecuted for reasons of race, religion, nationality, membership of a particular social group or political opinion, is out-side the country of his nationality and is unable or, owing to such fear, is unwilling to avail himself of the protection of that country; or who having a nationality and being outside the country of his former habitual residence as a result of such events, is unable or, owing to such fear, is unwilling to return to it.

In case of a person who has more than one nationality, the term “the country of his nationality” shall mean each of the countries of which he is a national, and a person shall not be deemed to be lacking the protection of the country of his nationality if, without any valid reason based well founded fear, he has not availed himself of the protection of one of the countries of which he is a national”.²⁹

The qualification of refugee under the convention becomes fulfilled based on the criteria:

1. One should be outside his/her nationality or a stateless person having no nationality and being outside his her former habitual residence.
2. Well-founded fear of being persecuted.
3. Persecution being raced on the grounds of race, religion, nationality, membership of a particular social group or political opinion

The Cartagena Declaration of Central America³⁰ and the Organisation of African OAU Convention of Africa³¹ speaks on additional ground for “external aggression, occupation, foreign domination or events seriously disturbing public order”.³² EU's Qualification Directive works on the recognition of the status of asylum as refugee under Article 1 of the Geneva Convention as stated in Article 21 to 24.³³ This objectives are mentioned in Article 48 as:

27 How climate change is multiplying risks for displacement (UNHCR, 2020); Global Compact on Refugees (2018) and Unprotected by Climate Change, responding to the growing risk of displacement (Oxfam, 2017).

28 UNHCR (2010), The 1951 Refugee Convention and 1967 Protocol relating to the Status of Refugees, Resolution 2198 (XXI) UNGA, Geneva. (Online: web) Accessed on 20 Jan 2026, Available at: <https://www.unhcr.org/media/1951-refugee-convention-and-1967-protocol-relating-status-refugees>

29 Ibid.

30 To reinforce programmes for protection of and assistance to refugees, particularly in the areas of health, education, labour and safety. See Cartagena Declaration on Refugees, adopted by the Colloquium on the International Protection of Refugees in Central America, Mexico and Panama, Cartagena de Indias, Colombia, 22 November 1984. (Online: web) Accessed on 20 Jan 2026, Available at: <https://www.unhcr.org/in/media/cartagena-declaration-refugees-adopted-colloquium-international-protection-refugees-central>

31 Article 2 states on the definitions OAU Convention Governing the Specific Aspects of Refugee Problems in Africa, adopted by the Assembly of Heads of State and Government at its Sixth Ordinary Session, Addis-Ababa, 10 September 1969 (Online: web) Accessed on 20 Jan 2026, Available at: <http://unhcr.org/in/media/oau-convention-governing-specific-aspects-refugee-problems-africa-adopted-assembly-heads>

32 The term “refugee” shall also apply to every person who, owing to external aggression, occupation, foreign domination or events seriously disturbing public order in either part or the whole of his country of origin or nationality, is compelled to leave his place of habitual residence in order to seek refuge in another place outside his country of origin or nationality. See Convention Governing the Specific Aspects of Refugee Problems in Africa, (Online: web) Accessed on 20 Jan 2026, Available at: <https://www.african-court.org/wpafc/wp-content/uploads/2020/10/17-OAU-CONVENTION-GOVERNING-THE-SPECIFIC-ASPECTS-OF-REFUGEE-PROBLEMS-IN-AFRICA.pdf>

33 Directive 2011/95/EU Of The European Parliament And Of The Council of 13 December 2011 (Online: web) Ac-

*“Since the objectives of this Directive, namely to establish standards for the granting of international protection to third-country nationals and stateless persons by Member States, for a uniform status for refugees or for persons eligible for subsidiary protection, and for the content of the protection granted, cannot be sufficiently achieved by the Member States and can therefore, by reason of the scale and effects of this Directive, be better achieved at Union level, the Union may adopt measures, in accordance with the principle of subsidiarity as set out in Article 5 of the TEU. In accordance with the principle of proportionality, as set out in that Article, this Directive does not go beyond what is necessary in order to achieve those objectives”.*³⁴

The directive lets us know that third member country national will be eligible for international protection and under Article 5 of the Treaty on European Union (TEU) the Union may adopt measures based on TEU.

Article 3³⁵ of the Directive points out that more favourable standards may be introduced for the member states. Chapter III Article 13 states that based on a third-country or stateless who qualifies under Chapter II and III.

The Global South and Ongoing Challenges

The global South has been induced with migration intervening institutional, political and socio-economic factors. These movement gets more triggered once it leads challenges towards human life, livelihood, safety and public health gets affected due to climate change. Further it escalates cross border movement when water pollution and inadequate sanitation increases difficulties out of hand.³⁶ The UN Global Compact for Migration and Global Compact on Refugees came up with the framework in 2018 as the Global Compact for Safe, Orderly and Regular Migration (A/Res/73/195) to protect and improve international migration with 23 objectives following Human rights commitments.³⁷ It has been observed that the Global South is relatively low contributor to Green House Gas (GHG) as compared to Global North they are more vulnerable to floods, sea-level rise and rising temperatures.³⁸

In the South Asia when the deadliest flood of hit Pakistan in 2022 affected 33 million people with 2.1 million losing homes.³⁹ Bangladesh being vulnerable to tropical cyclone and being in the Bay of Bengal, low lying coastal delta⁴⁰ in 2020 resulted in 128 death despite with the help of 139 polders covering 1.2 million hectares of land to safeguard 8 million people from flood.⁴¹ In the Middle East and North African (MENA) Region climate change occurs due to overuse of fossil fuel resulting in global warming, heat waves and posing health issues putting 400 million

cessed on 20 Jan 2026, Available at: <https://eur-lex.europa.eu>

34 Ibid.

35 Article 3, Ibid.

36 Abdulaziz I Amulhim et al. (2024) Climate-Induced migration in the Global South: An In depth Analysis, Climate Action (Online: web) Accessed on 20 Jan 2026, Available at: <https://doi.org/10.1038/s44168-024-00133-1>

37 UN Global Compact for Safe, Orderly and Regular Migration (GCM) OHCHR and Migration (1996-2026) OHCHR (Online: web) Accessed on 20 Jan 2026, Available at: <https://www.ohchr.org/en/migration/global-compact-safe-orderly-and-regular-migration-gcm>

38 South East Asia experiences highest increase in GHG. The top contributors of GHG are China, USA and EU. See: Abdulaziz I Amulhim et al. (2024) Climate-Induced migration in the Global South: An In depth Analysis, Climate Action (Online: web) Accessed on 20 Jan 2026, Available at: <https://doi.org/10.1038/s44168-024-00133-1>

39 Mangi, Naweem & Anjum, Ali Ashar (2023). Pakistan: Flood and Post-Flood Situation Pakistan and Post Flood Situation Institute of Historical and Social Research (IHSR), ISBN: 978-969-7985-35-7

40 Qiu, Jiangchao et al. (2025) From decades to years: Rising seas and cyclones amplify Bangladesh's storm-tide hazards in a warming climate One Earth, Volume 8, Issue 4, 101273

41 Ibid.

people into risk due to heat exposer.⁴²

In the Sub Sahara Africa, the areas are populated near the coastal areas leading to flood and Western Africa rising temperature along with droughts in Madagascar leads to leave their habitat though GHG emission is least still this area remains climate vulnerable land predicting by 2050 about 28.3 and 71.1 million people will be forced to migrate.⁴³

In Pacific Island forced displacement will be led due to desertification, wildfires, drought, sea level rise, extreme weather, ocean acidification impacting on food on the other hand in some places flood, tropical cyclone, rising temperature with expanding warmer water, agriculture damage.⁴⁴ In Pacific region almost 3.5 million lives in below poverty line and prefer going to Australia or New Zealand⁴⁵ for livelihood.

In the Latin American and the Caribbean, environmental challenges such as drought, heat waves, glacier melting, heavy rainfall and floods have intensified. These events exacerbate food insecurity and drive migration towards urban areas in search of livelihood opportunities.⁴⁶

To curb rising movement of environmental refugee, sustainable development is regarded as a key solution⁴⁷ but if a movement takes place internally or externally the sustainable development Goal 10 “reduce inequality among countries” an initiative to mitigate differences and insecurity. Moreover, highest number of refugees are recorded in 2024 (37.8 million people) along with migrants, with 8,938 fatalities. Reducing both internal as well as external movement where equitable resource distribution, investing in education and skills development, implementing social protection measures, combating discrimination, supporting marginalized groups and fostering international cooperation for fair trade and financial systems⁴⁸ can be provided. Reducing of inequality providing safe, order and accountability can account mobility and migration.⁴⁹

Lessons for Protecting Environmental Refugee

In 2014, Ioane Teitiota,⁵⁰ a Kiribati man approached a court in New Zealand (Ioane Teititola v. New Zealand CCPR/C/127/D/2728/2016) seeking the status of a “*climate change refugee*”, a first in the world. The *rise of sea level in Kiribati* as a result of global warming had rendered living on the island nation unsuitable for his family. However, the court turned down the plea and *allowed his deportation* back to the Pacific Ocean archipelago, large parts of which has been projected to be underwater by 2050. Recently, in response, New Zealand has announced that it is considering

42 Abdulaziz I Amulhim et al. (2024) Climate-Induced migration in the Global South: An In depth Analysis, Climate Action (Online: web) Accessed on 20 Jan 2026, Available at: <https://doi.org/10.1038/s44168-024-00133-1>

43 Ibid

44 Ibid

45 Saber Salem and Armin Rosencranz (2020) Climate Refugees in the Pacific, Environmental Law Institute, Washington, 50 ELR 10540 -10545

46 Abdulaziz I Amulhim et al. (2024) Climate-Induced migration in the Global South: An In depth Analysis, Climate Action (Online: web) Accessed on 20 Jan 2026, Available at: <https://doi.org/10.1038/s44168-024-00133-1>

47 Desai, Bharath (2022). Destroying the Global Environment: Another North-South Issue. Nov-Dec. 27-29

48 <https://www.un.org/sustainabledevelopment/inequality/>

49 Pörtner, H., et al. Climate Change 2022: Impacts, Adaptation and Vulnerability. (IPCC, Cambridge University Press, 2022).

50 In this case principle non-refoulement was raised which was stated to be applicable for war refugee. The Committee accepted the authors assertion that sea level rise is likely to render the island inhabitable in 10-15 years, however concluded that this timeline did not satisfy the need for the risk to be real, personal and imminent in order for removal to violate the Covenant. On this basis, the Committee found that removing the author did not constitute a violation of Article 6 of the ICCPR. See CCPR (2026) Claim of a violation of the right to life due to removal to Kiribati impacted by climate change, no violation as threshold of real, personal risk not met, (Online: web) Accessed on 20 Jan 2026, Available at: <https://ccprcentre.org/decision/17018>

the possibility of introducing an experimental *humanitarian visa* category specifically targeted at people displaced by rising sea levels in its neighbouring areas.

New Zealand has come out with the Pacific Access Category (PAC)⁵¹ and Samoan Quota (SQ)⁵² online registration it is a pathway to permanent residence, while the Recognised Seasonal Employer (RSE) scheme is a temporary, non-transferable work visa.⁵³ This is an annual ballot enabling citizens from Fiji, Tonga, Tuvalu, and Kiribati to obtain New Zealand residency, with quotas for 2023–2024 including 250 spots for Fiji/Tonga and 75 for Tuvalu/Kiribati, often with extra spots for previous undersubscription. The applicants must be aged 18–45 years of age, having a job offer, and can include families.

Earlier during 2015 an integrated approach was by established the Task Force on Displacement at the 21st Conference of the Parties (COP21) in Paris, which paved the way for the creation three years later of the Global Compact on Safe, Orderly, and Regular Migration and the Global Compact on Refugees.⁵⁴ In 2017 after Hurricanes Irma and Marialit devastated Northern Caribbean region⁵⁵ it was felt economic development, renewable energy and Medicaid and Medicare parity are becoming priority.⁵⁶ Further it was felt that funding of resources are one of the biggest barriers. Climate change is a critical public health emergency with risks of zoonotic and food-borne illnesses alarmingly on the rise. This is an important step toward a One Health approach, which also addresses the integration of human, animal, and environmental health, as well as strengthens food safety regulations and enhances disease surveillance. It needs immediate international cooperation to construct a robust and sustainable food system that reduces health hazards.⁵⁷

Bangladesh lives by the coast, and two-thirds of the country is 4.5 meters (15 feet) or less above sea level. In 1995, Bangladesh's Bhola Island was half-submerged by rising sea levels, leaving 500,000 people homeless. Scientists predict Bangladesh will lose 17 percent of its land by 2050 due to flooding caused by climate change. The loss of land could lead to as many as 20 million climate refugees from Bangladesh.⁵⁸

The UN's Intergovernmental Panel on Climate Change (IPCC) in 2007 warned that rises of 18 to 59 centimetres (7.2 to 23.2 inches) would make the Maldives virtually uninhabitable by the end

51 New Zealand Immigration (2026) (Online: web) Accessed on 20 Jan 2026, Available at: <https://ccprcentre.org/decision/17018> <https://www.immigration.govt.nz/visas/pacific-access-category-resident-visa/>

52 See: New Zealand Immigration (2026) (Online: web) Accessed on 20 Jan 2026, Available at: <https://ccprcentre.org/decision/17018> <https://www.immigration.govt.nz/visas/samoan-quota-resident-visa/>

53 Workers on seasonal visas may utilize the PAC ballot to transition to permanent residency if they meet the criteria and are selected, but they are separate immigration pathways.

54 Noicole Greenfield, (2022) Climate Migration and Equity: Inequality influences who can stay in climate-vulnerable locales and who can leave and thrive elsewhere. The world needs a plan that supports those climate refugees who can't do either. <https://www.nrdc.org/stories/climate-migration-equity>

55 Marshall Shepherd, (2017) Are Hurricanes Creating Climate Refugees In The Caribbean? (Online: web) Accessed on 20 Jan 2026, Available at: <https://www.forbes.com/sites/marshallshepherd/2017/09/21/are-hurricanes-creating-climate-refugees-in-the-caribbean/>

56 For more than two months without electricity in Puerto Rico and Virgin Islands and here many were struggling for clean drinking water See: Aida Chavez (2017) Bernie Saners, Elizabeth Warren Propose \$146 Billion "Marshall Plan" for Puerto Rico (Online: web) Accessed on 20 Jan 2026, Available at: <https://theintercept.com/2017/11/28/bernie-sanders-puerto-rico-elizabeth-warren-propose-146-billion-marshall-plan-for-puerto-rico/>

57 (Online: web) Accessed on 20 Jan 2026, Available at: <https://pmc.ncbi.nlm.nih.gov/articles/PMC12337417/>

58 What is Missing? (2024) "Climate Refugee." National Geographic Education (Online: web) Accessed on 20 Jan 2026, Available at: <https://archive.whatismissing.org/historical/bhola-island-submerged-by-rising-sea-level>

of the century.⁵⁹ Reclamation projects have already increased the country's landmass by about 10 percent in the past four decades, using sand pumped onto submerged coral platforms, totalling 30 square kilometres (11 square miles).⁶⁰

In China Three-North Shelterbelt Programme (TNSP)⁶¹ also known as the Great Green Wall is used to combat desertification. Early 20 percent of China was desert, and drought across the northern region making worse to live. One recent estimate said China had 21,000 square miles more desert than what existed in 1975. As the Tengger⁶² expands, it is merging with two other deserts to form a vast sea of sand that could become uninhabitable. Presently the Gobi dessert is increasing but halting the same is paramount task of China Government. By 2050 China can hold afforestation in Northern China.⁶³

Climate Induced Migration in India

Migration can be internal as well as cross boundary based and once it escalates may impact on human security. There has been significant cross border migration into India from its neighbouring countries. Cross-border migrants have increased over years for job opportunities and socio-political dynamics.⁶⁴ When detrimental impacts of climate change has been viewed one such condition the migration has been voluntary as well as forced migration⁶⁵ to name some it can be health related issues observed due to Salt water intrusion into the Ganges delta and the threat of cyclones in Bangladesh.⁶⁶ A number of policy challenges thus lie in store for the Indian government to deal with such an impending crisis. The floods in Kerala during 2018 and 2019 induced by Climate change also resulted in large scale internal displacement.⁶⁷

59 The Hindu (2023) Maldives to battle rising seas by building fortress islands: The upmarket holiday destination is famed for its white sand beaches, turquoise lagoons and vast coral reefs (Online: web) Accessed on 20 Jan 2026, Available at: <https://www.thehindu.com/news/international/maldives-to-battle-rising-seas-by-building-fortress-islands/article67558637.ece>

60 Ibid.

61 The Chinese government launched the Three-North Shelterbelt Program (TNSP), which covers 13 provinces (autonomous regions or municipalities) across northern China with a total area of 4.069 million km². A 72-year development plan has been formulated for the TNSP, in which the Program was divided into three stages, aiming at increasing the forest cover from 5.05% to 14.95% in the area. This effort has been organically incorporated with and contributed to China's overall strive for the achievement of the related SDGs. See: UNDESA: Sustainable Development Three –North Shelterbelt program: SDGAction42710 (Online: web) Accessed on 20 Jan 2026, Available at: <https://sdgs.un.org/partnerships/three-north-shelterbelt-program>

62 Tengger Desert or Tengri Desert is an arid natural region.

63 INAS (2026) (Using the great Green wall of china to halt Desertification-Gobi Desert (Online: web) Accessed on 20 Jan 2026, Available at: <https://ap-plat.nies.go.jp/inas/goodpractices/development/7.html>

64 Subash, N., Michael, G. (2025). Criminalization of Migrants: An Exploratory Study on Cross-Border Migration in India. In: Ullah, A.A. (eds) Handbook of Migration, International Relations and Security in Asia. Handbooks in Asian Studies. Springer, Singapore. (Online: web) Accessed on 20 Jan 2026, Available at: https://doi.org/10.1007/978-981-99-8001-7_106-1

65 Abdulaziz I Amulhim et al. (2024) Climate-Induced migration in the Global South: An In depth Analysis, Climate Action (Online: web) Accessed on 20 Jan 2026, Available at: <https://doi.org/10.1038/s44168-024-00133-1>.

66 state that “the problem of saline intrusion into drinking water is likely to be exacerbated by climate change-induced sea-level rise.” Ali Ahmed, Mahin Al Nahian, Craig W. Hutton, Attila N. Lázár (2018), Hypertension and malnutrition as health outcomes related to ecosystem services. Ecosystem Services for Well-Being in Deltas, Springer pp. 505-521; and Aneire Ehmar Khan, Andrew Ireson, Sari Kovats, Sontosh Kumar Mojumder, Amirul Khusru, Atiq Rahman, Paolo Vineis (2011) Drinking water salinity and maternal health in coastal Bangladesh: implications of climate change Environ. Health Perspect., 119 (9) , p. 1328

67 Renjini P S (2024), Forum for Linguistic Studies 6(2), (Online: web) Accessed on 20 Jan 2026, Available at: <https://>

The question naturally arises whether India has a legal framework to deal with an impending crisis of refugee inflow or even large scale internal displacement within the country as a result of climate change. India does not have any national legislation to specifically cater to this issue. This is a lacuna in India's legal system that needs redressal.

In 2022 first time a Bill on the Climate Migration (Protection and Rehabilitation) was brought by Pradyut Bordoloi,⁶⁸ a member of Parliament from the climate vulnerable eastern state of Assam, a private member's bill "to establish an appropriate policy framework for the protection and rehabilitation of internally displaced climate migrants and for all matters connected therewith and incidental thereto" and asked to establish an authority formed with inter ministries agency to be called as the National Climate Migration Authority.⁶⁹

India being a signatory to the Sendai Framework for Disaster Risk Reduction, which was adopted during the Third UN World Conference on Disaster Risk Reduction in March 2015 to work towards making all stakeholders disaster resilient and significantly reduce the loss of lives and assets.⁷⁰ The COP28 "alarmed the disproportionate and intersecting effects of *climate change*, conflict, fragility and/or humanitarian crises on women and girls, children and young people, indigenous peoples and local communities, people with disabilities, older persons, and on *refugees*, other displaced persons, and their hosting communities, among other populations",⁷¹ based on strengthening the COP28 IOM commitments and to reaffirm the anticipatory action, humanitarian assistance and climate resilience development.

Finding the right data to evaluate the problem

Existing data on the number of environmental refugees, including those internally displaced due to environmental factor, remains highly uncertain. The first priority for governments should be to establish a precise definition on environmental refugees and to analyse the nuanced caused of their displacement. Only with such clarity can effective strategies for rehabilitation and support be formulated.

It is reported that close to 1.5 million people are classified as internally displaced in India every year with climate change contributing to it.⁷² Furthermore, globally, 19.3 million people are reportedly said to be displaced due to climate change, with this subcontinent being identified as doi.org/10.24294/fls.v6i2.2135 The Rebuild Kerala Development Programme (RKDP) project initiated in the aftermath of the terrible 2018 floods to rebuild and revitalize Kerala, with an emphasis on resilience and sustainability. CLIMATE CHANGE AND INTERNAL DISPLACEMENT IN KERALA: A GROWING CRISIS.pg. 1539.

68 Motivated by the suffering of people in the Brahmaputra River islands who, after losing their homes and livelihoods each rainy season, are forced to relocate. He said that they become vulnerable to discrimination and persecution.

69 This bill relates mostly to the Internal Displaced people and not on the Environmental Refugees. With the help of these collaborating ministries of Ministry of Forest, Environment and Climate Change, Ministry of Home Affairs, Ministry of Labour and Employment, Ministry of Rural Development, Ministry of Women and Child Development, Ministry of Agriculture, Ministry of Law and Justice, Ministry of Jal Shakti and Ministry of Housing and Urban Affairs, etc. The bill also sought to establish a climate migration fund. However, the bill was not passed. (Online: web) Accessed on 20 Jan 2026, Available at: <https://sansad.in/getFile/BillsTexts/LSBillTexts/Asintroduced/160%20OF%202022%20AS12122022113734AM.pdf?source=legislation>

70 held from 14 to 18 March 2015 in Sendai, Miyagi, Japan, which represented a unique opportunity for countries: See: Sendai Framework for Disaster Risk Reduction 2015 – 2030 (Online: web) Accessed on 20 Jan 2026, Available at: https://www.preventionweb.net/files/43291_sendaiframeworkfordren.pdf?startDownload=true

71 2023 Sixth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC), COP28 (2023) Declaration on Climate, Relief, recovery and Peace, See: COP28 UAE. (Online: web) Accessed on 20 Jan 2026, Available at: <https://www.cop28.com/en/cop28-declaration-on-climate-relief-recovery-and-peace>

72 Nandan Sharalaya (2010) Taking India's Climate Migrants Seriously, The Diplomat (Online: web) Accessed on 20 Jan 2026, Available at: <https://thediplomat.com/2018/08/taking-indias-climate-migrants-seriously/>

one of the most vulnerable regions in this regard.⁷³ According to a recent World Bank report titled ‘*Groundswell-Preparing for Internal Climate Migration*’, 143 million people are at displacement risk from climate change and it will displace people in the Global South by 2050.⁷⁴ ‘Climate migrants’ are likely to be concentrated in developing countries, in Sub-Saharan Africa, South Asia and Latin America.⁷⁵

Accurate data to reflect the exact number of ‘climate refugees’ is difficult to procure given the lack of recognition by legal regimes of the existence of this specific type of refugees. The lack of substantive figures or causes can be attributed to a lack of clarity even among scholars and policy makers in identifying refugees of climate change or environmental disaster. The understanding needs further scholarship since climate change is attributing forced displacement.

Conclusion

The issue of environmental refugees has long remained contested and unresolved, with geographical and legal barriers frequently limiting their recognition under existing international legal framework, particularly the 1951 Refugee Convention. However, a progressive legal perspective has developed in New Zealand providing valuable insight on inflow of climate induce people to sustain livelihood and maintain food security. At the same time, the effectiveness of mitigating and adapting climate disasters and analysing to determine whether they adequately address the root cause of climate-induced displacement becomes a pressing demand.

In an already politically sensitive global environment shaped by refugee inflows from various regions. Climate-induced population or Environmental refugee movements pose a particularly complex legal and policy challenge to the nation states. However, the persistent definition gap surrounding the recognition of ‘environmental refugees’ has hindered the establishment of a coherent and effective international legal framework. Likewise, studies have demonstrated that displacement resulting from environmental factors, such as climate change and natural disasters, is more likely to occur within national borders rather than cross-border movement. Consequently, appropriate policies and legal frameworks must be identified and developed to effectively address such challenges.

A persistent lack of international consensus surrounds the difficulty in recognition of environmental refugees, for instance displacement is generally regarded as predominantly internal, with cross border movement occurring only in exceptional cases.

The acceptance of Environment Refugee or climate induced refugee still remains a question. When the International refugee law continues to be deficient in identifying ‘climate refugees’. The sanctity of acceptance comes in doubt. The 1951 Refugee Convention, to which India is not a party to, and the subsequent 1967 Protocol restrict the definition of persecution to five grounds: “*race, religion, nationality, membership of a particular social group and political opinion*”. Environmental degradation and climate change have not been recognised as a sufficient compelling grounds as it does not fall strictly with the scope of ‘persecution’ under existing refugee law. The absence of such recognition in the Refugee Convention has hindered the development of institutional mechanism and state practices capable of addressing this issue as a legal and humanitarian reality.

73 Rongeeet Poddar (2019) The Question of Climate Refugees: Does India Need a Legal Framework? Diplomat (On-line: web) Accessed on 20 Jan 2026, Available at: <https://lawschoolpolicyreview.com/2019/07/28/the-question-of-climate-refugees-does-india-need-a-legal-framework/>

74 Almulhim, A.I., Alverio, G.N., Sharifi, A. et al. Climate-induced migration in the Global South: an in depth analysis. *npj Clim. Action* 3, 47 (2024). <https://doi.org/10.1038/s44168-024-00133-1>

75 Noicole Greenfield, (2022) Climate Migration and Equity: Inequality influences who can stay in climate-vulnerable locales and who can leave and thrive elsewhere. The world needs a plan that supports those climate refugees who can’t do either. <https://www.nrdc.org/stories/climate-migration-equity>

Internally, India being the neighbours countries affected by environment or climate induced migration. It becomes important for the policy makers to understand the need for working on such legislation, where involvement of environment related migration is bound to vary across regions and accordingly, rehabilitation plans and other policy responses must be modified accordingly as per specific needs. The collaborative efforts of non-governmental organizations will also be crucial in this endeavour. Therefore, on the whole, addressing the issue of climate induced migration will involve a two pronged approach: an immediate mechanism for rehabilitation and a commitment to reversing or mitigating the harmful impact that derive such migration. A comprehensive policy paper on climate-induced migration must prioritize the identification of these vulnerable communities to facilitate the development and implementation of targeted, effective and well-coordinated responses. It has been observed that local self-governance institutions play a crucial role in democratising policy by ensuring that the voices of environmental refugee's communities are heard and meaningfully incorporate into decision making process.