

6. COGNIZING CLIMATE REFUGEES AND PROPOSING MEASURES FOR THEIR RELIEF

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ABSTRACT

There are several instances around the world where people have been forced to migrate due to numerous issues, inclusive of the political circumstances, terrorism, famines. One of the key issue which happens to be missing out from this bracket is the migration induced by the climate. If all the aforementioned earlier can cause force migrations, then it is possible that climate change can also induce forced migration. This paper will discuss the problems faced by the climate refugees in the current world, as this paper will showcase the manner in which the climate refugees have often been neglected from the focal point. It is observed that the Global North had often neglected to take the climate refugees as a part of their refugee system and its laws, this had left a massive void for these refugees, who had come seeking refuge under extraneous circumstances, which they had been facing and led to their migration from their homes domestically/internationally. Climate Refugees and their problems have often been deemed to be under an ambiguous conception, due to misunderstandings by several researchers. Therefore, the paper will shed light on the ambiguous concepts elaborate on the International Treaties and their take on the climate refugees. The paper highlights the vital need for recognition of people displaced by environmental crises and the inhumanity of ignoring them in the conventional refugee systems.

Key words: climate refugees, forcibly displaced, refugees, migration, policies

Cognizing Climate Refugees and Proposing Measures For Their Relief

INTRODUCTION

The term 'Climate Refugee' refers to individuals affected by grave environmental circumstances, which lead them to be displaced from their habitats, in pursuit of shelter at a new space, safe from dire climate impact.ⁱ Such displacement is also referred to as 'Environmental Migration'. These terms have come into use in recent years, but these effects have been recorded in ancient history. Climate change along with natural disasters has played a crucial role in shaping the 'Atlas of Migration' which records the manner in which inhabitants were distributed among land masses on Earth.ⁱⁱ Survivors of the great biblical flood aboard Noah's Ark were climate refugees.ⁱⁱⁱ So were the 1.15million people displaced by the Indian Ocean Tsunami which killed over 225,000 in 2004^{iv}; and the survivors, if any, of the sinking of Krishna's Dwarka off the coast of Gujarat^v.

Not all climate events are sudden. Some could be gradual, possibly stretched over long durations, such as the drying up of rivers and lakes, rising sea levels, or creeping desertification. Also, not all displacements are caused by nature. These could be man-made, such as the discharge of harmful chemicals by factories or mines; forest fires caused either by erring dwellers or lit intentionally by farmers and real estate developers to clear the land; radiation emanating from meltdowns in nuclear power plants, etc.

Thus, while a 'refugee' is one who seeks 'refuge' in a new community, a new place, or area, those forced to do so by sudden or gradual changes in climate or the environment are climate refugees^{vi}.

SOURCES OF ENERGY HAVE DRIVEN MIGRATION

It is well known that large migrations across seas and continents from 45,000 years ago to about 13,000 years ago occurred due to rise in sea levels post the ice age^{vii}. Human and animal energy gave way to coal and the 18th

and 19th centuries brought about a major turnaround across the world due to industrialisation, which surfaced as the most prominent driver for the movement of people from farms to industries. At the close of the 19th century, prominent 'migration routes' showcasing the importance of economic factors or hunger for jobs by people migrating to more prosperous towns have been identified by E.G. Ravenstein^{viii}.

Coal fueled the industrial revolution as the major source of energy and Britain, which was the largest producer, used its dominance in this energy source to the fullest. The rise of industrialisation of European colonial powers was fueled by the energy provided by coal, their progressive growth was powered by steam engines which ran steamships and railroads. Even though its effects on the environment are well documented, coal continues to be used today to generate about 50 percent of the world's electric power. In the case of large polluters such as China and India, this is higher; while China burns about 4.2 billion tonnes of coal, India stands second with 1.2 billion tonnes^{ix}.

Oil and gas grew in the 21st century as major energy fuels, largely for transportation and heating, but also for power generation, and the world adopted these with gay abandon, impervious to their ills^x. When enough gas could not be found on land, drilling rigs under river basins and oceans were set up, gas tankers began carrying compressed natural gas across the world, and port terminals came up to import gas and transmit it through gas pipelines in importing countries.

Even though there were alarming signs of smoke, fog, and pall all along the way, only the positive economic benefits of steam, coal, oil and gas revolutions were ever taken into account by leaders in decision-making positions. The sources of energy fuelling each stage of progress had obvious direct effects in causing people to migrate for jobs, and to vacate lands and spaces acquired or taken by governments and corporations to run their industries and power projects. They also had certain indirect effects on

the health of humans, both of current and future generations, that would compel people to shift from one place to another.

Nuclear disasters gained notoriety after Fukushima and several countries abandoned their plans of modernising their ageing nuclear power plants. However, the acknowledgement that nuclear energy is cheap and is the cleanest dependable baseload power appears to have overtaken the most environmentally-conscious nations today and as a result, both Japan and Germany have reversed their plans and are getting on depending on coal and reviving and modernising their nuclear power plants^{xi}.

In retrospect, it is revealing that the impact of our choice of energy sources on the planet's ecosystems has long been ignored in favour of development and national security, and this is the phase when the world has the chance to transform its old retinue. Latecomers to development are being noticed for their volume of emissions, but there are large parts of the world in Africa which are yet to emerge and transit through these stages of development in their energy sources. Every step of the evolution of energy has been fraught with climate consequences, much damage has already been done, and it continues to be done every passing day.

Climate change is not just a theoretical calculation or a thing of the past. It is very real at present and it could come to haunt us in the future if it is not remedied. In today's world, rapid environmental change is widely believed to be driving floods, heatwaves, global warming and the rising of sea levels in several parts of the world^{xii}.

Scientists at the United Nations' Intergovernmental Panel on Climate Change (IPCC) have reported that we are on a disastrous path of warming within the range of 2.3 degrees to 4 degrees Celsius by 2100CE. IPCC's 6th Report of the Third Working Group states "Total net anthropogenic Greenhouse Gas (GHG) emissions have continued to rise during the period 2010–2019, as have cumulative net CO₂ emissions since 1850. Average annual GHG emissions during 2010–2019 were higher than in any previous

decade, but the rate of growth between 2010 and 2019 was lower than that between 2000 and 2009'^{xiii}.

Commitments made by 195 signatories of the Paris agreement, if adhered to, would shave off just a few tenths of a degree and a large gap would still remain to reach the safe goal of 1.5 to 2 degrees^{xiv}. Essentially, the world has become conscious but we are making slow progress. Rising global temperatures result in the melting of ice and glaciers, not just at the polar icecaps but on mountain ranges across the world, and this results in rising sea levels. Climate change can be defined as 'the long-term change in the planet's average weather patterns along with changes in the frequency and severity of these patterns.'^{xv}

When people affected by these changes seek refuge in other areas, they often face stiff resistance. Their livelihoods are destroyed, often their neighbourhoods or whole cities are under threat. The lack of any arrangement for shelter remains a predominant point at issue which affects the lives of climate refugees. For those who do not suffer themselves, the suffering of other people sometimes appears to be of little concern, even though there are effects that harm all. Much work needs to be done to raise the consciousness of our shared global environment and protect people in danger.

Severe heatwaves which affected parts of South Asia, Africa, Europe and California during the summer of 2022 have harmed the production of food, leading to alarming rates of hunger. Quoting from the first joint report of the UN Office for Coordination of Humanitarian Affairs, the Red Cross, and the Red Crescent published in October 2022: 'Heatwaves already kill thousands of people every year, and they will become deadlier with every further increment of climate change. We hope this report serves not only as a wake-up call but also as a road map. Heatwaves demand a humanitarian response that is locally grounded, that acts quickly on the basis of data and analysis, and that works in partnerships with local governments, civil society and development actors to protect the most vulnerable people.'^{xvi}.

'Extreme heat will also increasingly undermine agriculture and livestock systems, degrade natural resources, damage infrastructure and contribute to migration. The International Labour Organization projects that economic losses related to heat stress will rise from 280 billion USD in 1995 to 2.4 trillion USD in 2030, with lower-income countries seeing the biggest losses.'^{xvii}

The severity of these impacts often goes unnoticed in the rest of the world except for the effect of rising food prices^{xviii}. There are long-term effects such as shifts in crop patterns which drive farmers to quit farming and migrate elsewhere and looming global food scarcity; the impact of climate change on the the global south is particularly severe. The people most affected are those who scarcely contribute to climate change and the leading question is—what should be done to take care of them?

At the 27th Conference of Parties (COP 27) of the United Nations Framework Convention for Climate Change (UNFCCC) at Sharm El Shaikh which was attended by 45,000 participants, this issue was raised and pressed by several European nations. After much debate, a resolution was passed for rich countries to provide aid to poorer nations hit by climate disasters through a dedicated fund. A sum of 270 million USD has been committed which would be operationalized under the five year action plan titled 'Action for Climate Empowerment' during UNFCCC's COP 28 next year^{xix}. The UN Executive Secretary for Climate Change, Simon Steel, admitted that the issue was being deliberated upon for decades: 'We have determined a way forward on a decades-long conversation on funding for loss and damage—deliberating over how we address the impacts on communities whose lives and livelihoods have been ruined by the very worst impacts of climate change.'^{xx} The UN Secretary General also announced a 3.1 billion USD plan to develop early warning systems.

These groundbreaking decisions are a good start, they do tackle sudden and severe climate disasters, but they do not tackle the displacement of people in case of severe gradual damage to their habitats. While people affected by

disasters would be assisted by this fund to relocate, this relocation would remain within national borders.

International migration has long been a contentious issue, particularly after the recent flood of refugees fleeing from the war in Syria to Europe. Several EU member nations refused entry for refugees, even though this contravened against EU law^{xxi}. The plight of small island nations that could completely sink under rising ocean levels is completely ignored. This problem is being faced by several Pacific islands today and in the future, could be faced by entire low-lying nations. The impact of climate-induced migration, even if the lands are not sinking, but are damaged and uncultivable, is acute and severe in the global south, where the state is unable to provide adequate relief for the displaced persons.

International covenants and treaties on refugees do not cognize climate or environmental refugees. The concern post the World Wars was about human rights, hence displacements due to war and political abuse have been acknowledged, but displacement due to climate change stays uncognized. The root of our problem lies perhaps not in defining climate refugees, but in the reluctance of member nations to burden themselves with the plight of others who are suffering. Since the world does not accept the existence of climate refugees, there are no international safeguards for them to be a part of the refugee system and they are left to fend for themselves. The UN Secretary General Antonio Guterres, who is a former High Commissioner for the UN High Commission for Refugees, acknowledges their plight thus:

'As forcibly displaced not covered by the refugee protection regime, they find themselves in a legal void.'^{xxii}

The UN has acknowledged this plight obliquely through the UN Chronicle since 2009, but perhaps other pressing matters prevented this body from taking charge of the matter and from doing anything substantial on the ground to build a consensus to alleviate it: 'The UN Chronicle is not an official record. It is privileged to host senior United Nations officials as well as

distinguished contributors from outside the United Nations system whose views are not necessarily those of the United Nations. Similarly, the boundaries and names shown, and the designations used, in maps or articles do not necessarily imply endorsement or acceptance by the United Nations.^{xxiii}

With the fierce severity of environmental disasters already being felt, it is time to confront the problem and generate a duty of care towards those lives and livelihoods affected by climate change.

TYPES OF CLIMATE REFUGEES

To find solutions for the problems faced by the climate refugees, at the outset, we must look at the types of climate refugees present around the world. There exist two types of climate refugees who can be categorised as follows:^{xxiv}

Internal Climate Refugees: The World Bank has delineated 'Internal Climate Refugees' as the people who have had to move or flee within the boundaries of their country due to forceful climate-driven migration. This internal movement is estimated to account for a massive chunk of the total number of people who happen to be forced to relocate due to the impact of climatic change.

External Climate Refugees : External climate refugees or 'International Climate Refugees' can be defined as the people who have had to move or flee beyond the borders of their countries due to the devastating consequences of adverse climatic change. The number of international climate refugees is not doubt relatively lower in number since not many countries still recognize that climate-driven circumstances can cause the people to cross borders to seek refuge. International refugees can also be understood as individuals who happen to flee their country owing to perceived reasons of safety and refuse to go back due to perceived real or impending disasters. A perfect example for this category is Ioane Teitiota, the Kiribati Citizen, who sought refuge in New Zealand on the basis of

climate change in his homeland. His island is sinking and the effects of ocean level rise are shockingly evident. He was, however, denied the refugee status in New Zealand^{xxv}.

'CLIMATE REFUGEES': A LONG-NEGLECTED TOPIC

Until early in the twenty-first century, the notion of environmentally-forced displacements was deemed to be something that would be faced in the future, and therefore did not attract immediate concern. Research on this aspect of displacement was largely absent from the study of migrations on account of the dominance of what we can deem to be an 'Economic Paradigm'^{xxvi}. Until recently, the majority of the mass migrations on the one hand emanated from the push for economic betterment which led to migration from the global south to the global north, and on the other, was attributed to the 'Political Paradigm' which included displacements due to people fleeing from totalitarian regimes, coups, wars or terrorist threats^{xxvii}.

The 1951 UN Convention on refugees and its Protocol of 1967, which were signed by 145 state parties, defined the principle of non-refoulement, which restricts the ability of host states to repatriate political refugees, and require states to cooperate and ensure that the rights of refugees are respected and protected^{xxviii}. It is understandable that the post-war period focused the UN's attention towards political refugees, but these paradigms have for long overlooked the connection between the environment and migration, and research on people displaced by the environment has been scarce.

We can distinguish five specific aspects which can act as push factors for migrations:

- Natural Disasters and Catastrophes
- Industrial Accidents
- Developmental Projects that change and involve damaging impacts on the environment
- Progressive Degradation of the environment and climate change

- Environmental Consequences of wars, terrorism or other political conflicts

It is these factors that are found time and again, to be the drivers for individuals to take refuge abroad. The countries of the global north consistently neglect these concepts as part of their refugee systems and laws.

One of the many factors which might have impeded the research of connections between the environment and migration is that the world perhaps did not accept the conception of environmental refugees in the absence of causal empirical proof. The evidently ambiguous conception of the unstable relationship between the empirical character of the subject and the disorganized nature of the work involved in collecting the data, has led the way for many other problems to surface from a unidirectional connection between migrations and environmental changes to the façade of the well-established outcomes from the UNHCR's 2008 Population Cascades study^{xxix}.

Following the Population Cascades study, a number of researchers have corroborated that when detrimental impacts are caused on the masses due to ghastly environmental degradations, they are often followed up by factors such as socio-economic problems, which in turn result in political situations of the region coming under serious threat. These threats can vary from case to case and region to region, but their numbers can show the surge or ebb in the flow of migration. There can also be instances of scientific error by which assumptions are made which are often oversimplified as a part of the process of analysis. Sometimes, this results in greater more attention being paid to the political situation of the region rather than to the deteriorating environmental circumstances. The political reasons for migration as fallouts of the wars in Syria and Ukraine for instance, overshadow the passive shifts in the environment, for instance, successive failures of crop harvests, or the breakdown of electrical and gas pipelines for heating, the closure of schools for children, which could actually be the driving force in influencing large-scale migration.

Consequently, the controversial usage of the term environmental refugee in international fora is often subjected to criticism. Norman Myers' study claims that 'there are nearly 150 million refugees around the world'^{xxx}. These refugees are often accused of flooding host nations, usually rich first-world countries in the global north. This flooding results in the harsh policies adopted by the aforementioned rich countries such as the closing of their borders or the increased hostility of citizens of host countries towards the refugees. The United States' stance of building a wall on its southern border with Mexico could be a perfect example of building hostility towards refugees, despite the fact that the US calls itself the 'melting pot' of humanity, irrespective of people's backgrounds and circumstances.

Another researcher, Sherlyn MacGregor, states : 'the term "environmental refugee" conflates the idea of disaster victim and refugee, its use brings with it the danger that the key features of refugee protection could be undermined and the lowest common denominator adopted.'^{xxxi} Macgregor further explains that a political problem exists in defining the sociological changes that occur with climate change and that these are best understood through a feminist lens, since it is undeniable that the effects of climate change would be gendered^{xxxii}.

The environment and its detrimental impacts, in most instances, occur in the natural ecological geosphere, distinctly separated from politics. Therefore, the term 'environmental refugee' should be further encouraged to allow for ethical treatment of incoming refugees by host countries in a manner similar to economic or political immigrants. Destination or host nations, often burdened by their own national problems, look to diminish their responsibility to assist and protect other people, and they refrain from acknowledging environmental refugees to be on the same page as other forms of refugees^{xxxiii}. In fact, three European nations—Poland, Hungary, and the Czech Republic—contravened European Union law and refused Syrian refugees in 2016 and, as the world has seen, they were reprimanded but not penalised for doing so^{xxxiv}.

The UN High Commissioner for Refugees is no doubt aware of this undefined category as the issue has been raised several times at several major fora, but refrains from taking quick concrete action, perhaps in order to not ruffle the feathers of donor nations. This would obviously nudge host nations towards prudent care under the accepted norms of human rights. If environmental motivations were to be treated as a subset of political motivations, such refugees would fall under the international definition of refugees and have the right to be granted protective charge by their host nations. However, for all practical purposes, climate refugees, have thus far been excluded from any relief under the human rights pacts.

Consequently, several terminological variants, have been used by researchers to cite the individuals who happen to be fleeing environmental hazards and other grave disturbances. Though the term 'environmental refugees' has frequently been used, such migrants have also been referred to as 'environmental migrants' or 'ecological migrants' or 'ecomigrants' and several other variants in French, Italian, German and Spanish. Some of these terms can be assigned to be used to specifically define individuals who have been displaced by developmental projects and industrial accidents. Perfect examples for industrial accident-induced domestic migrants are those affected by the Three Mile Island in USA, the Bhopal Gas Tragedy in India, and the Chernobyl Disaster in erstwhile USSR. The immediate impact of an industrial accident also often leaves in its wake a degradation of the habitat and a loss of local jobs. Therefore, the crucial factor of degradation of the environment cannot be taken away from the aspect of determining the plight of an individual, who seeks the status of refugee in a foreign land, whatever be the cause.

INTERNATIONAL TREATIES ON ENVIRONMENT IGNORE REFUGEES

The Stockholm Declaration of 1972 at the United Nations Conference on the Human Environment, was the first to bring the attention of world leaders to the growing harm that was being caused to the planet. The first

principle adopted at this convention stated that humans have a right to use and enjoy nature, but this right comes with the duty to protect it.^{xxxv} The second principle stated that natural resources are limited, we must use natural resources carefully, and that preservation of resources for future generations is essential and depends on effective planning and management. Principle 22 put the responsibility very clearly on member states thus: “States shall co-operate to develop further the international law regarding liability and compensation for the victims of pollution and other environmental damage caused by activities within the jurisdiction or control of such States to areas beyond their jurisdiction”^{xxxvi}.

This was a notable first step, but the underlying assumptions were that humans were somehow endowed with the right to use anything in nature, and could be relied upon to manage, plan, and preserve these 'resources'. Though this utilitarian underpinning was evident, this was perhaps the way the world functioned in that period, benefitting from exploiting everything provided by nature was presumed to be our right. The United Nations Environment Program was created in 1972 to facilitate the required shifts. A 'World Conservation Strategy' was formulated to integrate economic and environmental management. The dichotomy between the aims of economic development and environment management was indeed well articulated and this impetus drove several member nations to create laws to regulate and protect the contamination in their water and air^{xxxvii}.

This was followed by the Brundtland Commission's report titled 'Our Common Future'^{xxxviii}. This went much beyond management and planning and highlighted in the concept of sustainability, or using resources such that we leave enough for our future generations to use. The report stated: 'Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs.'^{xxxix} Utilitarian again, no doubt, but with a mature warning that caused a stir in the global intellectual circles of member nations to conserve and protect their environment. Environment protection laws

were enacted and regulating bodies created in the parliaments and assemblies of the leading nations of the world to curtail the excessive use of non-replenishable resources and to protect their air and water.

The Montreal Protocol on 'Substances that Deplete the Ozone Layer' was adopted by 193 signatory nations in 1987 to specifically tackle the growing ozone hole in the earth's atmosphere by phasing out Hydrochlorofluorocarbons (HCFCs). HCFCs were successfully removed from use across the world and were replaced by hydrofluorocarbons (HFCs) which did the job and the ozone hole began closing well, on the path to be fully repaired. However, it took the world a couple of decades to uncover the fact that HFCs themselves are very potent greenhouse gases. Although they survive in the atmosphere for less than thirty years or so, their effects on the earth's atmosphere could be thousands of times greater per unit of mass than that of carbon dioxide. These are now being phased out under agreements arrived at in Kigali in 2016, which came into effect in 2019^{xi}. This push will bring forth new chemicals to replace HFCs and to bring forth in the world an era of new climate-friendly refrigerants.

It seems to appear in retrospect, though, that the business interests that would profit from changing over to HFCs might have been instrumental in driving out HCFCs. HFCs were not declared as an interim step, it was only later that their effects were properly assessed^{xii}. Climate scientists need to learn to be alert to manipulation, if any, and must think ahead of the commercial curve of the profit interests of businesses when such radical shifts are engineered.

In 1989, the UN General Assembly passed resolution 44/288 which created the United Nations Conference on Environment and Development. The clash between development and the environment, which harmed the planet was evident and acknowledged, and the world collectively set out to address this clash under the guidance of world leaders at the United Nations.

The UNConference on Environment and Development, informally known as the Earth Summit, at Rio de Janeiro in 1992 was a high-level global summit which saw huge participation of civil society, and also a host of protesters to grab headlines which were splashed across the world. Being a plene-potentiary conference, the diplomatic representatives carried the authority of their governments to commit to schemes at the summit.

Agenda 21 was adopted by a resolution at this summit as a charted path for the 21st century which stressed on action to save the earth^{xliii}. Para 1.3 of Agenda 21 states 'Agenda 21 addresses the pressing problems of today and also aims at preparing the world for the challenges of the next century. It reflects a global consensus and political commitment at the highest level on development and environment cooperation. Its successful implementation is first and foremost the responsibility of Governments. National strategies, plans, policies and processes are crucial in achieving this. International cooperation should support and supplement such national efforts. In this context, the United Nations system has a key role to play.'^{xliiii}

While much was stated in the Agenda 21 about alleviating poverty, providing funds to developing nations, liberalising markets and trade restrictions, and achieving sustainable development, there was only a passing mention of the effects of climate change on rising coastlines. It was stated in Para 5.3: 'There is a need to develop strategies to mitigate both the adverse impact on the environment of human activities and the adverse impact of environmental change on human populations. The world's population is expected to exceed 8 billion by the year 2020. Sixty per cent of the world's population already live in coastal areas, while 65 per cent of cities with populations above 2.5 million are located along the world coasts; several of them are already at or below the present sea level.'^{xliiv} However, no steps were outlined for action to mitigate the harms caused to people dwelling in coastal areas who would be affected by these shifts.

The connection between poverty alleviation and sustainable development was to be balanced by strategic investments and open markets, as that was the flavour of the times with the USSR having broken up into CIS states. The success of free markets in prevalent economic and political opinion was considered to be the universal mantra for achieving sustainable development^{xlv}.

At this summit, 173 nations of the world also signed the Rio Declaration with 27 universal principles, and a treaty to create the United Nations Convention on Climate Change (UNFCCC), which has done commendable work since then^{xlvi}. The Convention on Biological Diversity was also created at this summit, and a declaration was adopted to spell out the principles of forest management. The impending plight of people displaced by climate degradation was ignored. There was no mention of environment refugees or of steps to be taken to alleviate their impending plight.

The UNFCCC went to work and in 1997 succeeded in creating the Kyoto Protocol. This was signed by 160 member states and it defined the 'Clean development mechanism' and the concept of 'Common but differentiated responsibilities'^{xlvii}. The mechanism allowed countries to develop projects aimed at emission reductions in other countries and get credits which could be traded to give form to the principle that the polluter must pay for causing the pollution.

The US however backed out of the Kyoto protocol, as it was not ratified by the US legislators, and this was followed in December 2011 by Canada's withdrawal from the protocol, effective Dec 2012. This was the deadline for the extended first period of commitment and Canada had committed to reducing its greenhouse gases by 6 percent by this time, which obviously had not been achieved. Annexure 1 signatories, 38 developed nations, had committed to specific reductions in their greenhouse gas emissions^{xlviii}. Targets had been committed to by signatories with percentages of reduction in each of the six major greenhouse gases emissions adding up to gross 5.2 percent reductions over 1990 levels^{xlix}. It was obvious that the US

and Canada did not want to achieve the committed reductions and there was resentment that non Annexure1 developing nations have not been given any target under the principle of common but differentiated liabilities.

This caused the emissions-trading norms agreed to at Kyoto to be stillborn at least until the second commitment period, when the remaining signatories readopted a scheme for emission reductions at Doha which came into force in 2020 to reduce emissions by 18 percent over 1990 levels by 2030ⁱ. The trading mechanism for emissions is revived and is back in place though still in its nascent stages. The Adaptation Fund created at Kyoto to facilitate the Clean Development Mechanism was later used to serve the CMA mechanism under the Paris agreementⁱⁱ.

UNFCCC continued the hard work of building awareness and achieving consensus on sustainability through the Stockholm Convention on Persistent Organic Pollutants of 2002, the Johannesburg Declaration for Sustainable Development in 2002, the UN Collaborative Program on Reducing Emissions from Deforestation and Forest Degradation in Developing Countries (UN-REDD) of 2008, the United Nations Conference on Sustainable Development (Rio +20) Summit, amongst others.ⁱⁱⁱ These, along with regular updates on the state of the world's environment with well-articulated scientific research conducted by the IPCC, paved the way for an environment agreement to curtail emissions—which the Kyoto protocol had failed to achieve.

UNFCCC convened meetings of the Committee of Parties (COP) every year and came close to achieving its mission at COP 15 at Copenhagen in 2009 which was undermined by developing nations led by India and China with support of the G77. These developing nations, grouped as non-Annexure1 parties, refused to be blamed for their high emissions taking the stand that their per capita emissions were indeed miniscule. Annexure1 parties committed to provide 100 billion USD towards the costs of mitigating carbon emissions and the Green Climate Fund was established to

manage and disburse these funds. The developing nations did not commit to an agreement as the costs of mitigation were estimated to be more than 2 trillion USD. All that they agreed to do was to look at their carbon sinks, look at their sources and quanta of greenhouse gas emissions and to follow the work done by IPCCⁱⁱⁱ.

This process of negotiation continued at successive meetings of the COP until they finally converged at the 21st COP meeting at Paris in 2015. However, the harsh targets for reducing emissions which had been proposed earlier were replaced by a watered-down version which allowed signatory nations to propose their intended nationally-determined contributions without any guiding parameters. The agreement was signed by 195 nations with open-ended, self-decided targets, to be ratified by their parliaments, and a month after 55 signatory nations came back with their instruments of ratification, acceptance or approval, the agreement came into force from November 2016.

President Obama had campaigned relentlessly for building the consensus required for Paris, to the extent of a making a joint announcement with the Chinese President a couple of months before COP21. But there was a change of guard and the *enfant terrible*, the United States, acted up again and served notice to the UNFCCC, withdrawing from the Paris agreement under executive orders of President Trump in 2017, which would be effective from 2020^{iv}. President Biden withdrew that notice by reversing this decision in 2021, and the US is back on board, though perhaps still way behind in its monetary contributions to the coordinating agency UN^{iv}.

These flip-flops reduced the impact these accords could have had, and squeezed the funds that were committed at Paris to be distributed to emerging nations to meet the challenges of shifts in the carbon intensities of their economies. It has been evident that the shift towards renewable energy would benefit the global north as companies in developed nations would hold the patents for newer technologies. It had been agreed at Paris

that developed nations would provide through the Green Climate Fund, an annual contribution of 100 billion US Dollars to contribute to the developing nations towards their shifts to renewable energies and towards meeting their nationally determined contributions from 2020 onwards. Funds, however, have been delayed due to the pandemic and a slack in contributions; it remains to be seen how much actually flows through to poor nations.

In an effort to achieve consensus, the UN seems to have diluted the due process of goal-making itself. The nationally self-determined contributions in carbon reduction, which have been offered by signatories, do not add up to the goal of limiting global warming to between 1.5 and 2 degrees Celsius. Starved of funding this switch to renewables, the poorer nations have been left holding their bowls for alms, and while China and India have made notably large strides in setting up very capacities for solar power, several other members of the G77 have been left far behind for lack of funds. To a large extent, the world's rich nations have also lost their market for solar panels and other peripheral equipment to generate and to store renewable energy, to China, which developed huge capacities for producing the solar equipment required for this switch and has offered it at expensive prices without the need to pay royalties to the west^{lvi}.

In all this, the plight of humans who would actually suffer the brunt of climate change seems to have been lost. Funds for technologies are being provided whereas those harmed by climate impact need funds for survival, for their lost livelihoods, for food and shelter for their families.

The UN had another embarrassment during this period. The Millennium Development Goals, very ably crafted at the Millennium Summit of 2000 in hope of significant achievement in reduction of poverty, had also failed. A face-saving device in the form of the Sustainable Development Goals was adopted by member states in 2015 under its Sustainable Agenda for 2030^{lviii}. These, too, are open ended, with no specific targets for any nation to meet,

though with well-developed reporting and review procedures with effective feedback loops.

It is no surprise that the plight of climate refugees has been landing on deaf ears. The plights of coastal regions and small island states and rising sea levels had been mentioned in Agenda 21 but nothing in all these years was done to arrive at a consensus to take care of the people living there. Adequate attention has not been paid by the UN bodies to creating an effective remedy that brings forth a direct effect on the ground. Their efforts are still in the process of reaching out to a large number of destination countries to accept environmental refugees, and it is obvious from the limbo in which this matter hangs that member states value their own national interests higher than the plight of others.

An example of this impending plight is evident in the case of Ioane Teitiota versus The Chief Executive of Ministry of Business, Innovation and Employment at the Supreme Court of New Zealand^{lix}. This case is of significance in the field of climate-induced migration. It was filed by the plaintiff Ioane Teitiota for refugee status and was rejected by New Zealand in 2015. Since then, Ioane Teitiota has filed several petitions in the United Nations based on the threats to his and his family's lives because of rapidly altering climate conditions in his home island nation of Kiribati. However, the UN Human Rights Committee has so far refused to grant him relief, the main reason being that the applicant's right to life was threatened not by war or political strife, but due to environmental change. The UN Committee ruled that there should be adequate circumstances to proceed in the aforementioned case, and that the prospect of his sinking island nation due to climate change was not one of them. Kiribati could adopt adaptation/mitigation actions which would possibly eliminate this dire prospect. A favourable decision, if granted, might result in violating international norms in the destination nation-states, both at national and international levels^{lx}.

This case showcases the inability of international fora to intervene and protect individuals whose lives are under threat due to fast-rising sea levels and inaccessibility to natural resources. All Teitiota's efforts were in vain as he was deported back to his native country of Kiribati. This is not the first case to come into prominence. In 2014, a judge in New Zealand had granted rights to two Tuvalu residents immigrate to New Zealand on humanitarian grounds. Despite this precedent, Teitiota's case is indeed the first where an individual has been fighting a losing battle for his rights of being an 'environmental refugee' on the international stage.

It needs to be mentioned here that New Zealand did make an earnest attempt in 2017-18 to bring in special humanitarian provisions for granting refugee visas to Tuvalu and Kiribati climate refugees. It was evident that both these neighbourhood island nations were sinking, but the proposal did not go through, and the matter was laid to rest^{lxi}. Australia too had promised aid of 300 million AUD over four years to assist the Pacific Islanders. Its failure was ascribed by analysts to the island nations of Kiribati and Tuvalu themselves, however the real reasons should not be cursorily assessed and would require a thorough study of the proceedings in the NZ Parliament.

The world seems to be arriving at a sorry consensus that climate refugees should be contained within their own countries, if possible with aid, rather than being encouraged to move across borders, as a government spokesman quoted by Reuters stated 'The best response, where feasible, is effective adaptation and internal relocation, rather than cross-border resettlement as a first response'^{lxii}.

In the Philippines, more than 382,000 persons were displaced in 2022 due to natural disasters and conflicts in Mindanao. According to the UN Office for Coordination of Humanitarian Affairs, of these, 265,000 are reported to have returned to their homes but 117,000 are still reported to be displaced^{lxiii}.

Closer home, India's neighbour Bangladesh has a portion of the Sunderbans in the Ganges delta sinking and has already given shelter to over

a million ostracised Rohingya refugees from Myanmar's Zakhine province. India has also hosted about 18,000 Rohingyas as per official figures. Borders are often porous in the global south and migration is easy.

The circumstances of their emigration appear to be political, but Bangladesh has housed several thousands on an island that is sinking. India has put those that could be identified and rounded up in camps, as a precursor to pushing them back^{lxiv}. The Geneva Convention regulates political emigres, and, in this instance, it might suits both India and Bangladesh to club the Rohingyas into this category. The fact of the matter remains, however, that no country, whether in the global north or south, wants to host refugees not defined under UN Conventions.

UN CONVENTIONS ON REFUGEES

The Geneva Convention on Refugees is considered to be the gold standard by which International Law for Refugees operates^{lxv}. Our reason for referencing the Geneva Convention or the 1951 Refugee Convention is to articulate its importance and the manner in which it governs and protects individuals who happen to seek refuge in another country. Refugees are entitled to, *inter alia*, the right not to be punished for entering the host country illegally, the right to fresh identity documents, the right of protection from *refoulement* or repatriation, the right to travel within the territory, the right to freedom of religion, the right to public relief and access to courts, the right to housing and education and the right to work.

However, since the concept of climate refugees was absent when its legal framework was made, signatory member states, particularly those that would need to host climate refugees, do not consider climate refugees to be a part of the refugee convention. Refugees are defined and cared for, but climate refugees are not specifically covered.

Therefore, during deliberations, the signatory states of the 1951 Refugee Convention find themselves in a dilemma in debates on the topic of climate

refugees. To their credit, the signatories of the Geneva Convention had proposed the formation of a 'Task Force on Displacement'. Instead of making it a part of this convention, however, this task force was established under the Paris Agreement. It states that the task force would create parameters for climate refugees using different and integrated approaches to diminish or address any kind of displacements caused due to the detrimental impacts of the climate change^{lxvi}.

It is important to mention Article 33 of the 1951 Refugee Convention, which curbs the destination countries from forcing refugees back to their native countries where they might face life-threatening circumstances^{lxvii}. This is of utmost importance and signatories explicitly take measures directed at intercepting and averting possible deportation of persons who might face life-endangering situations, along with situations that might arise which could harm the individual's freedom.

The UN Global Compact on Refugees was approved by the UN general Assembly in 2018^{lxviii}. It had set up guiding principles for human rights. It had laid out the responsibilities of businesses at its 2011 summit founded on the three pillars of:

1. The state's duty and responsibility to protect human rights
2. The responsibility of businesses to respect, identify, prevent, mitigate and account for the anticipated impacts of their business activities on human rights; and,
3. Access to remedies for all

However, in the form of guiding principles, these served to dilute the responsibilities of states by being voluntary. The same principles could have resulted in states making their own strong laws to implement these, had there been a treaty to this effect. It was hoped that a treaty would result in the 2022 summit, but this too was watered down as its ambitions were contained very specifically in only these four goals, all leading to pushing the problem back to suffering nations as an internal rather than an international issue:

- Ease pressures on host countries.
- Enhance refugee self-reliance.
- Expand access to third country solutions; and
- Support conditions in countries of origin for return in safety and dignity.

These expressly and narrowly defined ambitions served the purpose of the global north, the targeted host nations, very well. This terribly narrow mindset needs to be expanded in order to bring forth a fraternal ambience on the question of climate refugees.

The UN High Commissioner for Human Rights has acknowledged in 2021 that environmental effects have displaced more than 21 million people annually since 2010, and that this was twice the number of people displaced by wars, violence and conflicts^{lxix}. The Global Report on Internal Displacement had estimated in 2018 that more than 61 percent of displacements were due to natural disasters; and even though in 2021 conflicts and violence intensified, out of 38 million internal displacements, 23.7 million or 62 percent were due to natural disasters.^{lxx} A study of 2017 in *Science* magazine had stated “Weather-induced conflicts in developing countries spill over to developed countries through asylum applications...When temperatures in the source country deviated from a moderate optimum of around 20 Degrees C that is best for agriculture, asylum applications increased.”^{lxxi}

The World Bank in its report of 2018 claimed that 143 million people would be displaced internally by 2050^{lxxii}. The focus was deliberately shifted to internal displacements with these high figures, blotting out or at least overshadowing for the time being in the international global discourse, the need for international displacements. The initiative taken at Sharm Al Shaikh in 2022 therefore mirrors this concern and focuses merely on internal displacements. The global north pays for what the UN does, and this appears to be the bottleneck. This convergence of views seems to be

aligned with the wealthy north to stem the international flow of climate refugees, perhaps by refusing to even acknowledge their existence.

The result is that international displacements are curbed, so long as they are not covered by UN treaties and are overshadowed in international fora. The sheer size of the problem is expected to become more severe as small island nations sink and large tracts of land in other regions become infertile and uncultivable. The time to act is now, before we have a more serious problem on our hands.

SUMMARISING THE WORK DONE BY UNFCCC, AND PROPOSING SOME SOLUTIONS FOR CLIMATE REFUGEES

The international community seems to be a long way from coming to a consensus on specific definitions to classify the types of migrants or refugees and the protection status that they should be granted. Several proposals have been presented at international and intellectual fora to safeguard the vulnerable and these have been acknowledged since the 1990s. These proposals include, inter alia, award of the status of refugees to climate-displaced persons under the 1951 Refugee convention; a legal framework to ensure such refugees are accommodated by destination countries; using the guiding principles for internal and external displacement and temporary mechanisms for protection and care; and proposing a new protocol for climate refugees. In an article Chiara Scissa has suggested some pathways to bring relief to refugees^{lxxiii}. The authors concur and these are included and elaborated in some of our suggestions and acknowledged in the text and relevant footnotes. None so far have found favour with the rich nations, many of whom are popular destinations for migrants.

Until 2015, despite several proposals, there was no sign of a ground-breaking policy. The Agenda for the Protection of Cross-Border Displaced Persons in the Context of Disasters and Climate Change (Protection Agenda) was incorporated into the Paris Agreement and this now functions

under the guidelines of the Executive Committee of the Warsaw International Mechanism for Loss and Damage (ExCom) that had been established under the UNFCCC at Doha at COP 18 in 2012 and finalised at Warsaw in 2013 at COP19^{lxxiv}.

The functions of the Loss and Damage Mechanism are comprehensively spelt out: viz. “Enhancing knowledge and understanding of comprehensive risk management approaches to address loss and damage associated with the adverse effects of climate change, including slow onset impacts; strengthening dialogue coordination and cohesion and synergies among stakeholders; enhancing action and support including finance, technology and capacity building to assess loss and damage associated with the adverse effects of climate change, collection, sharing, management and use of relevant data and information, including gender-disaggregated data.”^{lxxv}

The first five year plan of the executive committee has been approved and is now in progress. The Executive Committee has five working groups of experts working on plans with the following themes:

- The Expert Group on Slow Onset Events
- The Expert Group on Non-Economic Losses
- The Technical Expert Group on Comprehensive Risk Management
- The Task Force on Displacement
- The Expert Group on Action and Support

The decisions to form these groups are welcome but they have been on the back burner for too long. Five-year plans are not required to study the effects on people vulnerable to climate change.

At the Conference of Parties, serving as the meeting of the Parties to the Paris Agreement, under the Warsaw International Mechanism for Loss and Damage, the Santiago Network has been established to avert, minimize, and address the loss and damage associated with the adverse effects of climate

change, and to 'catalyse the technical assistance of relevant organisations, bodies, networks and experts for the implementation of relevant approaches at the local, national and regional level in developing countries that are particularly vulnerable to the adverse effects of climate change'^{lxvii}. The Santiago Network's Secretariat has been created, and this should start working soon, hopefully in 2023. It was decided that this would have the following functions:

- (a) Contributing to the effective implementation of the functions of the Warsaw International Mechanism, in line with the provisions in paragraph 7 of decision 2/CP.19 and Article 8 of the Paris Agreement, by catalysing the technical assistance of organizations, bodies, networks and experts;
- (b) Catalysing demand-driven technical assistance, including of relevant organizations, bodies, networks and experts, for the implementation of relevant approaches to averting, minimizing and addressing loss and damage in developing countries that are particularly vulnerable to the adverse effects of climate change by assisting in:
 - (i) Identifying, prioritizing and communicating technical assistance needs and priorities.
 - (ii) Identifying types of relevant technical assistance.
 - (iii) Actively connecting those seeking technical assistance with best suited organizations, bodies, networks and experts.
 - (iv) Accessing technical assistance available, including from such organizations, bodies, networks and experts.
- (c) Facilitating the consideration of a wide range of topics relevant to averting, minimizing and addressing loss and damage approaches, including but not limited to current and future impacts, priorities, and actions related to averting, minimizing and addressing loss and damage pursuant to decisions 3/CP.18 and 2/CP.19, the areas referred to in Article 8, paragraph

4, of the Paris Agreement and the strategic workstreams of the five-year rolling workplan of the Executive Committee of the Warsaw International Mechanism;”^{lxvii}

These are welcome steps, and it seems that some thinking has started, though no practical action on the ground has emerged as yet. It is hoped that these structures do not swing towards protecting the would-be protectors, as in the case of the UN Global Compact. These new structures could, however, be expected to generate a wealth of research and knowledge on all aspects of the harms people face due to climate change.

The key however lies in getting the nations of the world to arrive at a consensus and make good these harms.

OUR SUGGESTIONS

The fund under Action for Climate & Environment Plan adopted at COP 27 at Sharm al Shaikh is expected to be finalised a year later at the next meeting of the committee of parties, COP 28. The Santiago Network and Secretariat should hopefully be fully operational by then. The mechanics of its operation and other fine details should, hopefully, be available when these are decided. It would be debilitating, however, if assistance or aid is provided only after the catastrophes have occurred, after some sort of detailed post facto investigation to assess who suffered and how much.

1. Gradual deterioration needs to be assessed and residents need to be supported by extending the responsibilities of local states with international aid under this action plan. Gradual deterioration could be classified into, say, four levels of seriousness and mitigation efforts could be commenced at certain stages as detailed below to counter or curtail the creeping damage before it causes grievous harm to local residents.
2. Persons who are likely to suffer from gradual deterioration in their habitats should be provided relief in the form of guidance to abate the

impending harm in advance. This should be a preventive measure which would deter them from fleeing and lessen the possibility of harm that they might be positioned to suffer in future. Impending deterioration of the environment can be assessed before it causes grievous harm to residents of local areas.

3. Once the gradual deterioration starts and is in progress, relief needs to be provided for those who suffer gradual climate-induced harm to their environments and livelihoods, while they are in early stages of gradual deterioration. Residents of local areas should be supported by their states so that over time they are empowered to cope with the change. Such support could be in the form of providing aid for abatement of the soil, water or air degradation as the case may be. Farmers and cattle breeders who depend on the climate may be provided alternate guidance regarding which crops to sow which could survive in their changing climate.
4. Forest dwellers need to be provided alternate means of livelihoods to be able to cope with the gradual deterioration in their habitat. In case such creeping harm can be attributed directly to neighbourhood mines, factories or other businesses, these units should be sued to provide adequate penalties to affected dwellers and to pay for the local government's efforts of abatement. Member states of the UNFCCC who are unable to meet abatement costs should be granted aid to adopt relief measures in consonance with the level of deterioration as per four stages suggested in the preceding paragraph.
5. In the event that gradual deterioration cannot be curtailed or mitigated and affected residents do need to relocate, they should be provided assistance for such relocation by member states in other areas if possible, with accommodation for their families, alternate vocations for their bread-earners and alternate education for their children. This should prevent them from becoming destitute and also, perhaps, from migrating to other countries.

6. In case their habitat provides no alternative space or accommodation, as in the case of small island nations which might soon be entirely under water, their country needs to take responsibility to negotiate with others and enter into bilateral agreements to provide them the required shelter abroad. It is normal for bilateral agreements to have some give-and-take, or *quid pro quo*, and it is for nation states to agree between themselves for such arrangements if possible and certain guidelines may be framed by the UNFCCC to arrive at fair compensation. One such method could be, for instance, for immigrants to pay higher taxes as citizens of their destination countries. There could be others, such as joint applications by both nations for aid from international organisations.
7. Those who cross international borders and are not covered under the Sharm el Shaikh initiative or future initiatives, need to be classified at destination countries as illegal. Legal emigrations would be those that are made under bilateral agreements,^{lxviii} and these would need to be registered under a new protocol at the UNFCCC as suggested in paragraph 4 above.
8. Illegal immigrations are also to be dealt with, as the growing climate deterioration might increase numbers beyond quotas or emigrants could land in nations not within the agreed bilateral quotas. Emigrants who land in destination countries in desperation without the support of their home states, can be treated as illegal but they should be covered under the 1951 Convention. There should be a provision for temporary protection and non-refoulement, legal aid for presenting their petitions seeking citizenship. Also recommended are temporary permissions for them to work and for their children to go to school; provision of temporary accommodation for their housing or temporary cash aid for them to survive. These provisions would be required to be created by multilateral agreements by amending the 1951 Convention.

9. The 1951 Refugee convention requires refugees to flee from their homelands in order to qualify for the status of a refugee. Several of those harmed by climate change might however be staying on, trying to find alternate solutions or vocations. Hence even if they were recognised as persons harmed by climate change who did not as yet flee their homelands, they would not qualify to be potential refugees. It is imperative that signatories to the 1951 Convention and members coopted in later years get together to amend the convention to include and cover climate refugees who flee from their homelands as being at par with other refugees, while potential refugees be defined and allocated to the UNFCCC to be taken care of, as suggested in the succeeding paragraphs.
10. In the event bilateral agreements are contravened, the International Court of Justice Nations may adjudicate, but the penalties on exit states and destination states should be quantified in prior guidelines under the UNFCCC and 1951 Convention. A consensus needs to be created about international migration. Quotas could be allotted to all nations of the world who do not enter into bilateral agreements. Bilaterals could be required to be registered with the UNFCCC so that gaps can be filled by imposing quotas. This may require a new protocol on Climate Refugees which could be adopted under the aegis of the UNFCCC.
11. In cognizance of International Human Rights Law and Customary Principles with guidelines, member states of the UN should be made aware of consequences for delay in complying with their international obligations. Environmental alterations in climate, whether natural and sudden, or gradual, all comprise events which severely affect the right to freedom of movement, along with life, health, property, sufficient food and water. The right to life with dignity specified in the declaration of human rights which has been repeated in several international conventions and treaties should be binding on signatory member states to the extent that if certain principles of priority are not adhered to, the

concerned member states should be penalised with compensatory damages. In essence, what we are proposing here is that certain human rights need to be treated as fundamental, such as the right to live a life with dignity, and in case these are not adhered to by member states, the International Court of Justice should be empowered to levy penalties. The right of all of humanity to live in dignity must be enforced and defaulters punished. Destination countries need to open up their borders and accommodate such immigrants subject to the guidelines proposed in preceding paragraphs. If the world does not accept them, it is a negation of their human right to live healthy and dignified lives. This fundamental human right needs to be made enforceable at the International Criminal Court, and states that do not adhere to it may be penalised. The quantum of penalty would need to be guided by predetermined guidelines agreed to by member states at the UNFCCC as well as the 1951 Convention.

12. Creating a temporary protection mechanism has been suggested by Chiara Scissa^{lxxix}. The specific aim of temporary protection mechanisms is to safeguard the vulnerable who happen to be dislocated by severe climatic events, pending an official decision on their admission. It is the moral duty of the international fora to protect these people and give them a temporary protection status such as the norms that members of the European Union have adopted in their domestic legislations. Asylum is a fundamental right and an international obligation for countries, as recognised in the 1951 Geneva Convention on the protection of refugees^{lxxx}. The EU adopted a Common European Asylum System in 1999 for refugees of war and political strife, which could assist in dealing with the environmental complications.^{lxxxi} This method is proposed in the absence of any other protection measures to safeguard the humanitarian interests of such refugees. It is ironic that while the refugee status is predominantly granted on humanitarian grounds, it still remains undefined in most national legislations,

including some member states of the European Union, and it completely ignores those who have been dislocated by environmental circumstances.

- The prime need today is to raise awareness about these issues so that the suggestions above may be implemented by member nations of the UNFCCC and the 1951 Convention. The UN performs the job of creating this awareness and nudging nations towards a consensus quite well by organising frequent conferences and spreading the word through non-governmental organizations, social media and civil society. It is important to bear in mind that this awareness exercise should be:
 - Inclusive, to incorporate the humanitarian dimension,
 - Gendered, with a gendered look at the burden on women and children,
 - Social and Economic, to look at the burden on the least well-off as it comes with huge ramifications on the safety and well-being of endangered populations, particularly women and children.
13. One of the criticisms that came up against some proposals is the loss of local jobs in destination countries by the influx of refugees, whether climate refugees or otherwise. A protection for local jobs may therefore be essential in order to arrive at a consensus. It is suggested that jobs of citizens in destination countries should be protected before jobs are offered to climate immigrants even after they become legally entitled to live in their host countries. However, livelihoods for arriving immigrants whether legal and covered under the UNFCCC protocol as suggested above, or illegal and covered under the 1951 convention, are obligatory for signatory member states at destination countries to provide and in case jobs are not available, such immigrants should be guests of the destination states.

CONCLUSION

It is evident that climate refugees are not receiving their rightful recognition and acknowledgement in the contemporary world. The importance of cognizing environmental refugees as a part of the conventional refugee system cannot be denied because life-threatening circumstances arise not only from man-made strife such as terrorism or wars, but they also emerge from changes in the environment and climate, sudden or prolonged. Merely debating the problem of climate-change migrants will not resolve the issue, getting nations together to negotiate the best deal might be the only solution. It is of utmost importance for global citizens to be cognizant of and to embrace the plight of our fellow humans suffering at the hands of nature. It needs to be understood that the world so far has witnessed just one Ioane Teitiota but the situation could undoubtedly worsen, and if left without any agreement on duty of care towards these refugees, the world could see millions of other Ioane Teitiotas soon.

ENDNOTES

- i Defining the term 'Climate Refugee' through contemporary means and lucid terms: School of Advanced Study, University of London. (2020, July 29). *Climate Crisis, Migration and Refugees: Bridging the Legal Protection Gap for a Sustainable Future*. Refugee Law Initiative Blog. Accessed Jan 06, 2023 from <https://rli.blogs.sas.ac.uk/2020/07/29/climate-crisis-migration-and-refugees-bridging-the-legal-protection-gap-for-a-sustainable-future/>
- ii Atlas of Migration published by Rosa Luxembourg Stiftung in 2019 offers an interesting analysis of research conducted on migration of labour and its impact on both countries of origin and the countries of destination. Accessed Jan 06, 2023 <https://www.rosalux.de/en/publication/id/40425/the-atlas-of-migration/#:~:text=The%20Atlas%20of%20Migration%20seeks%20to%20change%20perspectives,objective%20debate%20within%20left-wing%20European%20parties%20and%20movements.>
- iii Noah's Ark Old Testament Accessed Jan 06, 2023 <https://www.churchofjesuschrist.org/study/manual/old-testament-seminary-teacher-manual/introduction-to-the-book-of-genesis/lesson-17-genesis-6-13-9-29?lang=eng>
- iv Please see <https://www.britannica.com/event/Indian-Ocean-tsunami-of-2004> ; please also see from the UN Environment Program archives and notice that these do not mention the impact on migrations : <https://web.archive.org/web/20080820112413/http://www.oceansatlas.org/id/71687>, see also <https://web.archive.org/web/20050111221153/http://www.unep.org/Documents.Multilingual/Default.asp?DocumentID=414&ArticleID=4692&l=en>
- v Dwarka, Krishna's ancient sunken kingdom, is claimed to have been discovered in the waters of the coast of Kutch at Gujarat, Accessed Jan 06, 2023 <https://www.gujaratexpert.com/dwarka-history/> and <https://www.youtube.com/watch?v=msaaNZ5THrM>
- vi For the definition of a refugees, please see <https://dictionary.cambridge.org/dictionary/english/refugee> Accessed Jan 06, 2023.
- vii Showcasing the trend of migration or masses fleeing from their native places in search of better lives, evidence of which is present from the Ice Age to the contemporary world: Piguet, E. (2008, January). *New Issues in Refugee Research - Climate Change and Forced Migration*. UNHCR. Retrieved Jan 06, 2023, from <https://www.unhcr.org/uk/47a316182.pdf>
- viii Ravenstein, E. G. (1885). The Laws of Migration. United Kingdom: Royal Statistical Society. For more, please also see Ravenstein's estimates as quoted by Sir H Atkinson in the "The Otago Daily Times", Otago, New Zealand, Nov 13, 1890 at <https://paperspast.natlib.govt.nz/newspapers/ODT18901113.2.9> Accessed April 12th 2023. This also might be of interest: Piguet, E. (2008, January). 'Consequences of Industrialization on the environment and movement of the people in the period of 18th and 19th century', *New Issues in Refugee Research - Climate Change and Forced Migration*. UNHCR. Retrieved Jan 06, 2023, from <https://www.unhcr.org/uk/47a316182.pdf> Accessed April 12th 2023
- ix According to the International Energy Agency's 2022 report on Coal, the world will see an increased dependence on coal in 2022-23 due to the high gas prices in the wake of the crisis created by the war in Ukraine. See <https://www.ica.org/reports/coal-2022/executive-summary> . Quoting from this report: "Coal power generation will rise to a new record in 2022, surpassing its 2021 levels. This is driven by robust coal power growth in India and the European Union (EU) and by small increases in China – and it comes despite a decline in the United States."

- x International Energy Agency's 2021 report on Oil and Gas shows that 15 percent of global energy sector greenhouse gas emissions are caused by oil and gas. Please see <https://www.iea.org/reports/oil-and-natural-gas-supply> accessed Jan 06, 2023.
- xi On the policy reversal/volte face caused by the shortage of gas in Europe, please see this report from 2011 when Germany decided to shut down all its nuclear power plants by 2022: <https://www.bbc.com/news/world-europe-13592208> ; see the present position, please see this report from World Nuclear Association <https://world-nuclear.org/information-library/country-profiles/countries-g-n/germany.aspx> which states that in June 2020 the country started a new 1100MW coal fired power generation plant, Dattin4, which was expected to be the last. But the war in Ukraine tilted the priorities and this article compares the German policies for nuclear and coal power: Selje, Tom, 'Comparing the German exit of nuclear and coal: Assessing historical pathways and energy phase-out dimensions'in Energy Research and Social Science, Vol 92 December 2022 102883 <https://www.sciencedirect.com/journal/energy-research-and-social-science> Accessed April 17 20203 <https://www.sciencedirect.com/science/article/abs/pii/S2214629622003863>
- xii Anthropogenists believe this is caused by human actions, while there are deniers who refuse to believe that this is the case. For a balanced view on this debate, please see <https://en.unesco.org/courier/2018-2/anthropocene-vital-challenges-scientific-debate> accessed Jan 06, 2023
- xiii IPCC's Sixth Report accessed Jan 06, 2023 <https://www.ipcc.ch/report/ar6/wg3/>
- xiv UN Climate Press Release, Spt 17 2021, 'Full NDC Synthesis Report: Some Progress, but Still a Big Concern' <https://unfccc.int/news/full-ndc-synthesis-report-some-progress-but-still-a-big-concern>
- xv Defining the term 'Climate Change' through the patterns of weather and rainfall and other aspects: Council, H. B. (n.d.). *Climate Change Background*. Hastings Online. Accessed Jan 06, 2023, from <https://www.hastings.gov.uk/my-council/climate-change/background/>
- xvi The UN Office for Coordination of Humanitarian Affairs, the International Federation of the Red Cross and Red Crescent Societies and the Red Cross and Red Crescent Climate Centre published their first joint report on heatwaves and their impact in Oct 2022, please see <https://www.ifrc.org/sites/default/files/2022-10/Extreme-Heat-Report-IFRC-OCHA-2022.pdf> accessed Jan 06, 2023.
- xvii Ibid; and also International Labour Organisation report July 2019 'Increase in heat stress predicted to bring productivity loss equivalent to 80 million jobs' https://www.ilo.org/global/about-the-ilo/newsroom/news/WCMS_711917/lang-en/index.htm
- xviii Heatwaves and the havoc wreaked by them on the food producers and consumers see <https://www.weforum.org/agenda/2022/10/heatwaves-unexpected-impact-diverse-communities/>
- xix UNFCCC United Nations Resolution on climate disasters <https://unfccc.int/news/cop27-reaches-breakthrough-agreement-on-new-loss-and-damage-fund-for-vulnerable-countries>
- xx UN Climate Press Release 20 November 2022 <https://unfccc.int/news/cop27-reaches-breakthrough-agreement-on-new-loss-and-damage-fund-for-vulnerable-countries> 'COP27 Reaches Breakthrough Agreement on New "Loss and Damage" Fund for Vulnerable Countries'
- xxi Poland Hungary and Czech Republic refuse entry to Syrian refugees in 2015/16. See <https://www.aljazeera.com/news/2020/4/2/by-refusing-refugees-poles-hungarians-and-czechs-broke-eu-law> There is no such law for climate refugees.

- xxii A Statement articulating the situation of Climate Refugees in the Contemporary World by Antonio Guterres - *The Problem*. (2022, May 13). Climate Refugees. Accessed Jan 06, 2023, from <https://www.climate-refugees.org/why>
- xxiii The UN Chronicle states the problem but dismisses the UN's responsibility by stating this in small text at the bottom. Accessed Jan 06, 2023 <https://www.un.org/en/chronicle/article/small-islands-rising-seas> It isnt that the UN is unaware, please see also Sadat, N, 'Small Islands, Rising Seas' in the UN Chronicles, Accessed April 17 2023 <https://www.un.org/en/chronicle/article/small-islands-rising-seas>
- xxiv Defining the types of Climate Refugees present around the world: *Who is a climate refugee?* (2021, September 17). The Third Pole. Accessed Jan 06, 2023, from <https://www.thethirdpole.net/en/hub/climate-refugees/>
- xxv Ioanne Teitiota vs New Zealand please see <https://www.refworld.org/cases/HRC.5c26f7134.html> and <https://ohrh.law.ox.ac.uk/teitiota-v-new-zealand-a-step-forward-in-the-protection-of-climate-refugees-under-international-human-rights-law/>
- xxvi Connecting the Economic Paradigm to the Political Paradigm to understand the movement of the masses across the regions of the world: Piguet, E. (2008, January). *New Issues in Refugee Research - Climate Change and Forced Migration*. UNHCR. Retrieved Jan 06, 2023, from <https://www.unhcr.org/uk/47a316182.pdf>
- xxvii Ibid
- xxviii UNHCR 1951 Refugee Convention and 1967 Protocol [unhcr.org/1951-refugee-convention.html](https://www.unhcr.org/1951-refugee-convention.html)
- xxix The Depiction of the Environmental Refugee as a problematic concept: Piguet, E. (2008, January). *New Issues in Refugee Research - Climate Change and Forced Migration*. UNHCR. Retrieved Jan 06, 2023, from <https://www.unhcr.org/uk/47a316182.pdf>
- xxx Myers, Norman. The Sinking Ark. A New Look at the Problem of Disappearing Species (Pergamon Press, 1979). See also Myers, N. Ultimate Security: The Environmental Basis of Political Stability (WW Norton & Company, Inc., 1993) and Myers, N. Mittermeier, R., Mittermeier, C. *et al.* Biodiversity hotspots for conservation priorities. *Nature* **403**, 853–858 (2000). <https://doi.org/10.1038/35002501> please see <https://www.nature.com/articles/35002501> This study established that species with a small geographical spread are more prone to extinction, and they are found in areas where severe destruction of the habitat is caused by human development activity. Myers defined these areas as 'biodiversity hotspots'. He also suggested various methods to curtail the destruction of biodiversity. At the National Research Council during the 1980s, he had published a report on the rate of deterioration of tropical forests and a report on the correlation of the loss of tropical forests and climate change at the UN's Food and Agriculture Organisation.
- xxxi Macgregor, Sherlyn, 'A Stranger Silence Still: The Need for Feminist Social Research on Climate Change' [Volume 57, Issue 2, suppl](#)
Please see <https://journals.sagepub.com/doi/full/10.1111/j.1467-954X.2010.01889.x> She argues for a gendered approach to solving the climate crisis, as that would enable a 'more accurate diagnosis' and a 'more promising cure'. quotes Nelson who states that 'policies need to ensure that gender analysis is fully integrated to avoid exacerbating gender inequalities' (Nelson V., Meadows K., Cannon T., Morton J., Martin A., (2002), Uncertain predictions, invisible impacts, and the need to mainstream gender in climate change adaptations, *Gender and Development* 10 (2): p51–59) and feminist lobbyists who protested at Bali in 2007 with the slogan 'No climate justice without gender justice'.
- xxxii Ibid

- xxxiii Number showcasing the rise in number of climate refugees since 2010: Owen-Burge, C. (2021, August 17). *Climate refugees – the world's forgotten victims*. Climate Champions. Retrieved Jan 06, 2023, from <https://climatechampions.unfccc.int/climate-refugees-the-worlds-forgotten-victims/>
- xxxiv Please see <https://www.aljazeera.com/news/2020/4/2/by-refusing-refugees-poles-hungarians-and-czechs-broke-eu-law> ; see also <https://www.usnews.com/news/best-countries/articles/2022-03-08/the-russia-ukraine-conflict-highlights-polands-complicated-history-with-refugees>
- xxxv Principles of the Stockholm Declaration and the Action Plan for the Human Environment can be accessed here : <https://wedocs.unep.org/bitstream/handle/20.500.11822/29567/ELGP1StockD.pdf> Accessed April 12th 2023
- xxxvi Ibid
- xxxvii The US enacted its Clean Air Act in 1972 building on its existing Pollution Control Act of 1955 and mandated the US Environment Protection Agency to set up and establish National Acceptable Air Quality Standards and implement them in every state by 1975; the Clean Water Act was also enacted in 1972. The UK already had its Clean Air Act of 1953, which had been created in response to the London Smog of 1952. India enacted the Water (Prevention and Control of Pollution) Act in 1974, the Air (Prevention and Control of Pollution) Act in 1981, and the Environment (Protection) Act in 1986.
- xxxviii The Brundtland Commission, formally the World Commission on Environment and Development (WECD), informally known by this name as Ms Gro Harlem Brundtland, former President of Norway. was nominated as its Chairperson and Mansoor Khalid as Vice Chairman in 1983. Its report titled “Our Common Future” was released in 1987. In 1988 the commission was wound up and the Centre for Our Common Future was tasked with the follow-up.
- xxxix Ibid
- xl For more on the damaging effects of HFCs please see <https://www.ccacoalition.org/fr/slcp/hydrofluorocarbons-hfcs> and also see Anjali Jaiswal's analysis at NRDC published in 2017 at <https://www.nrdc.org/experts/anjali-jaiswal/climate-action-global-transition-away-hfcs-moving-forward> both accessed Jan 06, 2023
- xli This is not the first instance of businesses driving change; in previous decades, Azo-free dyes were made to switch over from Azo-based dyes, which were found to be carcinogens. The benefit of this switch was naturally bagged by leading dye-making corporate conglomerates which had benefited from profits of Azo dyes in previous decades and, with this switch, benefited from their patented technologies for making Azo-free dyes. The world would largely benefit if new technologies to save humankind from harmful effects of existing products were pushed by policy changes rather than the other way around. The point to emphasise is that the change should be driven by the consciousness of the harm caused by our current use of certain materials and businesses can still have their profits from patenting intellectual rights on the best possible technologies for the desired change. There needs to be further research to uncover this aspect of profit taking from such multilaterally agreed shifts bound by international treaties.
- xlii Para 1.1 of Agenda 21 states: 'Humanity stands at a defining moment in history. We are confronted with a perpetuation of disparities between and within nations, a worsening of poverty, hunger, ill health and illiteracy, and the continuing deterioration of the ecosystems on which we depend for our well-being.' For the complete text of Agenda 21, please see <https://sustainabledevelopment.un.org/content/documents/Agenda21.pdf>

- xlili Ibid. Emphasis on globalisation and opening up of markets in the developing world is evident as the flavour of the times, see Para 2.5 of Agenda 21 which states 'An open, equitable, secure, non-discriminatory and predictable multilateral trading system that is consistent with the goals of sustainable development and leads to the optimal distribution of global production in accordance with comparative advantage is of benefit to all trading partners. Moreover, improved market access for developing countries' exports in conjunction with sound macroeconomic and environmental policies would have a positive environmental impact and therefore make an important contribution towards sustainable development.'
- xliv Ibid United Nations Sustainable Development. (1992, June 14). *Agenda 21* [Press release].
<https://sustainabledevelopment.un.org/content/documents/Agenda21.pdf> accessed Jan 06, 2023
- xlv Fukuyama, F. (1989). The End of History? *The National Interest*, 16, 3–18.
<http://www.jstor.org/stable/24027184>
<https://www.jstor.org/stable/24027184> see also Macintosh, D., *The End of History and the Last Man* by Francis Fukuyama in *Philosophy Now*
https://philosophynow.org/issues/106/The_End_of_History_and_the_Last_Man_by_Francis_Fukuyama
- xlvi For the birth of the UNFCCC and the commendable work this convention has done, please see <https://unfccc.int/process/the-convention/history-of-the-convention#Essential-background> accessed Jan 06, 2023
- xlviii The Clean development Mechanism created at Kyoto is detailed on this site <https://unfccc.int/process-and-meetings/the-kyoto-protocol/mechanisms-under-the-kyoto-protocol/the-clean-development-mechanism> accessed Jan 10 2023
- xlvi Targets for the first commitment period of the Kyoto Protocol were committed by Annex 1 countries to reduce emissions of six main greenhouse gases: Carbon dioxide (CO₂), Methane (CH₄), Nitrous oxide (N₂O), Hydrofluorocarbons (HFCs), Perfluorocarbons (PFCs), and Sulphur hexafluoride (SF₆). The exact percentages by which each gas would be reduced were listed in Annex B. For more, please see: <https://unfccc.int/process-and-meetings/the-kyoto-protocol/what-is-the-kyoto-protocol/kyoto-protocol-targets-for-the-first-commitment-period>
- xliv For more views on the failure of Kyoto Protocol please see <https://www.climateforesight.eu/articles/success-or-failure-the-kyoto-protocols-troubled-legacy/> and <https://www.nature.com/articles/491663a>
- l The Doha amendment was signed in 2012 but ratified later and has come into effect from 2020. Please see <https://sdg.iisd.org/news/doha-amendment-enters-into-force/> and <https://unfccc.int/process/the-kyoto-protocol/the-doha-amendment>
- li For more on the fate of the Adaptation Fund please see: <https://unfccc.int/Adaptation-Fund> and https://unfccc.int/sites/default/files/resource/cma2018_3_add2_new_advance.pdf#page=2
- lii AT Rio, +20 member states adopted the document 'The Future We Want' in which they decided to commence the process of creating Sustainable Development Goals to build on the earlier Millennium Development Goals.
- liii At COP 15 at Copenhagen, which was also the location for a concurrent COP 6 of the Kyoto Protocol, there was a breakdown. India led the G77 and took this stand to block an agreement which would have constrained developing economies, along with others, to define the measure of how much each would achieve, as had been done at Kyoto. For a Swedish view of India's position on climate change, please see <https://mediamanager.sci.org/documents/Publications/Climate-mitigation-adaptation/reducinggreenhousegasemissions-india.pdf> accessed Jan 06, 2023

- liv For more on the US flip flops please see : <https://environment.co/is-the-united-states-in-the-paris-climate-agreement/>
- lv The US State Department announcement of Feb 19th 2021 <https://www.state.gov/the-united-states-officially-rejoins-the-paris-agreement/> Accessed April 12th 2023
- lvi This author claims that German subsidies actually helped Chinese solar panels to flood the market in Europe at cheap prices: <https://qz.com/41166/how-germanys-energy-transformation-has-turned-into-a-crisis> ; Please see this contrary view from Forbes which states that subsidies from the Chinese government along with cheap labour and coal have made Chinese solar panel prices drop so substantially <https://www.forbes.com/sites/michaelsellenberger/2021/05/19/china-made-solar-cheap-through-coal-subsidies--forced-labor-not-efficiency/?sh=1253388d71ec> The fact undisputedly remains that developed nations cannot compete now at such low prices.
- lvii UN Millennium development Goals and the shift to SGDs : <https://www.un.org/millenniumgoals/bkgd.shtml> Accessed April 12th 2023
- lviii UN Sustainable Development Goals were adopted in 2015, please see <https://sdgs.un.org/goals>
- lix The first international climate refugee-seeking case of Ioane Teitiota v The Chief Executive of Ministry of Business, Innovation and Employment: **[Citation No: SC 7/2015; NZSC 107]**. United Nations High Commissioner for Refugees. (2020, January 7). *Refworld* | *Ioane Teitiota v. New Zealand (advance unedited version)*. Refworld. Accessed Jan 06, 2023, from <https://www.refworld.org/cases,HRC,5e26f7134.html>
- lx German Institute of Development and Sustainability (IDOS), Mariya, Schraven, & Serraglio. (2020, February 24). *The implications of the UN's ruling on "climate refugees."* German Institute of Development and Sustainability (IDOS). <https://www.idos-research.de/en/the-current-column/article/the-implications-of-the-uns-ruling-on-climate-refugees-1/>
- lxi Manch, Thomas, Aug 2018, 'Humanitarian visa proposed for climate change refugees dead in the water' Stuff Co New Zealand: Environment [://www.stuff.co.nz/environment/106660148/humanitarian-visa-proposed-for-climate-change-refugees-dead-in-the-water](https://www.stuff.co.nz/environment/106660148/humanitarian-visa-proposed-for-climate-change-refugees-dead-in-the-water) , Accessed March 31st 2023; See also Dempster, Helen and Ober' Kayly 'New Zealand's 'Climate Refugee' Visas: Lessons for the Rest of the World' Refugees International Organisation / Reports, Jan 2020, <https://www.refugeesinternational.org/reports/2020/1/23/new-zealands-climate-refugee-visas-lessons-for-the-rest-of-the-world> Accessed March 31st 2023
- lxii Taylor, Liz, Thomson Reuters Foundation/ News APAC Nov 17th 2017. 'New Zealand considers visa for climate refugees from Pacific islands' <https://www.reuters.com/article/us-newzealand-climatechange-visa-idUSKBN1DH1JB> Accessed April 1st 2023
- lxiii UNOCHA Reliefweb publication of Jan 12th 2023 <https://reliefweb.int/report/philippines/philippines-2022-significant-events-snapshot-11-january-2023> Accessed 1st April 2023
- lxiv The Dhaka Tribune, Via Reuters, Aug 17th 2022, <https://www.dhakatribune.com/south-asia/2022/08/17/india-to-offer-shelter-to-rohingyas-in-delhi> Accessed April 1st 2023
- lxv The 1951 Geneva Convention on Refugees related to war and political strife, the key areas of concern after the world wars. Please see <https://www.unhcr.org/4ec262df9.pdf>.
- lxvi Bir. (2021, June 20). *Climate refugees "seeking asylum" in international law*. Anadolu Agency. <https://www.aa.com.tr/en/environment/climate-refugees-seeking-asylum-in-international-law/2279788>

- lxvii Delineation of Article 33 of 1951 Convention: UNHCR. (1951). *Article 33*. The 1951 Refugee Convention signed at Geneva <https://www.unhcr.org/4ca34be29.pdf>
- lxviii 'UN Global Compact on Refugees' Accessed Apr 17 2023, <https://www.unhcr.org/about-unhcr/who-we-are/global-compact-refugees>
- lxix Ibid, <https://www.aa.com.tr/en/environment/climate-refugees-seeking-asylum-in-international-law/2279788>
- lxx Report of International Displacement Monitoring Centre of Norwegian Refugee Council, 2018, <https://www.internal-displacement.org/global-report/grid2018/>; and its 2021 report at <https://www.internal-displacement.org/global-report/grid2022/> both Accessed April 1st 2023
- lxxi Missirian, A and Schlenker, W 'Asylum applications respond to temperature fluctuations' Science, Vol 358 No 6370, Dec 2017, <https://www.science.org/doi/10.1126/science.aao0432> Accessed April 1st 2023
- lxxii World Bank Report 'Groundswell: Preparing for Internal Climate Migration' <https://openknowledge.worldbank.org/entities/publication/2be91c76-d023-5809-9c94-d41b71c25635> Accessed 1st April 2023
- lxxiii Identifying the temporary solutions for the Climate Refugees or Migrants in the contemporary world at the earliest: Scissa, C. (2021, June 24). *Recognition and Protection of Environmental Migrants in International Law*. E-International Relations. Retrieved Jan 06, 2023, from <https://www.e-ir.info/2021/06/24/recognition-and-protection-of-environmental-migrants-in-international-law/>
- lxxiv See Task Force on Displacement and the working groups of experts under the Warsaw Executive Committee on Loss and Damage <https://unfccc.int/wim-excom> and Doha COP 18 2012 decisions at <https://unfccc.int/documents/7643#beg>
- lxxv https://unfccc.int/topics/adaptation-and-resilience/workstreams/loss-and-damage/warsaw-international-mechanism#__Enhancing-knowledge-and-understanding-of-comprehensive-risk-management-approaches-to-address-loss-and-damage-associated-with-the-adverse-effects-of-climate-change-including-slow-onset-impacts-by-facilitating-and-promoting
- lxxvi UNFCCC Conference of the Parties Twenty-seventh session Sharm el-Sheikh, 18 November 2022 Agenda item 7, Warsaw International Mechanism for Loss and Damage associated with Climate Change Impacts https://cop23.unfccc.int/sites/default/files/resource/cp2022_L05E.pdf Accessed Apr 1st 2023
- lxxvii Ibid
- lxxix The European Commission describes “temporary protection” under the TPD directive of 2001 as an “exceptional measure to provide immediate and temporary protection to displaced persons from non-EU countries and those unable to return to their country of origin”. The directive applies when “there is a risk that the standard asylum system is struggling to cope with demand stemming from a mass influx risking a negative impact on the processing of claims”. Quoted from <https://indianexpress.com/article/explained/everyday-explainers/temporary-protection-directive-why-has-eu-invoked-refugees-of-ukraine-war-7807000/>. See also Chiara Scissa, Ibid
- lxxx Ibid
- lxxxi For more on the European Union's Common European Asylum System please see: https://home-affairs.ec.europa.eu/policies/migration-and-asylum/common-european-asylum-system_en

REFERENCES

1. Aleksandrova, M., Schraven, B., Serraglio, D. (2020). *The implications of the UN's ruling on "climate refugees."* German Institute of Development and Sustainability (IDOS). <https://www.idos-research.de/en/the-current-column/article/the-implications-of-the-uns-ruling-on-climate-refugees-1/>
2. BBC. (2011). Germany: Nuclear power plants to close by 2022. *BBC News*. Accessed from <https://www.bbc.com/news/world-europe-13592208>
3. Bir. (2021, June 20). Climate refugees "seeking asylum" in international law. *Anadolu Agency*. Accessed from <https://www.aa.com.tr/en/environment/climate-refugees-seeking-asylum-in-international-law/2279788>
4. Blinken, A.J. (2021). The United States Officially Rejoins the Paris Agreement. *U.S Department of State, Press Release*. Accessed from <https://www.state.gov/the-united-states-officially-rejoins-the-paris-agreement/>
5. Bracholdt, C. (2013). China's about to surpass Germany's solar market thanks to some help from...Germany? *Quartz*. Accessed from <https://qz.com/41166/how-germanys-energy-transformation-has-turned-into-a-crisis>
6. Burschel, F. et al. (2019). Atlas of Migration. *Rosa Luxembourg Stiftung*. Accessed Jan 06, 2023 <https://www.rosalux.de/en/publication/id/40425/the-atlas-of-migration/#:~:text=The%20Atlas%20of%20Migration%20seek%20to%20change%20perspectives,objective%20debate%20within%20left-wing%20European%20parties%20and%20movements.>
7. Common European Asylum System in *Migration and Home Affairs*. European Union. Accessed from https://home-affairs.ec.europa.eu/policies/migration-and-asylum/common-european-asylum-system_en
8. Council, H. B. (n.d.). *Climate Change Background*. Hastings Online. Accessed Jan 06, 2023, from <https://www.hastings.gov.uk/my-council/climate-change/background/>

9. Genesis 6:13-9:29. *The Church of Jesus Christ of Latter Day Saints*. Accessed Jan 06, 2023
<https://www.churchofjesuschrist.org/study/manual/old-testament-seminary-teacher-manual/introduction-to-the-book-of-genesis/lesson-17-genesis-6-13-9-29?lang=eng>
10. Guterres, A. (2022, May 13). The Problem. *Climate Refugees*. Accessed Jan 06, 2023, from <https://www.climate-refugees.org/why>
11. *History of the Convention*. United Nations Climate Change. Accessed from <https://unfccc.int/process/the-convention/history-of-the-convention#Essential-background>
12. *Impact of Tsunamis on Ecosystems*. UN Atlas of the Oceans. Accessed from <http://www.oceansatlas.org/id/71687>
13. *Ioane Teitiota v. New Zealand (advance unedited version)*, CCPR/C/127/D/2728/2016, UN Human Rights Committee (HRC), (2020, January 7). Accessed from <https://www.refworld.org/cases,HRC,5e26f7134.html>
14. Issberner, L-J. and Lena, P. (2018). Anthropocene: the vital challenges of a scientific debate. *The UNESCO Courier*. Accessed Jan 06, 2023 from <https://en.unesco.org/courier/2018-2/anthropocene-vital-challenges-scientific-debate>
15. *Kyoto Protocol- Targets for the first commitment period*. The United Nations Climate Change. Accessed from <https://unfccc.int/process-and-meetings/the-kyoto-protocol/what-is-the-kyoto-protocol/kyoto-protocol-targets-for-the-first-commitment-period>
16. Lark, R. (2022). Is the United States in the Paris Climate Agreement? *Environment*. Accessed from <https://environment.co/is-the-united-states-in-the-paris-climate-agreement/>
17. Macgregor, S. (2009). A Stranger Silence Still: The Need for Feminist Social Research on Climate Change. *The Sociological Review* 57(2): 124-140. Accessed from https://journals.sagepub.com/toc/sora/57/2__suppl

18. Manch, T. (2018). Humanitarian visa proposed for climate change refugees dead in the water. *Stuff Co. New Zealand: Environment*. Accessed from <://www.stuff.co.nz/environment/106660148/humanitarian-visa-proposed-for-climate-change-refugees-dead-in-the-water> ,
19. McGlade, C., Schulz, R., and de Oliveira Bredariol, T. (202, September). Oil and Natural Gas Supply. *International Energy Agency*. Accessed from <https://www.iea.org/reports/oil-and-natural-gas-supply>
20. Millennium Development Goals and Beyond. Accessed from <https://www.un.org/millenniumgoals/bkgd.shtml>
21. Missirian, A. and Schlenker, W. (2017). Asylum applications respond to temperature fluctuations. *Science* 358 (6370). Accessed on 01 April 2023 from <https://www.science.org/doi/10.1126/science.aao0432>
22. Myers, N. (1979). *The Sinking Ark. A New Look at the Problem of Disappearing Species*. Pergamon Press.
23. Myers, N. (1993). *Ultimate Security: The Environmental Basis of Political Stability* WW Norton & Company, Inc.
24. Myers, N., Mittermeier, R., Mittermeier, C. *et al.* (2000). Biodiversity hotspots for conservation priorities. *Nature* 403, 853–858. <https://doi.org/10.1038/35002501>
25. Navarre, B. (2022). Inside Poland's Drastic Immigration Reversal. *US News*. Accessed from <https://www.usnews.com/news/best-countries/articles/2022-03-08/the-russia-ukraine-conflict-highlights-polands-complicated-history-with-refugees>
26. Nelson V., Meadows K., Cannon T., Morton J., and Martin A. (2002). Uncertain predictions, invisible impacts, and the need to mainstream gender in climate change adaptations. *Gender and Development* 10 (2): 51–59.
27. OCHA. (2022, October). Extreme Heat: Preparing for the Heatwaves of the Future. *IFRC, OCHA, Climate Centre*. Accessed 06 Jan 2023 from <https://www.ifrc.org/sites/default/files/2022-10/Extreme-Heat-Report-IFRC-OCHA-2022.pdf>

28. OCHA. (2023). Philippines: 2022 Significant Events Snapshot (Infographic). *OCHA Services, Reliefweb*. Accessed from <https://reliefweb.int/report/philippines/philippines-2022-significant-events-snapshot-11-january-2023>
29. Owen-Burge, C. (2021, August 17). Climate refugees – the world's forgotten victims. *Climate Champions*. Retrieved Jan 06, 2023, from <https://climatechampions.unfccc.int/climate-refugees-the-worlds-forgotten-victims/>
30. Piguet, E. (2008, January). *New Issues in Refugee Research - Climate Change and Forced Migration*. UNHCR. Retrieved Jan 06, 2023, from <https://www.unhcr.org/uk/47a316182.pdf>
31. Ravenstein, E. G. (1885). *The Laws of Migration*. United Kingdom: Royal Statistical Society.
32. Raza, M.R. and Shekhar, R. (2020). Climate Crisis, Migration and Refugees: Bridging the Legal Protection Gap for a Sustainable Future. *Refugee Law Initiative Blog*. Accessed Jan 06, 2023 from <https://rli.blogs.sas.ac.uk/2020/07/29/climate-crisis-migration-and-refugees-bridging-the-legal-protection-gap-for-a-sustainable-future/>
33. Reuters. (2022, August 17). India backtracks on support for Rohingya refugees, will deport them. *Dhaka Tribune*. Accessed from <https://www.dhakatribune.com/south-asia/2022/08/17/india-to-offer-shelter-to-rohingyas-in-delhi>
34. Sadat, N. (2012). Small Islands, Rising Seas. UN Chronicle. Accessed on 06 Jan 2023 from <https://www.un.org/en/chronicle/article/small-islands-rising-seas>
35. Scissa, C. (2021, June 24). Recognition and Protection of Environmental Migrants in International Law. *E-International Relations*. Retrieved Jan 06, 2023, from <https://www.e-ir.info/2021/06/24/recognition-and-protection-of-environmental-migrants-in-international-law/>
36. Shellenberger, M. (2021). China Helped Make Solar Power Cheap Through Subsidies, Coal and Allegedly Forced Labour. *Forbes*. Accessed from

<https://www.forbes.com/sites/michaelsellenberger/2021/05/19/china-made-solar-cheap-through-coal-subsidies--forced-labor-not-efficiency/?sh=21eec09e71ec>

37. Sinclair-Blakemore, A. (2020). Teitiota v New Zealand: A Step Forward in the Protection of Climate Refugees under International Human Rights Law? *Oxford Human Rights Hub*. Accessed from <https://ohrh.law.ox.ac.uk/teitiota-v-new-zealand-a-step-forward-in-the-protection-of-climate-refugees-under-international-human-rights-law/>
38. Taylor, L. (2017, November 17). New Zealand considers visa for climate 'refugees' from Pacific islands. *Thomson Reuters Foundation*. Accessed from <https://www.reuters.com/article/us-newzealand-climatechange-visa-idUSKBN1DH1JB>
39. The Clean Development Mechanism in *The Kyoto Protocol*. United Nations Climate Change. Accessed from <https://unfccc.int/process-and-meetings/the-kyoto-protocol/mechanisms-under-the-kyoto-protocol/the-clean-development-mechanism>
40. The Doha Amendment in *The Kyoto Protocol*. United Nations Climate Change. Accessed from <https://unfccc.int/process/the-kyoto-protocol/the-doha-amendment>
41. The Editors of Encyclopedia Britannica. (2023, March). Indian Ocean tsunami of 2004. *Encyclopedia Britannica*. Accessed from <http://www.oceansatlas.org/id/71687>
42. *The Executive Committee of the Warsaw International Mechanism for Loss and Damage*. United Nations Climate Change. Accessed from <https://unfccc.int/wim-excom>
43. UN Climate Press Release. (2022, October). COP27 Reaches Breakthrough Agreement on New “Loss and Damage” Fund for Vulnerable Countries. United Nations Climate Change.
44. UNEP. (1972). *Stockholm Declaration*. UNEP. Accessed from <https://wedocs.unep.org/bitstream/handle/20.500.11822/29567/ELGP1StockD.pdf>

45. UNFCCC, Secretariat. (2013). *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.* COP18. Accessed from <https://unfccc.int/documents/7643#beg>
46. UNHCR. *1951 Refugee Convention.* UNHCR: India. Accessed from unhcr.org/1951-refugee-convention.html
47. United Nations Sustainable Development. (1992). *Agenda 21.* United Nations Conference on Environment and Development, Rio de Janeiro. Accessed from <https://sustainabledevelopment.un.org/content/documents/Agenda21.pdf>
48. Warsaw International Mechanism for Loss and Damage associated with Climate Change Impacts (WIM). Accessed from https://unfccc.int/topics/adaptation-and-resilience/workstreams/loss-and-damage/warsaw-international-mechanism#_Enhancing-knowledge-and-understanding-of-comprehensive-risk-management-approaches-to-address-loss-and-damage-associated-with-the-adverse-effects-of-climate-change-including-slow-onset-impacts-by-facilitating-and-promoting
49. World Bank Report 'Groundswell: Preparing for Internal Climate Migration' <https://openknowledge.worldbank.org/entities/publication/2be91c76-d023-5809-9c94-d41b71c25635>
50. n.d. Dwarka, 12,000 Year Old City of Lord Krishna in Gujarat. *Gujarat Expert.* Accessed from <https://www.gujaratexpert.com/dwarka-history/>
51. (2020, April 02). By refusing refugees, Poles, Hungarians and Czechs 'broke EU law'. *Al Jazeera.* Accessed from <https://www.aljazeera.com/news/2020/4/2/by-refusing-refugees-poles-hungarians-and-czechs-broke-eu-law>
52. (2020, October 08). Doha Amendment to Enter into Force. *SDG Knowledge Hub.* Accessed from <https://sdg.iisd.org/news/doha-amendment-enters-into-force/>

53. (2021, September 17). Who is a climate refugee? *The Third Pole*. Accessed Jan 06, 2023, from <https://www.thethirdpole.net/en/hub/climate-refugees/>
54. (2022, March 10). What is the Temporary Protection Directive of 2001, and why has the EU invoked it for refugees of the Ukraine war? *Indian Express*. Accessed from <https://indianexpress.com/article/explained/everyday-explainers/temporary-protection-directive-why-has-eu-invoked-refugees-of-ukraine-war-7807000/>
55. (2022, October). These are some of the unexpected impacts of heatwaves. *World Economic Forum*. Accessed from <https://www.weforum.org/agenda/2022/10/heatwaves-unexpected-impact-diverse-communities/>
56. (2022, 18 November) *Agenda item 7, Warsaw International Mechanism for Loss and Damage associated with Climate Change Impacts*. UNFCCC Conference of the Parties Twenty-seventh session, Sharm el-Sheikh. Accessed on 01 April 2023 from https://cop23.unfccc.int/sites/default/files/resource/cp2022_L05E.pdf
57. (2022). Coal 2022: Executive Summary. *International Energy Agency*. Accessed from <https://www.iea.org/reports/coal-2022/executive-summary>
58. (2022). Climate Change 2022: Mitigation of Climate Change. *IPCC*. Accessed from <https://www.ipcc.ch/report/ar6/wg3/>