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Human Rights & Climate Change: Environmental Migration and the Role of UNESCO.

UNESCO'S CONTRIBUTION ON THE GLOBAL STAGE

Versione in Inglese con Abstract e Introduzione in Italiano

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Abstract

Questo saggio tratta la tematica delle migrazioni forzate e degli spostamenti ambientali. Negli ultimi anni, infatti, i fenomeni legati ai cambiamenti climatici hanno suscitato molta preoccupazione nella comunità intenrnazionale, con riferimento nello specifico all'intesificazione degli spostamenti migratori sia interni che transfrontalieri. Dal momento che la Convenzione Relativa allo Statuto dei Rifugiati del 1951, anche conosciuta come Convenzione di Ginevra, si è dimostrata inadeguata nel riconoscimento e protezione delle popolazioni colpite, nuove iniziative si sono sviluppate all'interno della comunità intenrnazionale. Le molte ipotesi relative agli sfollati ambientali e la complessità dell'argomento mettono alla luce la necessità di un approccio transdisciplinare di studio. Al fine di fornire delle risposte soddisfacenti, questo saggio prende in considerazioni diverse fonti, nello specifico cerca di dimostrare l'evidenza empirica attraverso il database dell'Internal Displacement Monitoring Centre (IDMC). Per quanto riguarda la complessità del tema trattato, vengono presi in considerazione da un lato il piano d'azione portato avanti dall'UNESCO in riferimento ai rifugiati ambientali, dall'altro due casi di studio emblematici: La storica guerra per l'acqua fra Israele e Palestina, e la graduale sommersione delle isole di Tuvalu e Kiribati nell'Oceano Pacifico.

Keywords: *Climate Change; Environmental migration; Geneva Convention; Global Compact; 2030 Agenda; SDG; Transdisciplinary; UNESCO.*

Contents

List of Abbreviations

BIOPALT: French acronym for biosphere and heritage of Lake Chad

COP21: United Nations Climate Change Conference (2015)

COVID-19: Corona Virus Disease

CSR: Convention on the Status of Refugees

ECOSOC: United Nations Economic and Social Council

EWASH: Emergency Water, Sanitation and Hygiene group

GDPR: General Data Protection Regulation

GMC: Global Compact on Safe, Orderly and Regular Migration

GMG: Global Migration Group

GRID: Global Report on Internal Displacement

H2020: Horizon 2020 EU Commission Project

HD: High Definition

ICCPR: International Covenant on Civil and Political Rights

ICT: Information Communications Technology

IDMC: Internal Displacement Monitoring Centre

IDP: Internally Displaced Person

ILO: International Labour Organisation

IOM: International Organisation for Migration

IPCC: Intergovernmental Panel on Climate Change

MICIC: Migrants in Countries in Crisis

MIL: Media and information literacy

MOST: Management of Social Transformations programme

OECD: Organisation for Economic Co-operation and Development

PAC: Pacific Access Category (Visa)

PIPA: Phoenix Island Protected Area

SDG: Sustainable Development Goal

SFDRR: Sendai Framework for Disaster Risk Reduction

SHS: Social and Human Sciences Sector

SIDS: Small Island Developing States

TVET: Technical and Vocational Education and Training

U.S: United States

UIS: UNESCO Institute for Statistics

UN: United Nations

UNCCD: United Nations Convention on Combat Desertification

UNESCO: United Nations Educational, Scientific and Cultural Organisation

UNFCCC: United Nations Framework Convention on Climate Change

UNFPA: United Nations Population Fund

UNHCR: United Nations High Commissioner for Refugees

UNRWA: United Nations Relief and Works Agency

WNBR: World Network of Biosphere Reserves

MAB: Man and the Biosphere programme

WRLs: World Reference Levels

Introduzione: Una Visione d'Insieme sulle Migrazioni Ambientali.

Il cambiamento climatico antropogenico rappresenta una minaccia per una vasta gamma di diritti fondamentali, come il diritto alla vita, all'alimentazione, ad un'abitazione decorosa, alla salute, all'acqua potabile e alla proprietà. In quanto fenomeno globale, il cambiamento climatico costituisce una patogenia ifortemente interdipendente e interconnessa ai diritti umani, come viene specificato anche dalla Dichiarazione Universale dei Diritti Umani.

In generale, gli individui più vulnerabili alle conseguenze catatrofiche dei cambiamenti climatici sono coloro che si trovano in una situazione di marginalizzazione, indipendentemente dal livello di industrializzazione del paese in cui risiedono o dalla cultura. Per dare degli esempi: i piccoli agricoltori, le donne che risiedono in aree rurali, coloro che non hanno accesso ad acqua potabile sicura, assistenza sanitaria o provvidenza sociale, i rifugiati o sfollati interni, e i poveri che vivono già al limite della sopravvivenza; questi soggetti vengono influenzati in modo sproporzionale dalle conseguenze dirette dei cambiamenti climatici.

Di conseguenza, il cambiamento climatico influenza largamente le migrazioni umane. Ogni anno, milioni di persone sono costrette a spostarsi per un numero svariato di cause: come l'erosione costiera, le inondazioni litoranee o le perturbazioni che colpiscono l'agricoltura. Recenti ricerche mostrano che questi spostamenti forzati avvengono per la maggior parte all'interno dei confini nazionali, piuttosto che fra paesi. Su scala globale, le migrazioni per cause ambientali coinvolgono quantomeno 25 milioni di persone all'anno (Miletto et al., 2017). La Banca Mondiale (WB) stima che, entro il 2050, gli spostamenti interni per cause ambientali coinvolgeranno 140 milioni di individui, con particolare attenzione a tre aree in via di sviluppo: l'Africa Sub-Sahariana, il Sud-Est Asiatico e l'America Latina[1].

Nonostante la rilevanza dell'argomento, non esiste una definizione universalmente accettata di rifugiato ambientale. La voce '*climate refugee'* non è, infatti, approvata dall'Alto Commissariato delle Nazioni Unite per i Rifugiati (UNHCR), disastri ambientali e del cambiamento climatico sono proposti i termini *'persons displaced'* (Goodwin-Gill &

[1] Per maggiori informazioni vedere: : here.

McAdam, 2017) o '*environmental migrants'* (IOM, 2019)[2]. In ogni caso, l'Organizzazione Internazionale per le Migrazioni (IOM) definisce le migrazioni climatiche come:

> Lo spostamento, all'interno di uno Stato o attraverso un confine internazionale, di una persona o un gruppo di persone, che sono obbligate a lasciare il loro luogo abituale di residenza, o scelgono di fare ciò, sia in modo temporaneo che permanente, prevalentemente per via di un cambiamento improvviso o progressivo nel loro ambiente a causa del cambiamento climatico (Chazalnoël & Ionesco, 2016; IOM 2019)[3].

La Banca Mondiale propone delle politiche di contrasto generalizzate, come il taglio delle emissioni globali di gas serra con lo scopo di ridurre la pressione climatica, o l'aggiustamento dei piani di sviluppo in base all'intero ciclo delle migrazioni climatiche, o ancora investire nella ricerca al fine di facilitare, a livello statale, la comprensione dell'andamento e delle traiettorie migratorie interne (World Bank, 2018). Ogni persona rappresenta una storia a sé, ciò nonostante, trovare una soluzione comune a questo problema globale è fondamentale…

Prima di tutto, è necessario che il problema venga propriamente riconosciuto, affinché una soluzione possa essere trovata. Essendo un argomento con molteplici sfaccettature e limitazioni (per esempio nell'educazione, inclusione sociale e accumulazione dei dati), lo studio delle migrazioni ambientali richiede un approccio multidisciplinare: un concetto che è bene presente nella missione dell'UNESCO. Vale a dire promuovere la cooperazione fra gli stati attraverso l'educazione, la scienza e la cultura, con il fine ultimo del rispetto universale dei diritti umani e delle libertà fondamentali. Perciò, questo paper si occupa di rispondere alle seguenti domande:

> Quale è lo status (legale) degli sfollati ambientali nel contesto del diritto internazionale?

[2] In italiano, rispettivamente, '*sfollati'* e '*migranti ambientali*'.
[3] In inglese: '*the movement, within a State or across an international border, of a person or groups of persons, who are obliged to leave their habitual place of residence, or choose to do so, either temporarily or permanently, predominantly for reasons of sudden or progressive change in their environment due to climate change'* (Chazalnoël & Ionesco, 2016; IOM 2019).

Perché la questione degli sfollati ambientali deve essere posta come un problema cruciale che necessita un'azione collettiva? e

Quale è il contributo dell'UNESCO?

Al fine di rispondere a queste domande nel primo capitolo verrà analizzato il framework internazionale degli sfollati ambientali, con un focus specifico sul suo ruolo nel diritto internazionale. Nel secondo capitolo, vengono proposte le fonti dei dati e l'evidenza empirica, cercando di evidenziare la scala del fenomeno. Il terzo capitolo si addentra nell'analisi di due casi di studio, con il fine di dare il giusto rilievo alle condizioni reali e alla complessità delle vite di coloro che sono quotidianamente colpiti dal cambiamento climatico. Per concludere, l'enfasi è spostata sul piano d'azione transdisciplinare dell'UNESCO.

Chapter I: International framework: Legal status of the environmentally displaced persons.

1.1. International law protection gaps: Why not the Geneva Convention (1951)?

In spite of their critical condition, environmental migrants have limited rights afforded to them beyond those of traditional migrants, principally, due to a failure of bureaucracy. Notably, contemporary international law governs solely political refugees – those who are fleeing persecution – and does not extend to climate refugees (Atapattu, 2018).

According to the 1951 Geneva Convention on Refugees, adopted in the aftermath of World War II, a refugee is a person who:

> owing to well-founded fear of being persecuted for reasons of race, religion, nationality, membership of a particular social group or political opinion, is outside the country of his nationality and is unable or, owing to such fear, is unwilling to avail himself of the protection of that country; or who, not having a nationality and being outside the country of his former habitual residence as a result of such events, is unable or, owing to such fear, is unwilling to return to it (Article 1, Convention Relating to the Status of Refugees, 1951; UNHCR, 2010).

As it is implied, the basis of any refugee's claim appears to be a single individual's sentiment and that constitutes a well-established fear for its origin and quality. Another insinuation dictates that the original intent of the Geneva Convention is focused on the individual scope, rather than collective groups. Nevertheless, environmental catastrophes whether natural (e.g. tropical cyclones), semi-natural where human contribution is less crucial (e.g. floods, tsunamis) or human-determined (e.g. melting ice and permafrost in the Artic, rising sea levels) affect a wider number of population.

Effects of the climate change are asymmetrical and possibly disastrous for the less-developed countries whereby people are lead to either cross-border or internal migration. Provably, the very same reasons that exhort them to forced migration are phenomena unevenly understood by the receiving countries or governments (Westra, 2009). For instance, desertification or land degradation is a crucial topic for Somalia albeit not equally essential for Russia.

However, what should be highlighted here is the role of the Global Citizenship concept. To be more elaborative, the necessity of a new citizenship, beyond the nation state, where climate change and its effects will be dealt collectively. Meaningfully, the development of co-belonging in a broader community and common humanity that will serve the role of a collective receptor for the global dimension pathogenies (UNESCO, 2015).

Only then, problems such as desertification or land degradation will be understood equally and hence the status of the environmentally displaced will be evaluated on a more rational basis by the receiving countries. To give an illustration, empirical data argue that land degradation has been determinant factor to rural-urban migration within Mexico and from Mexico to U.S. In consequence, 700.000 to 900.000 migrate from Mexico's drylands per annum (UNCCD, 2012). Yet, even if degradation combat is a matter of survival for Mexicans, their migration to U.S remains problematic due to political reasons.

On the other end, environmental 'refugees' migrate from exposed rural areas to cities within their own country. Likewise, unprepared and/or unwilling to assimilate them and to support even fundamental necessities. Their displacement increasingly leads to loss of assets, isolation from markets, labour market discrimination, limited access to formal labour markets

due to legal barriers such as documentation requirements, and the loss of social networks and support systems (Huang and Graham, 2019).

What is noteworthy is that environmental displacement impacts women and men differently, as challenges and opportunities are very much dependent on gender roles and societal norms. Principally, the number of female migrants doubled between 1960-2015. In 2013, female share of international migrants was estimated at 48.2%, with 52% of them being settled in Europe. Moreover, dissimilar immigration rules might be applicable when it comes to work permit or refugee status eligibility based on gender as it is widely argued, for example, that women are more often than men denied full citizenship (UNESCO, 2019).

Even so, in Sub-Saharan Africa, where male out-migration is dominant, women's workload increases as they take up traditional male roles albeit without the acquisition of the same rights (i.e. participation in natural resource management). Likewise, women are forced to make trade-offs, ensuring clean water to safeguard children and completing further chores or foregoing family care due to lengthy distances for water collection. By default, that workload hinders women's access to paid labor and/or education (Miletto et al., 2017).

Taking it a bit back, another important remark is that acquisition of refugee status under the 1951 Convention, pertains to *fleeing violence* or *persecution*. Thus, even though displacement and starvation can be caused, climate change does not engage in violence; and desertification and sea level rise do not discriminate based on race or political persuasion. What is more, due to the idiosyncratic language of the Geneva Convention, environmentally displaced persons are afforded none of the protections that refugees would typically be provided under international law (Rafferty, 2018).

As follows, national governments find themselves in an unenviable position as their obligation to apply the Convention on the Status of Refugees (CSR) to refugees at their borders often collides with the firm opinion of their constituents regarding these admissions. As a matter of fact, public opinion tends to be reluctant either expressing mistrust for the 'system-abusers', or robust rejection. Specifically, such 'clichés' often occur in weaker domestic economies with high unemployment, where all asylum seekers are perceived as usurpers or unfair 'contenders' for the Western countries' 'real' citizens in job hunting (Westra, 2009).

Consequently, people subjected to enforced mobility due to climate reasons are not officially accepted as legitimate refuge seekers, but rather as internally displaced persons (IPDs), not qualified to claim refugee status. Therefore, they may or may not, pertain to the regional treaties such as Kampala Convention (2009). Notwithstanding, primary responsibility rests with their territorial state and UN has no legal authority to safeguard persons within their own country (Westra, 2009).

With regard to the Kampala Convention, the acknowledged forced fleeing/persecuted reasons are: armed conflict effects, situations of generalised violence, violations of human rights or natural or human-made disasters (Article 1, Convention of Kampala; UNHCR, 2019). However, that convention constitutes a regional treaty based on the Guiding Principles applicable to Africa and hence is not a universal tool for the protection of the environmentally displaced.

Equally important gaps exist in the context of humanitarian law. Namely, the only instrument that defined governments' obligations –though non-binding- was the ILO Convention No.169 whereby mentions that: 'Governments shall take measures, in co-operation with the peoples concerned, to protect and preserve the environment of the territories they inhabit' (Article 7, Indigenous and Tribal Peoples Convention). Besides the non-binding connotations, the spectrum of the Convention solely protected indigenous people.

Despite of a relatively slow mobilisation climate negotiators, recently, demonstrate a dynamic approach towards the global concern of climate change. Provably, due to the fact that it is a newly-emerged topic, Geneva Convention proved to be insufficient in ensuring the legal status of environmental refugees. Above all, gaps in the international law highlighted the necessity for the establishment and protection of a new category…

1.2. Current international framework: The development of new initiatives and UN's contributions.

For an extended period, the recognition of environmental/climate refugees as a distinct category, in need of protection, was the 'apple of discord' within international law. Nonetheless, important progress has been made through advanced proposals. In 2012, the

Nansen Initiative, based upon a pledge made by the governments of Switzerland and Norway, recognised forced displacement related to disasters, and contributed to a protection agenda focused on cross-border displacements.

On the other hand, the Peninsula Principles on Climate Displacement (2013) endorsed the mission of providing a normative framework, protection and assistance principles focused on internal displacement. In 2015, climate displacement was mentioned in climate documents at COP21 for the first time (Paragraph 50, Part III, Adoption of the Paris Agreement). The following year, Paris Agreement entered into force on 4th November. In the meantime, a taskforce to avert, minimise and address climate displacement had been scheduled.

Likewise, from 2016 onwards, the collaboration between the UN and IOM re-addressed the issue of environmental migration internationally. In December 2018, a distinguished normative initiative was born from the *Global Compact on Safe, Orderly and Regular Migration (GCM)*[4] adoption by the majority of the UN Members.

Predominantly, a *non-binding document*, the first inter-governmentally negotiated agreement, prepared under the auspices of the UN, Global Compact, covers all dimensions of international migration. It is consisted of three pillars: Drivers of Migration, Human Rights and Protection of Migrants in vulnerable situation.

As regards, the first part designates environmental degradation, disasters and climate change contribution for the intensification of migration and displacement flows suggesting preventive measures (e.g. disaster risk reduction). The second, points out the affected human rights such as: access to water, sanitation, food, housing, health, and self-determination. Finally, the last part defines the '*situational vulnerability*' as circumstances of risk en-route or in countries of destination for migrants including conflict, disaster, or other humanitarian crisis (Annex II, New York Declaration for Refugees and Migrants; UNHCR, 2017).

Simultaneously, each section classifies the appropriate (international) instruments where each topic pertains separately. In essence, though, major aspects of migrant protection

[4] Set in motion by the annex II of the New York Declaration for Refugees and Migrants adopted by 193 UN Members in 2016.

(e.g. rescue, appropriate reception arrangements) evidently relies on the contribution of each state. Accordingly:

- Drivers of Migration: UNFCCC Paris Agreement and the Sendai Framework[5] on Disaster Risk Reduction.
- Human Rights: Nansen Initiative Protection Agenda, MICIC[6], and UNHCR guidance and instruments (i.e. 10 Point Plan in Action[7]).
- Protection of Migrants in Vulnerable Situations: UNHCR's 10 Point Plan in Action

Last and yet not least, the 2030 Agenda for Sustainable Development (2030 Agenda) embedded Sustainable Development Goals (SDGs) set the target framework on both climate change and migration, although their interconnectivity seems to be a work in progress. Significantly, SDG 13 focuses on climate change and calls governments to take urgent action to combat its impacts. On the other hand, SDGs 8, 10 and 17, through inequality reduction, full & productive employment and strengthening of the Global Partnership for Sustainable Development, point to the need for well-planned migration policies (UN, 2015).

Essentially, the new international legal framework laid the foundations for the definition of the *environmental/climate migrants* as a category to be protected. On that grounds, the Paris Agreement and Global Compact should be considered as milestones. However, raising awareness and protecting fundamental human rights of those in suffering of the climate change consequences constitutes an inter-governmental matter.

Therefore, migration as an adaptation strategy should be organised at individual or state level. Where not appropriately managed or facilitated, migration could increase vulnerability, for instance, though the disruption of social networks, a lack of jobs at arriving locations or marginal accommodation in areas of high risk (Tulloch et al., 2016; Olsen, 2009).

[5] The Sendai Framework (SFDRR), focuses on displacement in response to extreme events.
[6] The Migrants in Countries in Crisis (MICIC) Initiative, is a government-led effort co-chaired by the United States and the Philippines, aimed to improve the protection of migrants when the countries in which they live, work, study, transit, or travel experience a conflict or natural disaster.
[7] The 10 Point Plan in Action includes: 1. Cooperation among key partners 2. Data collection and analysis 3. Protection-sensitive entry systems 4. Reception arrangements 5. Mechanisms for profiling and referral 6. Differentiated processes and procedures 7. Solutions for refugees 8. Addressing secondary movements 9. Return arrangements for non-refugees and alternative migration options 10. Information strategy. For more information, see: UNHCR (2011), 'Refugee protection and Mixed Migration; The 10-Point Plan in action', Imprimerie Centrale, Luxembourg. Available online: here.

Simultaneously, efforts ought to lead to appropriate mechanism for those that desire but do not have the capacity to migrate due to climate risks.

Could the states be committed enough and abide by the principles of the Paris Agreement, catastrophic consequences that give rise to displacement will minimise. In other words, respect of the Paris Agreement is of critical importance for the national adaptation planning processes, as issues of justice, equity and accountability are fundamental if climate-resilient development goals are to be achieved (Stapleton et al., 2017). After all, environmental sustainability would not only benefit the displaced, but earth's Global Citizens.

Another recommendation would require supporting countries to develop meaningful, risk informed policies and efficient resources allocation, essential to tackle the concerns human mobility raises. Coupled with comprehension of the environmental migration, associated opportunities, reduction of the costs of mobility and the vulnerability of migrants will contribute to in-situ confrontation of the problem (Stapleton et al., 2017). For this, concrete proposals need to be introduced in the context of international law.

Alternatively, respecting the principles of the Global Compact framework will require the collaboration of the relevant international instruments but more importantly governments. Either internal or cross-border, climate change displacement demands collective action. Global Compact Local Networks and Action platforms provided by the UN aim to enhance collaboration between governments, private companies and civil society and advance national SDG priorities. Thus, the provided UN framework has hitherto progressed dynamically albeit governments are at the helm of adapting their national policies…

Chapter II: Empirical evidence on Environmental Migration.

2.1. Data sources and limitations

According to the UN, as of 2019, 272 million people approximately were living outside their state of origin[8]. Of those forced from their homes due to persecution, war and violence

[8] See UNDESA, International migrant stock 2019. Available online: here.

41.3 million people were estimated to be living in an internal displacement and 25.9 million are refugees, IDMC argues (IDMC, 2019a).

However, the process of allocating the flows solely or partially because of climate-related hazards has been proved challenging. Storms, floods and droughts have occurred for millennia, and while climate change is demonstrably altering the nature of climate-related hazards and trends, not every hazard is completely attributable to or influenced by climate change (Peterson et al., 2012).

Factually, not all states collect data on immigration or numbers of refugees and IDPs on regular basis whereas collection and reporting methods might significantly alter (Ginnetti, 2017; Lucas, 2015). Further, inter alia, challenges include double counting of cross-border migrants and refugees, sluggish asylum registration processes while cumulative counting of international migrants in some datasets is often misleading (Butler, 2017).

Moreover, a plethora of agencies comprised by the IDMC, the Red Cross/Red Crescent and the UN Refugee Agency (UNHCR) collect annual data, yet their methods and datasets are frequently non-comparable, both with each other and/or with national data (Stapleton et al., 2017). In retrospect, displacement by hazard categories is only available through separate reports mostly from IDMC.

Notwithstanding, tracking cross-border movement flows data is almost impossible, hereby it constitutes the ultimate challenge. Due to lack of data, drawing relationships between cross-border movement and climate migration is unrealistic, thus internal displacement databases remain researchers' sole tool in that aspect. Allegedly, only few exceptions (e.g. in Latin America, islands[9]) prove that climate migration takes place within the national borders (Butler, 2017).

As regards IDMC database, cross-border migration has been causal mostly of conflict and violence but is also documented in the case of natural disasters. Yet, there is no separation of cross-border and internal migration in the dataset. In principle, IDMC adopts Nansen

[9] Threatened by sea level rise.

Initiative's definition on disaster displacement which pertains to natural hazards and contains both internal cross-border movement[10].

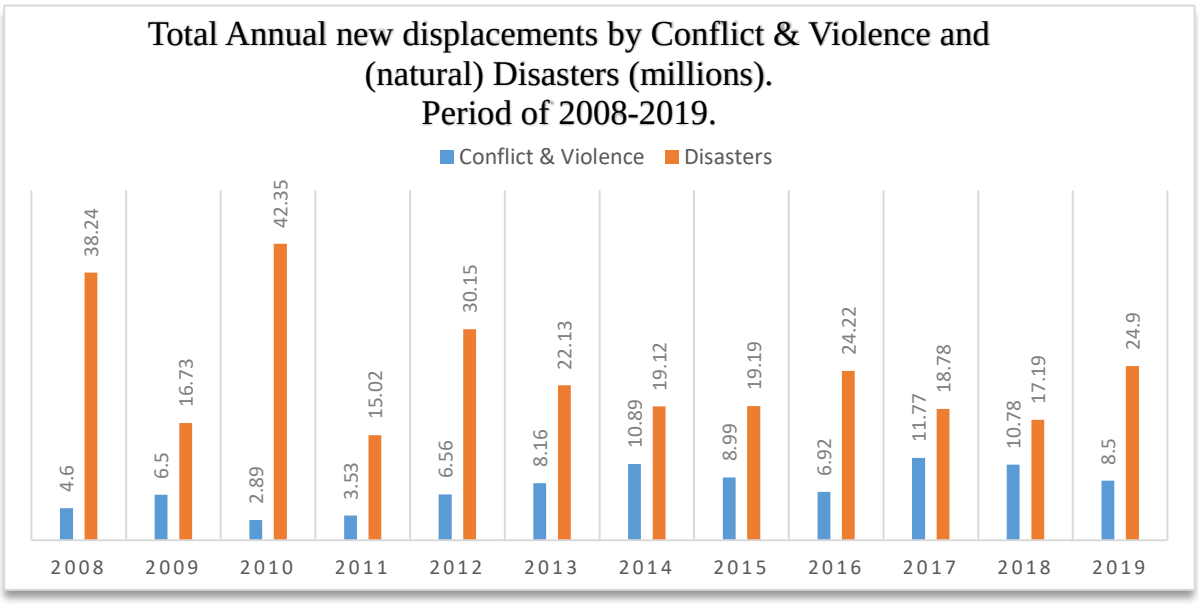
In the light of the aforementioned, two conclusions are drawn. First, defining the environmental migration as portion in the pie of total migration is de facto unattainable. Second, in order to give prominence to cross-border environmental migration partial focus of this paper will be on case-study research.

2.2. Global trends of Environmental Migration

Should it be clear hitherto, the majority of quality data regarding environmental migration stems from IDMC. According to the Global Internal Displacement Database, documentation of empirical evidence for displacements due to (environmental) disasters initiates from 2008. Thus, considerable global patterns can be observed during the decade of 2008-2018 as follows.

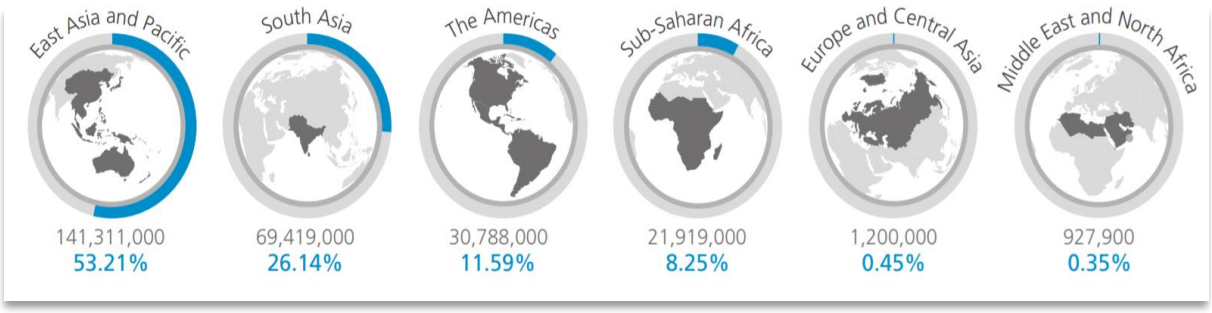
Evidently, displacements due to disasters, conventionally, outnumber those of conflict and violence throughout all the decade (see figure 1). In 2008 (38.24 million), 2010 (42.35 million) and 2012 (30.15 million) not only were they disproportionally higher compared to conflict and violence but they were indeed record-breaking. However, since 2013 with few exceptions (i.e. 2016, 2019) the gap between the two categories deescalated as (natural) disaster displacements remain relatively stable (from 19 to 24 millions) yet pessimistically those related to conflict and violence increase.

[10] For more information, see: IDMC (2019), 'Disaster Displacement; A global review 2008-2018', pp. 10. Available online: here.



1.Figure 1: Total Annual new displacements by Conflict & Violence and (natural) Disasters (millions), 2008-2019. Source: IDMC.

In respect to the regional distribution of the disaster displacements, patterns seem to be quite clear (see map 1). According to IDMC, more than 80 % or around 200 million of all new displacements between 2008-2018, have occurred in the Asia-Pacific region, thus predominantly in East Asia, the Pacific and South Asia (IDMC, 2019). In the second place, with considerably lower percentage, stands the American continent (11.59%) and in the third Sub-Saharan Africa (8.25%). Last and indeed least are Europe and Central Asia (0.45%) along with Middle East and North Africa (0.35%), where numbers show anemic displacement.

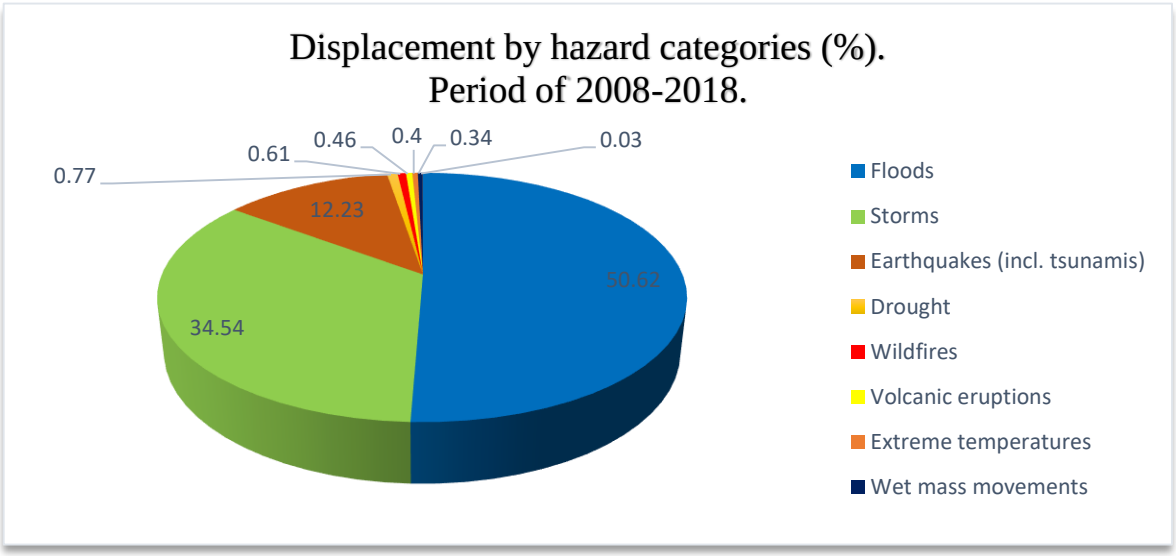


1.Map 1: Regional distribution of disaster displacement 2008-2018. Source: IDMC (2019), 'Disaster Displacement; A global review 2008-2018'.

Delving into the (natural) disasters displacement patterns, a reference to the origins and classification of the most dangerous environmental hazards is noteworthy (see figure 2). Accordingly, between 2008-2018, 87.27% of the displacements were triggered by weather-

related hazards and only 12.73% from geophysical ones. The most evident weather-related were floods (50.62%) and storms (34.54%) while geophysical hazard data allude mostly to earthquakes/tsunamis (12.23%).

Indicatively, important events that contributed to vast augmentations were: The 7.0Mw earthquake of 2010, in Haiti[11] (2.3 million), Indian monsoon floods and Nigeria floods in 2012 (6.9 and 6.09 million respectively) (Guardian, 2013). More recent events include: The powerful typhoon Mangkhut of 2017, in Phillipines (1.6 million) (IDMC, 2019a).



2.Figure 2: Displacement by hazard categories (%), 2008-2018. Source: IDMC (2019), 'Disaster Displacement; A global review 2008-2018'.

After a cross-examination between the data of the Notre Dame (ND-GAIN index) and climate-related displacements one can have a diverse scope on the topic (see table 1). Accordingly, taking into account the degree of the exposure to climate change along with the institutional and social readiness, conclusions are drawn regarding the vulnerability of each country to environmental hazards.

Seemingly, the most vulnerable countries to climate change (lowest scoring) are located in Africa with two exceptions (i.e. Haiti and Afghanistan). What is interesting, is that, at least for 2018, except Somalia, Afghanistan and less Sudan displacements were not particularly high. In addition, there were not available data for Eritrea in the IDMC database.

[11] See IDMC, Country Overview (Haiti): here.

Inarguably, climate-related displacements constitute a topic of high concern on global scale. However, neither the number of displacements are particularly high compared to most-affected countries of 2018 (e.g. Philippines – 3.8 million), nor to their total population. For instance, Chad's (2nd most vulnerable globally) displacements of 2.000 persons are not disproportionally high in comparison to its approximate population of 16 million. Therefore, in that case one should consider that African displacements, according to IDMC, are mostly conflict-related and more prominently that current living conditions of Africans might as well limit their capacity for mobility.

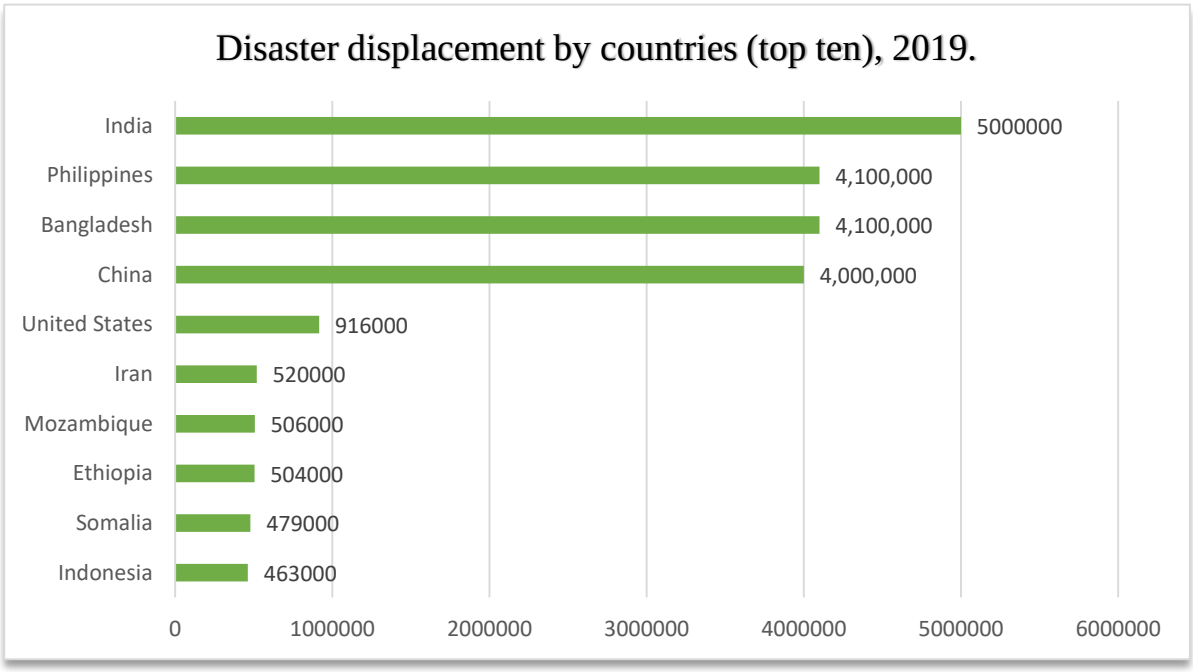
	Country	Region	Most vulnerable to Climate Change. ND-GAIN Score[12] (0=100)	Climate-related displacements (2018)
1	**Somalia**	East Africa	20.3	547.000
2	**Chad**	Central Africa	25.7	2.000
3	**Eritrea**	East Africa	26.3	No data
4	**Central African Rep.**	Central Africa	27.5	9.300
5	**Dem. Rep. of Congo**	Central Africa	29.6	81.000
6	**Sudan**	North Africa	30.4	121.000
7	**Niger**	West Africa	31	40.000
=8	**Haiti**	Caribbean	31.4	8.800
=8	**Afghanistan**	South Asia	31.4	435.000
10	**Guinea-Bissau**	West Africa	32.1	3.700

1.Table 1: Cross-examination table of climate change vulnerability and Climate related displacements by country (top ten). Source: Notre Dame Global Adaptation Initiative (ND-GAIN) and IDMC.

As third empirical indicator, the GRID 2020, released by IDMC, sheds some light. Once again, the pattern of the Asia's high vulnerability to sudden onset weather-related disasters is confirmed (see figure 3). As a matter of fact, the four first positions are monopolised by Asian countries, namely *India, Philippines, Bangladesh and China*. Accumulated, their (climate) displacements account for 17.2 out of global 24.9 million. The U.S completes the top 5 and

[12] The ND-GAIN Country Index summarises a country's vulnerability to climate change and other global challenges in combination with its readiness to improve resilience. A country's ND-GAIN (0=100) Score is composed of a vulnerability score and a readiness score. Vulnerability is defined by considering six life-supporting sectors: food, water, health, ecosystem service, human habitat and infrastructure. On the other hand, ND-GAIN measures overall readiness by considering three components – economic readiness, governance readiness and social readiness. The latest version includes the 2017 score.

Iran follows in the 6th place. In the three consecutive positions, of the ten most-affected, one finds African countries (i.e. Mozambique, Ethiopia and Somalia). Lastly, Indonesia occupies the 10th place. Overall, both total and disaster displacements figures were the highest since 2012 (33.4 and 24.9 million respectively) (IDMC, 2020).

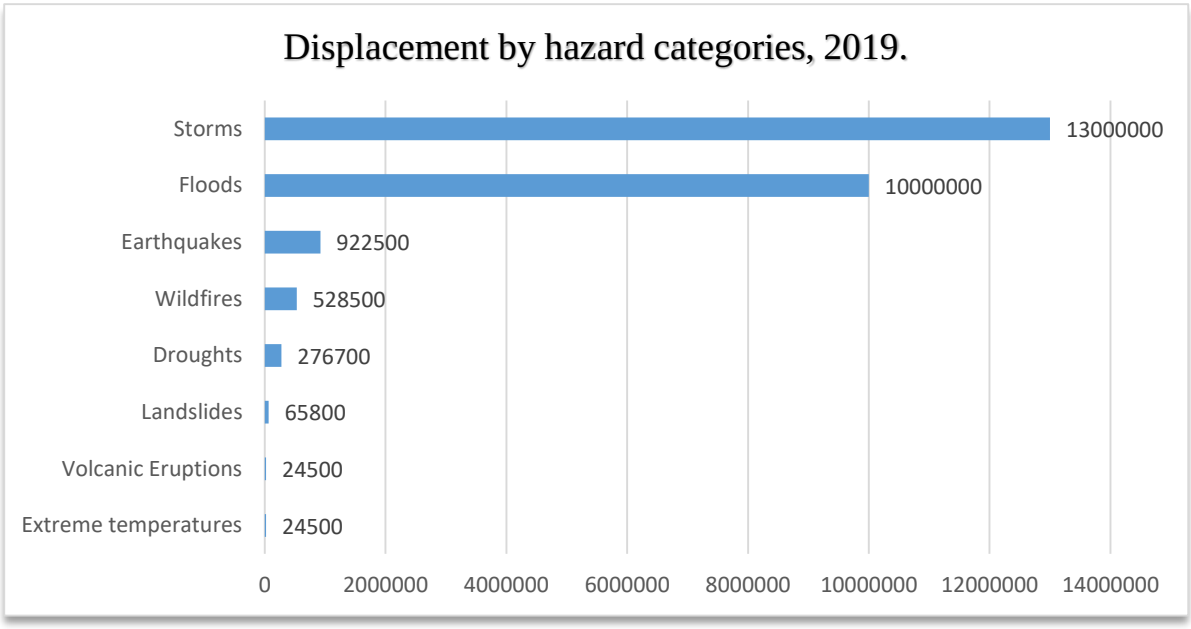


3.Figure 3: (Natural) Disaster displacements by country (top ten), 2019. Source: IDMC (2020), 'Global Report on Internal Displacement.

As a closing point, the pattern of the most affecting environmental hazards is confirmed as well (see figure 4). Notably, 23.9 out of 24.9 million displacements for 2019 were weather-related and the rest 1 million geophysical. Once more, storms (13 million) and floods (10 million) were the main causals. Interestingly, cyclones hurricanes and typhoons were the most treacherous types of storms (11.9 out of 13 million displacements). Between the critical ones were the Southwest monsoon (flood) for India (2.6 million), severe cyclonic storm Bulbul for India/Bangladesh (2.1 million) and typhoon Lekima (Hanna) for China (2.1 million) (IDMC, 2020).

Secondary, yet important disaster displacement factors were earthquakes (922.500), wildfires (528.500), droughts (276.700), landslides (65.800), volcanic eruptions (24.500) and extreme temperatures (24.500). Regarding earthquakes, those of Indonesia (231.000) and Philippines (223.000) caused the most geophysical-related displacements. Other important

disasters were the drought in Ethiopia (100.000) and the wildfire (Saddleridge) in California (131.000) (IDMC, 2020).



4.Figure 4: Displacement by hazard categories, 2019. Source: IDMC (2020), 'Global Report on Internal Displacement'.

Chapter III: Every-day life perspectives in UNESCO's transdisciplinary action-plan

3.1. Background and linkage of the organisation to the Environmental Migration

In the heart of the disastrous consequences of natural disasters, which have led to rapid augmentations of forced displacement for the past decades, an effective response cannot just be monolithic. Admittedly, ensuring an international status for the environmentally displaced to find refuge should be a priority, yet life goes on, and that entails the necessity to develop mechanisms to facilitate their social, cultural integration and education with a parallel strengthening of evidence.

One could claim that the first and foremost determinant of UNESCO's action plan is expressed in its mandate:

> to contribute to peace and security by promoting collaboration among the nations through education, science and culture in order to further universal respect for justice, for the rule of law and for the human rights and fundamental freedoms which are affirmed for the peoples of the world without distinction of race, sex, language or religion (Constitution of UNESCO, Article I)[13].

Having said that, the epicentre of its function entails the protection of its protagonists – migrants, refugees and their families- human dignity, through its focus areas (e.g. on gender equality). For its achievement, UNESCO aims in the building of peace, eradication of poverty, sustainable development and intercultural dialogue. In that respect, the education, sciences, culture and communication & information are its main tools.

As enhanced coordination is the desiteratum, the organisation's work is aligned with the international community's framework on environmental displacement. Within multiple examples, the Man and the Biosphere (MAB) programme was launched by UNESCO in support of the Paris Agreement objectives for the moderation of global temperature and the SDG 13 of the 2030 Agenda.

Accordingly, based on a 10-year strategy (2015-2025), MAB aims to support global biodiversity conservation by restoring and enhancing ecosystem services and fostering the sustainable use of natural resources, and to ensure the sustainability of the World Network of Biosphere Reserves (WNBR)[14]. To put it simply, it utilises biosphere reserves as priority sites and observatories for climate change research, monitoring, mitigation and adaptation.

Another illustration, in line with the Global Compacts and as a member of the Global Migration Group, UNESCO contributed in the crucial topic of the data on environmental displacement (focused on the areas of competence) through the UNESCO Institute for Statistics (UIS). Notwithstanding, the kaleidoscope the organisation's action plan includes specialised initiatives and responses to tackle climate migration impacts on vulnerable groups, having thorough consideration of education, sciences, culture and communication & information.

[13] UNESCO, 2020:5. Available online: here.
[14] For more information, see: here & here.

3.2. Action-plan: Perspectives of climate response through Education, Science, Culture & Information

When it comes to its action-plan, UNESCO's interventions can be clustered around four pillars: 1. Improving public perceptions of migrants and fostering a culture of living together; 2. Creating enabling conditions for migrants' inclusion; 3. Realising the right to quality education; and 4. Strengthening the evidence base on migration (UNESCO, 2019). Hence an overview of the action plan including some indicative examples/achievements rolls out as follows:

1. Improving public perceptions of migrants and fostering a culture of living together

Shortly, the first pillar of UNESCO's action plan is consisted of the promotion of: 1. Balanced media coverage of migration & reinforcement of the safety of journalists; 2. Global citizenship education; 3. Media and information literacy (MIL) for dialogue and inclusion; and 4. Building skills for intercultural dialogue.

Indicatively, under the umbrella of SDGs 10 & 16, and in order to improve the quality of strengthening access to information on issues related to migration UNESCO places emphasis on the need for useful and reliable information on the complexities of migration and for media coverage to be informed, verified and balanced. One of the most recent projects, launched in May 13th 2019 with the support of the Italian government, is the '*Empowering young people in Africa through media and communication*'.

As a matter of fact, the beneficiaries are eight countries in West and Central Africa (Cameroon, Cote d'Ivoire, Ghana, Guinea-Conakry, Niger, Nigeria, Mali and Senegal). Essentially, the project, in cooperation with domestic key stakeholders, aims to empower the youth and women, by building the capacity of media to broadcast informed, verified and balanced coverage of migration-related issues and reinforcing the safety of journalists[15].

Following this project, under the intention to raise awareness about COVID-19, UNESCO engaged with national and local media. The campaign against the discrimination of

[15] For more information, see: here.

migrants will comprise of the production in HD audio formats of ten (10) messages and their translation in 30 national and local languages including English and French (OFA, 2020).

2. Creating enabling conditions for migrants' inclusion

From general standpoint, the second pillar takes action in: 1. Promoting an inclusive urban governance for migrants; 2. Using ICTs for migrants' inclusion; and 3. Safeguarding and mobilising living heritage for dialogue and resilience.

In the light of the above, from 2019, UNESCO has been an active partner of the EU H2020 project REBUILD piloted in Greece, Spain and Italy as well as in collaboration with partners from Belgium and France. Shifting the focus on the importance of ICT the project seeks to raise awareness about the gap between the supply of public services and the actual possibility of accessing them for immigrants and refugees. Through ICT-based solutions, the objective is to enhance interaction amongst them and receiving countries' public administrations.

Essentially, REBUILD, is actively working towards the coding of an application based on data collection of the immigrants (abiding by the GDPR) and the activities of the national public administrations in the aforementioned receiving countries. In its simplest form, through pictograms images, videos and audios, the project will provide information on crucial topics such as legal procedures, medical assistance and so forth… From methodological scope, UNESCO has undertaken a supervising/advising role for the test of the compatibility between the project and its potential users (migrants/refugees) [16].

3. Realising the right to quality education

As the title dictates, action in this domain is entrenched in the realisation of the right to education. Irrevocably linked with the context of SDG4, a roadmap of challenges such as the discrimination in education seems to jeopardise the future of migrants and refugees and especially women.

Thus, UNESCO's actions seek to protect the right to education, shifting its focus on all women and girls fleeing from conflict zones or natural disasters by deconstructing gender stereotypes and gender-based violence in the cases of displacement. The main areas of the third

[16] For more information, see: here.

pillar are: 1. Recognition of higher education qualifications; 2. Access to Technical and Vocational Education and Training (TVET); and 3. Education response to the Syria crisis.

As mentioned in the '*Handbook for Improving the Production and Use of Migration Data for Development*', UNESCO is leading two major initiatives on the cross-border recognition of qualifications. In November 2019, the organisation ratified the '*Global Convention on the Recognition of Qualifications concerning Higher Education*' which established a global regulatory framework for the recognition of higher education qualifications[17].

Secondarily, it is spearheading the process of development of a set of World Reference Levels (WRLs) in order to provide international recognition of TVET qualifications. Both initiatives will substantially facilitate the integration of the environmental migrants in foreign labour markets (GMG, 2017).

4. Strengthening evidence base on migration

As it has been aforementioned, evidence generally, and data collection specifically, play a focal role in the comprehension of climate change and environmental displacement. In fact, several obstacles lead to fundamental discrepancies in classifying climate change effects but more importantly defining climate related movement and its consequences (e.g. on education). Hence, actions are organised in the following sub-pillars: 1. Education and migration: monitoring SDG4; 2. Research policy nexus on migration: perspectives from the South; 3. Environment and human migration: evidence of a critical nexus.

In the front of the monitoring of education and migration, the key actor in data-gathering data for international students, UNESCO Institute for Statistics cooperates with Eurostat and OECD. As a result, it produces annual data on enrolment and graduation ratios disaggregated by sex and type of programme, enrolment rates in private and public institutions, and graduates by field of study. Moreover, it develops unique indicators to track the flows of foreign or mobile students aiming to highlight the demand for higher education especially in the developing countries.

[17] For more information, see: here & here.

In the front of research policy nexus on migration, UNESCO has emphasised on the strengthening of the research-based perception of the social, cultural, economic and political background of migration. Within the UNESCO intergovernmental Management of Social Transformations (MOST) programme, there are several initiatives and responses that correspond to climate change and movement in cooperation with national authorities, scientific communities and civil society. Those initiatives include participation in intergovernmental forums, knowledge-brokering activities and action learning (e.g. MOST school or Future Literacy labs) and research to provide SHS to member states for policymaking (UNESCO, 2019a).

Specifically, in Asian-Pacific, the region-mostly hit by natural disasters, case study research has been conducted. In the Pacific Small Island Developing States (SIDS) like Vanuatu, research output has been produced to catalogue the vulnerabilities of women with disabilities in the effects of climate change. One of that examples, is the publication for the Cyclone Pam that hit Vanuatu, in March 2015, and its effects on vulnerable groups (women, disabled) providing data on topics such as access to healthcare, drinking water, shelter and so on[18]…

In the front of evidence, UNESCO's science takes over through the Biosphere and Heritage of Lake Chad Project (BIOPALT) of 2018. The project provides early warning systems for droughts and floods to strengthen the resilience of the locals to climate change (SDG 13). Overall, 300 policy-makers, scientists and community leaders were recruited to mobilise 30.000 lake residents for the peaceful management of natural resources and water (SDGs 6 and 15). The end-goal has been to rehabilitate degraded ecosystems such as ponds, oases and flood plains, to implement income-generating activities based on green economy to improve the livelihoods of local communities (SDGs 1, 8) and to promote transboundary inscription of the lake as a Biosphere Reserve and World Heritage site (UNESCO, 2019)[19].

In terms of education and culture, the Global Partnership for Girls' and Women's Education contains a plethora of initiatives to increase learning opportunities for adolescent

[18] See document: Baker et. al. (2017), 'Disability Inclusion in Disaster Risk Reduction: Experiences of people with disabilities in Vanuatu during and after Tropical Cyclone Pam and recommendations for humanitarian agencies'. Available online: here.
[19] For more information, see: here.

girls and women. One of the key projects is the UNESCO Malala Fund for Girls' Right to Education. Through this programme, in Mozambique, more than 580 beneficiaries (95% female) and 18 literacy teachers were selected and over 50 technicians (42% female) have been trained in family literacy. Thirteen classes implement regular literacy programmes, benefiting approximately 475 learners (71% female)[20].

Chapter IV: Environmental migration case studies and the UNESCO contribution

4.1. Tuvalu and Kiribati: Remember ancient Atlantis?

A Member of the UN since 2000, Tuvalu hosted approximately 10.000 in 2015, extends in nine Polynesian islands and atolls arcing across the Pacific Ocean between the latitude of 5° to 10° south and longitude of 176° to 180° (Marino & Lazrus, 2015). According to UN data, due to the fast-growing rate, the population in 2019 accounted for 12.000 people that reside in high density (388.2/km^2) [21]. Tuvalu is currently considered to be among the most vulnerable countries to climate change hazards, mainly due to its geographical position and elevation, which in the highest point reaches three metres above sea water.

Likewise, in the case of Kiribati in Micronesia things are not optimistic. Being a member of the UN since 2000 as well, with a considerable higher population of 118.000 inhabitants but lower density (145.2/km^2)[22], Kiribati's existence has been long threatened from climate change. Most of Kiribati's islands are just a few hundred meters wide with average altitude of 1.8 meters above sea level, establishing it as one of the most vulnerable to the sea level rise as well (World Bank, 2019).

Low-lying Pacific islands are, in fact, affected by several derivatives of natural disasters leading to specific challenges. On one hand, *sudden-onset disasters* like cyclones, tsunamis, flooding, volcanic eruptions and earthquakes, have been increasing in frequency; on the other hand, *slow-onset disasters*, such as sea level rise, coastal erosion, intense coastal flooding and

[20] For more information, see: here.
[21] For more information, see: here.
[22] For more information, see: here.

coral bleaching in reefs are leading to increased salinisation of the soil due to saltwater intrusion and consequent land loss (Ferris et al., 2011).

Higher sea levels are increasing floods from high tides and storm surge. While, ocean acidification and increased sea surface damage marine ecosystems, destroying coral colonies and removing the natural barrier they provide against storm surge. The shift of precipitation patterns mean that less freshwater is available for human consumption (Marino & Lazarus, 2015). With the entire population and the majority of infrastructure located on the coast, damage and coastal erosion from high tides, storm surges and salt water are increasingly becoming major issues for the communities (Ferris et al., 2011; World Bank, 2019).

For example, even though it is a part of the main island group of Kiribati, North Tawara, is solely accessible by boat. Moreover, it remains largely subsistence-based meaning that residents gathering most of their food and water from their surroundings using groundwater from shallow wells –prone to contamination- for their cooking, drinking and farming needs (World Bank, 2019).

Sea-level rise impacts on the low-lying Pacific Islands atoll may at some threshold, pose risks to their sovereignty or existence, leading to statelessness and cross-border displacement. For such small island states, relocation in response to a disaster will by all means be cross-border. In the face of a sudden onset natural disaster, internal migration within Kiribati or Tuvalu, given resource and land constraints, could be almost impossible.

The most evident cross-border migration patterns indicate Australia and New Zealand as main destinations for I-Kiribati and Tuvaluans (Curtain & Dornan, 2019). Kiribati's government has expressed the will to enhance international labour migration and are keen to secure international agreements in which other governments recognise that climate change has contributed to their displacement. Instead, the government of Tuvalu does not wish for relocation to feature in international agreements (Kolmannskog, 2009). During 2005-2015, international migration has been low for Kiribati (1.3%) but moderate for Tuvalu (15%)[23].

One of the most important responsive initiatives for Tuvalu and Kiribati[24] has been the New Zealand's Pacific Access Category (PAC) Visa, since 2002. Practically, the programme

[23] For more information, see: here.
[24] 75 citizens per year.

allows pacific islanders to immigrate for working purposes, albeit with a maximum quota of relocation (Curtain & Dornan, 2019). Efforts have also been made with a Kiribati Climate Adaptation Programme in order to improve the living standards of its citizens, launched by World Bank along with the Australian government as the main contributor.

However, reality has been harsh on the Pacific Island citizens. In 2012, Ioane Teitiota, a citizen of the Kiribati Republic, applied for shelter as a refugee and/or protected person in New-Zealand, arguing that the sea level rise and other effects of climate change have exacerbated the living conditions in Kiribati unsound and precarious. Teitiota's asylum application was denied subsequently by New Zealand's Immigration and Protection Tribunal, High Court, Court of Appeal and Supreme Court and together with his family was returned to Kiribati, in 2015 (Delval, 2020).

At a final stage, Ioane Teitiota filed an individual communication with the UN Human Rights Committee under the Optional Protocol to the International Covenant on Civil and Political Rights, asserting that, by sending him back to Kiribati, New Zealand has violated his right to life under Article 6 of the ICCPR[25].

On January 7th 2020, the Committee upheld New Zealand's decision and ruled that Teitiota's return had not taken place in violation of his right to life on the grounds that he had not presented sufficient evidence to support he is facing life-threatening conditions. However, the committee stressed the strong obligations of governments to the environmentally displaced persons and recognised that if climate change impacts worsen, *non-refoulement* obligations imposed on States, would, thereby, be triggered (Delval, 2020).

Unfortunately, projections are persistently disheartening. By 2050, the UN estimates that the population of Kiribati will be near 180,000 people. Population growth is likely to be concentrated in the main urban area on South Tarawa. Migration is going to rise from 4% to 5.9%. As for Tuvalu, population is expected to grow modestly to over 14,000 people by 2050. However, its higher migration rate will facilitate the economy through remittances. Taking into account the availability of natural resources, climate change makes future unsustainable for both countries (Curtain & Dornan, 2019).

[25] For the official document, see: here.

According to IPCC statistics, global temperatures could exceed a 3°C above pre-industrial temperature increase by 2100 with global-mean sea level rise projected around 1.2 meters or higher (Letman, 2018). This could mean that Tuvalu and Kiribati will be uninhabitable if not two contemporary versions of Atlantis. For their inhabitants, cross-border migration is a double-edged blade. As wrong as it may sound, the real dilemma lies between uprooting and hence survival or extinction via residency. Notwithstanding, both I-Kiribati and Tuvaluans are in need for international protection. Their survival is subject to countdown…

Meanwhile, in respect of their tangible and intangible cultural heritage, threatened by extinction, UNESCO has taken action in both cases. Notably, the UNESCO office in Apia has emphasised on the safeguarding of the intangible cultural heritage for the preservation of the Tuvaluan identity. The participation of UNESCO, local communities and inter alia partners from the local and overseas network (e.g. Women's Associations, government departments and Rei Foundation) contributed to the Tuvalu's National Culture Policy Plan (2018-2024). Essentially, unique songs, dances, sports, and customs of Tuvalu, core of its habitants' identity, are placed in the centre of the cultural preservation which tends to be diluent with migration on the rise[26].

In a purely environmental-centric approach Kiribati has been inscribed in the Phoenix Island Protected Area (PIPA) which conserves one of the world's largest intact oceanic coral archipelago ecosystems. Concisely, that means Kiribati's maritime environment will be safeguarded as World Heritage due to its uniqueness keeping, simultaneously, the population financially sound with the endowment of the PIPA Conservation Trust Fund (IUCN, 2013)[27]. A solid challenge which demands delicate handling for the local populations' financial activity adaptation (to fishery bans) and/or potential migration.

4.2. Israeli – Palestinian water conflict: A grey zone in forced displacement

More often than not, discussions of adaptation to climate change often emphasise on the country level, thus internal displacement. Occasionally, displacement may be affected by

[26] For more information on the Tuvalu National Culture Policy, see: here.
[27] For more information on the Phoenix Islands Protected Area, see: here.

transboundary complications. In the Israeli–Palestinian case, transboundary relations are typified by concurrent collaboration and conflict (Zeitoun, 2007).

Originally, Palestinians were 'British protected persons' entitled to a British passport issued by the government of Palestine, since after the 1948 conflict they were deprived of their citizenship. According to international law, states make decisions vis-à-vis to who are its citizens, though, they do not possess the right to 'denationalise their nationals in order to expel them as non-citizens' (Laura Westa, 2009).

However, the Israeli judiciary system adjudged that Palestinians lost their citizenship when the British Mandate was terminated. What is more, after denying the Israeli one, they were automatically deprived from any citizenship. As they are factually, *stateless persons*, Palestinians were placed outside of protection scope of the 1951 Convention. Thus, although initially assistance to Palestinian refugees was provided by the UNRWA, there is a protection and assistance gap for the de jure descendants of the refugees from the 1948 conflict, or those displaced by further and future hostilities (Westra, 2009).

It is widely accepted that the Middle East is among the least stable and most fragile regions. A real concern derives from the fact that, the Palestinian, one of the fastest growing population globally residing in the West Bank and Gaza experiences an excessive demand for water. Access and supply of water in these territories has been an issue within the context of the Israeli-Palestinian conflict since 1967. Economic inequalities, inefficient infrastructure and management of the water, compounded by contamination have led to its uneven allocation and to substantial depletion and pollution of the hydro resources.

More importantly, climate change consequences such as frequent droughts, lack of rain, and evaporation of rainwater, amplified the ensuing gap between supply and demand. The regional water resources in Israel, the West Bank and Gaza are three: lake Tiberias, the Mountain Aquifer and the Coastal Aquifer. Resources are available and the needs of the inhabitants (i.e. Israelis, Palestinians and Jordanians) are increasingly high. Yet, the allocation of the fresh water proves to be disproportional in the expense of the Palestinians.

In the light of that, the land in the West Bank and Gaza is subjected to soil degradation and desertification which further exacerbates the problem and jeopardises the humanitarian and environmental state of the region. Essentially, due to the allocations of trans-boundary water

resources agreed upon under Oslo II (1995), Israel currently controls approximately 80% of water reserves in the West Bank. After the 2014 Gaza conflict, over a million residents' right to access water was violated (Lazarou, 2016).

According to the General Comment No. 15:

> the human right to water entitles everyone to sufficient, safe, acceptable, physically accessible and affordable water for personal and domestic uses. An adequate amount of safe water is necessary to prevent death from dehydration, to reduce the risk of water-related disease and to provide for consumption, cooking, personal and domestic hygienic requirements (ECOSOC, 2003).

Since access to water, is irrevocably linked to the right to life, the necessity for a common solution to the Palestinian topic becomes insofar pivotal. Verily, it is unclear whether Palestinians are refugees in an occupying country (Israel) despite the illegality of Israel's present borders after 1967 or IDPs, fleeing to a different part of their own country after a forced displacement (Westra, 2009). Their displacement foundations constitute a grey zone pertaining to a political and armed conflict that leverages the consequences of the climate change in the worst possible scenario.

Two sworn statements of the Palestinian nationals, Sami Sbeih and Fayeq Sbeih shed some light on the topic. Sami, claims that lack of water sources is a problem in Al-'Aqaba, for both residents and institutions (i.e. schools). The village lacks a water network system as well as water storage tanks, due to the Israeli prohibitions. He argues that Palestinian households are overcharged for potable water:

> Each household or institution purchases this water which costs about 150-200 NIS per tanker, an amount required almost on a weekly basis. While the price of tanker water is about 15-20 NIS per cubic meter, water though Mekorot's network costs less than one NIS for the same amount (EWASH & Al-Haq, 2011).

Finally, Sami denounces Israel for having destroyed an agricultural pool of 300m^3, in Al-'Aqaba village, in 1999. Contrary, as Sami claims, Israeli settlers in the Jordan Valley are

supplied with an abundant amount of water that surpasses their needs (EWASH & Al-Haq, 2011).

The hetero affidavit, Fayeq, owns 43 Dunams[28], of agricultural land in al-Aghwar Area (Jordan Valley), where, as a farmer, he cultivated tomatoes, cucumbers, lettuce and a plethora of other vegetables. In order to establish his crop irrigation, he extended pipeline from a public spring known as 'Ein al-Shak'. In 2011, after Israeli military officers and officials from the Israeli national water company *'Mekorot'* removed, as Fayeq claimed, and damaged his pipeline, him and his family were stripped of their core income source and they abandoned their land. Likewise, other al-Aghwar's Palestinian farmers that cannot ensure their crop irrigation are fleeing (EWASH & Al-Haq, 2011).

According to UNRWA, nearly one-third of the registered Palestine refugees, more than 1.5 million individuals, reside in fifty-eight recognised Palestine refugee camps in Jordan, Lebanon, the Syrian Arab Republic, the Gaza Strip and the West Bank, including East Jerusalem. The remaining two thirds reside in and around the cities and towns of the host countries, and in the West Bank and the Gaza Strip, often in the environs of official camps[29].

Conventionally, as in the case of Palestinians environmental displacement tends to be irrevocably political, the consortium of consequences is multifaceted. Education has been a predominant area of focus for the organisation. After the ICHEON declaration[30] in 2015, UNESCO was assigned the leadership and coordination of the Education 2030 agenda in collaboration with education partners, towards the achievements of the ten SDG4 targets (e.g. 4.3 equal access for all women and men to affordable and quality technical, vocational and tertiary education, including university).

Through supporting global and national frameworks, it engaged with the Palestinian Education Development Strategic Plan (2014-2019), the Education Sector Strategic Plan (2017-2022) and is co-chairing the Education Sector Working Group[31]. Currently, as partner of the advisory team for the national education policy, in collaboration with the Palestinian

[28] Or 43.000 square meters.
[29] For more information, see: here.
[30] For the ICHEON declaration see: here.
[31] For the general educational framework of UNESCO for Palestine, see: here.

Ministry of Education and Higher Education is responsible for the advancement in various areas.

From technical point of view, that includes topics such as the augmentation of the enrolment rate and children's integration at the pre-school education system and the promotion of children with disability education needs, protection, nutrition and health and creative methods of learning in general (Palestinian Ministry of Education and Higher Education, 2017).

For over six decades, the key partnership of UNESCO-UNRWA has been on the spotlight of the learning opportunities for the Palestinians. Until recently, data argue for the provision of free basic education to over 515.000 Palestine youth in 702 schools, 8 vocational training centers and 2 educational science faculties in Gaza, West Bank, Lebanon, Syria, and Jordan.

Despite the significant contribution of UNESCO-UNRWA, instability in the Arab Region has generated a vast resource gap in the sector of education which combined with the environmental displacement torments the Palestinian youth. Essentially, cornerstones of the UNESCO resource mobilisation strategy such as the 'Education Cannot Wait Fund' have been crowned with success[32] albeit an estimated funding gap of the Arab education accounts for $3.8 billion (UNESCO, 2017).

Future UN projections indicate that due to the high fertility, by 2050, Gaza Strip population will increase to more than double from 1.9 to 4.8 million (UNFPA, 2017). Primarily, it is implied that Gaza population will outnumber the population of West Bank and without a resolution of the water conflict sustainable living and basic human rights such as access to education will become extremely hard for Palestinians.

Political refugees or climate migrants, cross-border (Palestine to Israel) or internally displaced (within Israel) one aspect of truth is universal. As climate change exacerbates and protection is ensured with confinement in the camps, Palestinians as a complicated category of political and climate refugees will increasingly suffer…

[32] Including donors such as international organisations (EU), countries (e.g. Canada), foundations (Walton Family Foundation, even companies (Procter & Gamble).

Conclusions

For an extended period, the international community has been dealing with the progressively crucial challenges of the environmentally displaced persons. The apocalyptic consequences of climate change have become reality and the UN university estimations suggest that total environmental migrants will account for approximately 200 million by 2050[33].

Until recently, the national and international response to this challenge per se, has been limited with several protection gaps. Evidently, the acquisition of the refugee status, according to the Convention on the Status of Refugees, is attainable only for those who have a well-founded fear of being persecuted because of their race, religion, nationality, membership of a particular social group or political opinion, and are unable or unwilling to seek protection from their home countries (Apap, 2019). Thus, environmentally displaced persons could only find protection through regional treaties such as the Kampala Convention of Africa.

However, in the recent years, and especially after 2015, several steps have been made towards the acknowledgment of environmental displacement and the establishment of a new international legal status as 'environmental migrants' (Goodwin-Gill & McAdam, 2017; The Economist, 2018; IOM, 2019).

At the same time, newly-emerged responses such as the Nansen Initiative specialised on topics of the cross-border environmental migration. More importantly, the general international framework was shaped by UN's 2030 Agenda for Sustainable Development which set-up the goals, the Paris Agreement as the preventive shield and the New York Declaration for Refugees and Migrants including the Global Compact as the protective measure.

Human mobility, and the capacity to adapt and cope with shocks and stressors, including those posed by climate change, are issues of vulnerability and capacity, who render suitable risk-informed development strategies and policies at national level essential. One cannot unpick climate and human mobility matters from the underlying context of states and communities.

[33] For more information, see: here.

Though, if sufficiently resourced and integrated into broader socioeconomic plans, national and sub-national adaptation procedures demonstrate a prospective to play a vital role in this regard (Stapleton et al. 2017). In that respect, the development of the Global Citizenship becomes essential for the understanding of climate change and migration as a collective problem, beyond national borders.

When it comes to empirical evidence, fundamental discrepancies between the sources and lack of detailed data indicate a necessity for improvements. Accordingly, as aforementioned the incomparability between data of credible sources such as the UN and IOM or the absence on detailed data distinguishing cross-border and internal migration due to climate change can constitute significant problems for researchers. In any case, that should be accounted for the complexity and not the relegation of climate migration.

The main source of this paper, IDMC, rapidly confirms the seriousness of environmental migration as a global concern providing numbers (see chapter 2.2). Accordingly, only for the decade of 2008-2018 recorded climate-related displacements account approximately for 263 million people. More than 80% of them occurred in the Asia-Pacific region making it the most prone region to climate change effects globally. However, only 1.2 million happened in Europe and Central Asia, meaning that the problem is by default not equally experienced by all states and/or regions.

Additionally, a cross-examination of the African countries' high vulnerability to climate change and the number of the respective displacements raises serious concerns about population's capacity to move due to political or economic difficulties. Not to mention that, Africa has the highest rate conflict displacements as well (IDMC, 2020).

Moreover, environmental displacement in the African continent affects men and women unevenly. For example, undertaking their husbands -who have migrated- workload, hinders women's access to paid labor and/or education. Their protection would require the development of further mechanisms in which UNESCO has taken initiatives.

When it comes to causals, most of the climate-related disasters are weather-related and less geophysical (87.27% to 12.73%). Evidence shows that between 2008-2018 the most frequent disasters were floods and storms. Most recent data of 2019, confirm the pattern of the

weather-related phenomena triggering vast displacements. For instance, the Southwest monsoon (flood) for India lead to the displacement of 2.6 million people.

Those numbers constitute shredded evidence to why climate change and migration should be addressed as a global concern though not solely. Coupled with research on case studies one concludes that environmental displacements are a complex issue due their interconnectivity with other spheres (historical, political, economic etc.).

In the first case, the Pacific Islands were analysed, for being vigorously swallowed by the oceans due to the excessive sea level rise. Tuvalu and Kiribati, located in Polynesia and Micronesia respectively, both resemble cases of a modern Atlantis. As sea level rises, people will migrate internally until these two islands will be eventually uninhabitable. Important steps such as the New Zealand's PAC Visa have been made. At the end of the line, cross-border migration flows have become the only realistic solution for the survival of the residents which will need the protection of the international community.

In the second one of the Israeli-Palestinian conflict, allocation of water resources as a vital topic prolongs a historically problematic relation of conflict between nations. Significant gaps in legislation allows the violation of Palestinians' basic human rights such as the access to water and threaten in extend their right to a decent life. On that grounds, climate change is scrupulously leveraged in order to artificially force displacements by generating suffocating conditions.

Optimistically, UNESCO has raised a shield by taking action in the protection of the tangible and intangible heritage of the two Pacific Islands. That is to say, the acknowledgement of Kiribati's maritime environment in the list of World Heritage and the contribution for the preservation of Tuvaluan songs, dances, sports, and customs on national policy level. Evidently, fight for sustainable Palestinian education has proven to be laborious. Today, there is a sparkle of optimism for the Palestinian education as UNESCO-UNRWA have as well developed alternative education methods (i.e. dedicated self-learning and computer based materials) for extreme conditions such as the Syrian conflict (UNESCO, 2017).

To conclude, while in-situ adaptation measures can allow people to keep their homes environmental migration turns out to be a multifaceted topic demanding a transdisciplinary action-plan which envisages a sustainable future for its Global Citizens. In that front, UNESCO

has developed effective action around the improvement of public perceptions of migrants to enhance a culture of living together, against migrants' inclusion, simultaneously, protecting the right to quality education and strengthening the evidence on (environmental) migration. For that, projects of Education, Science and Culture & Information (e.g. REBUILD), and the '*Global Convention on the Recognition of Qualifications concerning Higher Education*' have been summoned.

Although still in progress, the international framework seeks to find a 'home' for the environmentally displaced. Climate change takes place right now, it acknowledges no borders, and nobody can buyout its effects. As once Albert Einstein said: 'The world will not be destroyed by those who do evil, but by those who watch them without doing anything'[34]. Shouldn't the 24.9 million of environmental displacements become the 'next normal', it is necessary to shift our kaleidoscope as human species towards a decent and sustainable future for all…

[34] Source: here.

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*Note: All online sources have been viewed from 25/03/2020 to 15/07/2020. Thus, they may be subject to changes.