# Explaining Climate Change Induced Human Mobility: Revisiting Traditional and Emerging Migration Theories in the Wake of Regularising Climate Change Induced Human Mobility under International Law

## VALÉRIA ESZTER HORVÁTH<sup>1</sup>

#### Introduction

The term "environmental refugees" was used by the United Nations Environmental Program in 1985, drawing the international community's attention to environmentally induced human mobility for the first time. Almost 40 years on, migration experts, lawyers as well as the international community struggle to define and to conceptualise an imminent phenomenon. Migration studies as such are still struggling for their own emancipation among other fields of social sciences, and now migration experts are challenged with a novel social phenomenon, climate change induced human mobility. In fact, environmentally induced human mobility is not a new phenomenon, it is merely a novel research area. In this article, I will collect and summarise traditional and emerging migration theories and concepts, in order to establish whether climate change induced human mobility may be interpreted by any of these theories at all, or if not, how could these be adapted to understand climate change induced human mobility.

**Keywords:** climate refugees, climate displacement, migration, climate change

While there is an ever-growing abundance of agency reports on various forms and empirical experiences of environmental displacement from international organisations such as the World Bank, the International Organisation for Migration, the Food and Agriculture Organisation, and even human rights organisations, to this date the literature on the conceptualisation of such phenomena remain limited. And while many a times practical approaches yield solutions, the lack of adequate conceptual framework limits problem-solving to ad hoc, fragmented and emergency-type situations. The term "environmental

<sup>1</sup> Assistant Professor, University of Public Service, Department of International Law, e-mail: horvath.valeria.eszter@uni-nke.hu

refugees" was used by the United Nations Environmental Program in 1985, drawing the international community's attention to environmentally induced human mobility for the first time. Almost 40 years on, migration experts, international lawyers as well as the international community struggle to define and to conceptualise this imminent phenomenon. "Ecological refugees", "environmentally displaced persons", "climate refugees", and more recently even "climigration" are all terms coined to reference the same thing, and yet as we will see, not precisely the same thing. At the same time, there is a regular and loud call in the media from non-state stakeholders of the international community to manage the social injustices tied to climate change, demanding "climate justice", and international organisations urge states to protect those most vulnerable to climate change, in particular those, who are displaced due to climate change. The confusion around the volume and the magnitude of this problem prevails, with references to old estimations between 25 million to 1 billion persons affected, and no further attempts to identify the potential number of persons of concern. The underlying problem also remains: without a standard definition, without the consolidation of fundamental concepts and conceptual frameworks, states as primary subjects of international law remain inapt to act in unity in a comprehensive way to provide protection to those most vulnerable to the negative effects of climate change.2

Creating a comprehensive conceptual framework does indeed require creativity. Migration studies as such are still struggling for their own emancipation among other fields of social sciences as a cohesive system of concepts and theories. On top of that, nowadays, migration experts are challenged with a series of situations of crisis, from all around the world, such as the 2011 Haiti Earthquake, the 2015 European Refugee Crisis, the 2018 Central American Refugee and the perpetual Rohingya Refugee Crisis in Bangladesh. Perhaps by now it is beyond discussion that environmental deterioration, natural hazards, climate change contribute in certain ways and to some extent to such crises. Understanding such complexities require abstraction of these empirical problems.

Although environmentally induced human mobility may seem to be a novel social phenomenon, it is not an entirely new phenomenon, it is merely a novel research area. Anthropology has long been researching and trying to explain how the human race actually evolved, and recently research has begun on how nomadic tribes settled in certain places. Human mobility resulting from environmental factors, an "ecological push", as Piguet notes is indeed the first form of migration in history, referenced as "primitive migration", because of human kind's inability to cope with natural forces.³ In this paper, I will collect and summarise the most relevant, traditional and emerging migration concepts and theories, in order to establish whether climate change induced human mobility may be interpreted by any of these theories at all. If it is found that these cannot interpret climate change induced human mobility, then I will

<sup>2</sup> For more information on this see Horváth 2021: 119–136.

<sup>3</sup> Piguet 2013: 151.

assess how these could be adapted to understand climate change induced human mobility. In this paper I will use the term "human mobility", in its broadest sense, as a movement of a person or a group of persons across an internationally recognised state border or within a state border, either voluntarily or involuntarily, for whatever reasons, and for however long. Thus "international human mobility" is a movement of a person or a group of persons through an internationally recognised state border, either voluntarily or involuntarily, for whatever reasons and for however long. In this vein, "climate change induced human mobility" is the movement of a person or a group of persons, across an internationally recognised state border or within a state border, either voluntarily or involuntarily, for however long, due to gradual or rapid onset effects of climate change, affecting the habitual place of residence of a person of concern.

# The state of current migration concepts

De Haas simply sums up the state of current migration concepts by stating that "theories on migration are underdeveloped".<sup>4</sup> In my own interpretation, the various concepts and theories on human mobility can rather be summarised as a brainstorm of relevant concepts spanning over decades and continents, focusing, one at a time, on a single event, a single aspect of mobility, a single empirical experience of a vulnerable person or a group of persons, or a specific situation of crisis.

This lagging behind can be explained by numerous factors and trends. First of all, as Nagy<sup>5</sup> points out, before the 1940s, international human mobility simply was not an issue, as it is today. Up until the end of the 1900s, with certain exceptions concerning resettlement, individuals could travel and relocate relatively freely. It is the emphasis of state sovereignty as a building block of the new world order and the international community after the Second World War that brings about state concern related to state sovereignty vis-à-vis migrants. So while human mobility is human nature, addressing it, in particular with issue-specific legal regimes is rather a novel trend. Subsequently, the research on international human mobility gained momentum through economic globalisation, the increasingly regularised international flow of labour and the aftermath of decolonisation, including resettlement of colonial nationals to former colonising countries as well as the civil unrest in certain countries as a result of the newly gained independence. Finally, nowadays, issues related to asylum and migration are so highly politicised, viewed as inevitably infringing state sovereignty, that this securitisation of migration brings about the exacerbation of research and political discourse on international human mobility. And yet, international migratory flows are relatively small compared to other international flows such as international trade,

<sup>4</sup> DE HAAS 2021.

<sup>5</sup> Kende et al. 2014: 526.

global financial flows or information, which is reflected in the marginalisation of an autonomous migration studies.<sup>6</sup>

To shed light on the available literature, analysing the available research on international human mobility, most scholars do not elaborate a whole paradigm or cohesive system of concepts and principles. In this vein, Póczik<sup>7</sup> maintains that the phenomenon of human mobility is examined by numerous social sciences, such as sociology, anthropology, history, demography, geography, political sciences, legal and international studies. At the same time, mostly reports by international organisations, as the most authentic source for climate change induced human mobility data, completely omit to touch upon theoretical explanations, and merely deduce generalisations from their empirical research. In my understanding, these fields limit their research and make one aspect of human mobility their focal point. Moving forward complex migratory flows call for multidisciplinary research. From the perspective of regularisation and legislation, the outcomes of a multidisciplinary research can yield an evidence-based, substantiated and substantial legal framework on climate change induced human mobility. Another oversimplified approach, yet a prevalent foundation for policy formation all around the world, is the division of persons of concern into groups of emigrants and immigrants and researching these two oppositely directed flows of human mobility as essentially separate.8 Again, individual, particular fields of research are in fact effective in answering a question related to one aspect of human mobility but are unable to provide complex interpretations. Thus Massey et al. conclude that 'complex migration models'9 should be created. However, Piguet<sup>10</sup> points out that even as migration theories grew in coherence and complexity, environmental considerations generally disappeared from explanations of displacement, as humans gradually gained control, or the illusion of control, over nature through technological progress.

I will now move on to introducing the most relevant traditional theories on human mobility, and add some of the most relevant new concepts on human mobility. I will also assess them altogether in order to establish whether these theories and concepts are able to explain climate change induced human mobility in any way. Since it is beyond the scope of my research and the material of this article, I will only list the theories on the causes and motivations, the type of movements and trends in this paper, and as less relevant for the subject of this article, I will omit theories on the integration of the new arrivals. Moreover, for effective assessment, human mobility may not be considered a single unit but must be examined in its elements. In my understanding, there are three essential elements of international human mobility: 1. leaving the country of origin or habitual place of residence (voluntarily

<sup>6</sup> Sriskandarajah 2005: 3.

<sup>7</sup> Póczik 2008: 66.

<sup>8</sup> Póczik 2008: 69.

<sup>9</sup> Massey et al. 1998: 20.

<sup>10</sup> Piguet 2013: 151.

or involuntarily); 2. arriving in the country of destination (regularly or irregularly); 3. staying in the country of destination (temporarily or permanently). Additionally, there are two other recurring elements, such as 4. passing through a country of transit; and 5. leaving the country of destination (such as voluntary or forced return, expulsion). In this paper I will only address the circumstances of departure.

## Classic theories on human mobility

To start off with, classic migration theories can be divided into two paradigms, namely 1. 'historical-structural theories', which maintain that persons on the move are fundamentally constrained by structural forces; and 2. 'functionalist theories', according to which human mobility is an economic optimisation strategy for an individual and/or their families as a result of making cost—benefit calculations.<sup>11</sup>

Historical-structural theories maintain that persons on the move are fundamentally constrained by structural forces. In this vein, the 'Dependency Theory' 2 explains the underdevelopment of "Third World" countries as a result of the exploitation of their resources by colonial interference. Although completely omitted by the theory itself, as a factor in itself, exploitation of natural resources leads to the gradual but profound degradation of the natural environment. Moreover, this dependency is perpetuated by the unfair terms of global trade with the overwhelming power dynamics and division of tasks between developed economies and less developed states. Considering that the Dependency Theory developed in the 1960s, in Latin America,13 it is a direct predecessor of the Climate Justice movement of the 21st century. Subsequently, a more comprehensive 'World Systems Theory'14 developed in the 1970s, focusing on the way 'peripheral' regions have been incorporated into the global economy controlled by core capitalist countries. De Haas claims that together with the emergence of multinational corporations, this accelerated rural change and deprived farmers and rural workers of their livelihoods, leading to poverty, rural-urban migration and rapid urbanisation, as well as the emergence of informal economies.<sup>15</sup> While in the World Systems Theory, there is but a mention of "rural change and deprived farmers", there is a clear vacancy for the incorporation of the effects of natural and anthropogenic climate change. All in all, the Dependency and World Systems Theories were precursors of the Globalisation theories<sup>16</sup> that emerged in the 1990s, which put forward that globalisation facilitates international human

<sup>11</sup> DE HAAS et al. 2020: 49.

<sup>12</sup> DE HAAS et al. 2020: 49.

<sup>13</sup> Massey et al. 1998: 35; de Haas et al. 2020: 49.

<sup>14</sup> Massey et al. 1998: 35; de Haas et al. 2020: 49.

<sup>15</sup> DE HAAS et al. 2020: 49.

<sup>16</sup> However, de Haas maintains that such improvements have also increased the scope for trade and the outsourcing of production and services, which as he argues, has replaced some forms of migration (DE HAAS et al. 2020: 49).

mobility as a consequence of improved transport infrastructure and communication technology.

Historical-Structural Theories are mainly criticised for depicting migrants as victims of global capitalism, who have no choice but to migrate in order to survive, and almost fully ignore human agency in this context.<sup>17</sup> In comparison, the Functionalist theories reduce human mobility to a premeditated and deliberate cost-benefit analysis for the individual migrant and/or their families.<sup>18</sup> One of the earliest and the most widely accepted complex migration models referring to this functionality is Lee's Push and Pull Model.<sup>19</sup> A typical interpretation of the Model is provided by Boswell, in the case of "economic migration", where Boswell lists typical usually push factors as economic conditions such as unemployment, low salaries or low per capita income relative to the country of destination, and migration legislation and the labour market situation in receiving countries as pull factors.<sup>20</sup> However, as Piguet points out, 21 originally, even Lee briefly mentioned that a good climate is attractive and a bad climate is repulsive to nearly everyone. Boswell continues to explain<sup>22</sup> that involuntary displacement would be explained through factors such as state repression or fear of generalised violence or civil war, but I would also add natural hazards or gradual natural deterioration due to climate change.

With the evolution of human mobility trends and patterns, reforming the abovementioned Classic Theories, Neoclassic Theories emerged. During the mid-20th century, neoclassical economic theories were extended to multiple dimensions of the social sciences, including migration. The neoclassical economics perspective<sup>23</sup> combines an individual decision motivated by income maximisation (micro level) with country-level structural determinants such as wages and employment conditions (macro level), which I will also address in a later section. An essentially neoclassic structural theory is the Dual Labour Market Theory<sup>24</sup> which maintains that international human mobility is caused by a structural and chronic demand within advanced economies for lower-skilled workers to carry out production tasks and to staff service enterprises. Subsequently, the New Economics of Labour Migration Theory<sup>25</sup> emerged as a critical response to this neoclassic structural approach, which regards migration as a family or household decision rather than an individual decision. And while the New Economics of Labour Migration theory incorporates the consequences for the countries of origin, the Dual Labour Market theory focuses on

<sup>17</sup> DE HAAS et al. 2020: 49.

<sup>18</sup> Boswell 2002: 3.

<sup>19</sup> Lee 1966: 47-57.

<sup>20</sup> In this context, Boswell also coins the term 'pioneer voluntary migration' (Boswell 2002: 4).

<sup>21</sup> DE HAAS et al. 2020: 50.

<sup>22</sup> Boswell 2002: 3.

<sup>23</sup> Bueno-Prieto-Rosas 2019: 2.

<sup>24</sup> Bueno-Prieto-Rosas 2019: 2.

<sup>25</sup> Bueno-Prieto-Rosas 2019: 2.

countries of destination. Additionally, the Migration Transition Theory<sup>26</sup> maintains that demographic shifts and economic development initially increase levels of domestic and international mobility. Although at first it may seem that this Theory does not allow for the integration of environmental concerns, Hunter<sup>27</sup> takes natural hazards into account as "personal preferences". I would argue that the term "personal preferences" is usually used synonymously with personal circumstances, a variant of environmental pressures experienced by an individual, and as such climate change may affect such demographic shifts and economic changes that increase domestic and international human mobility. Finally, the concept of Cumulative Causation<sup>28</sup> maintains that international human mobility induces changes in social and economic structures that make additional human mobility likely. This is sometimes also referred to as "replacement migration", creating a chain of countries engaged in attracting migrants to replace those who have left for other countries. If the individual experiences are deemed a success, human mobility can give rise to a "culture of migration", revering to the Functionalist approach to human mobility. Such Transition Theories and Development Theories also do not provide sufficient explanations on why people move once development occurs, therefore de Haas<sup>29</sup> argues that it is necessary to conceptualise individual migration as a function of capabilities and aspirations to move, which I will later explain with his Aspirations and Capabilities framework.

As demonstrated above, within classic and neo-classic migration theories, constructed on fundamental classic and neo-classic economic principles, the emphasis of individual economic motivations (Functionalist approach) and economic inter-state relations (Structural approach) overshadow all other aspects, such as social and community factors or even completely omit some, such as environmental factors. Neoclassical approaches take no account of historical causes of human mobility, oversimplify the role of the state and structural constraints, and completely omit environmental factors, while historical-structural approaches overemphasise political and economic structures and fail to explain individual motivations. Additionally, these offer explicitly no explanation to environmental displacement, but historicalstructural as well as to some extent neoclassic functionalist theories may be applied to environmental displacement. Nevertheless, in most scenarios environmental determinants such as the effects of climate change may be added to the equation. Adding factors outside their scope will not make these concepts more operational or effective. Therefore, instead of broadening such tools to encompass the various types and complex nature of the effects of climate change, new conceptual frameworks should be established.

<sup>26</sup> Zelinsky 1971: 222.

<sup>27</sup> Hunter 2005: 277.

<sup>28</sup> DE HAAS et al. 2020: 60.

<sup>29</sup> DE HAAS et al. 2020: 62.

## Emerging concepts on human mobility

An emerging trend towards the end of the 20<sup>th</sup> century and at the beginning of the 21<sup>st</sup> century was to shift research focus from causes to actual movements and trajectories, to consider human mobility as a system or a network. As mentioned above, classic perspective on human mobility was to segment it in terms of its direction; in terms of immigration and emigration. By now, at the peak of economic globalisation, scholars realise that human mobility is not actually or at least not always one-way, nor is it linear (especially if illegal facilitation activities are involved), nor is it definitively permanent, or even individual in its strictest sense.

Massey's Network Theory,30 similarly to Bourdieu's Social Capital Theory,31 focuses on knowledge sharing among persons of concern, and the transmission of the migration experience to relatives and friends in the countries of origin as a driver of international human mobility. As a result, there is a multiplier effect referred to as 'chain migration', which implies that those who arrive following another person enjoy lower costs and risks of migration. Network theory is useful to explain family reunification processes and as Bueno and Prieto-Rosas refer to it, care-related migration. Similarly, Institutional Theory<sup>32</sup> operates at the meso level, pointing out how profit oriented organisations, including legal entities and illegal human smuggling networks, and even advocacy groups such as non-profit organisations, mediate the human mobility process. More recently, the Migration Trajectory<sup>33</sup> concept emphasises the trajectory of a person of concern observing them in the country of origin but emphasising the route and countries of transit and the circumstances of arrival. Studying the trajectories of international human mobility is especially vital in the study of irregular and mixed human mobility, when persons of concern are least likely to take a straight, direct and relatively short route to their country of destinations, or any location they deem ultimately safe. More specifically, this approach recognises that a) trajectories are turbulent, contests a supposed intended country of destination and focuses on constantly fluctuating opportunities and constraints; and b) certain critical events during the journey prove to be pivotal in the continuation of a migrant's journey. Although among critical events Wissink references events embedded in and outside of the migrant's social network and personal circumstances, we must add that such critical events may also involve natural disasters or rapid onset effects of climate change. Linked close to these theories, the concept of the Migration Industry<sup>34</sup> also emerged. Proponents claim that as a result of the industrialisation of international human mobility, the Migration Industry consists of any service provider in its economic as well as humanitarian sense, such as

<sup>30</sup> Massey et al. 1998: 448.

<sup>31</sup> Bourdieu 1986: 222.

<sup>32</sup> Bueno-Prieto-Rosas 2019: 2.

<sup>33</sup> Wissink et al. 2017: 282-291.

<sup>34</sup> DE HAAS et al. 2020: 66.

employers, travel agents, recruiters, brokers and house agents, smugglers, traffickers, humanitarian organisations, immigration lawyers, and any other intermediaries, who have a strong interest, in most cases, an economic interest in the continuation of human mobility. Nota bene, while migration network theories focus on the role of social capital, migration systems theory looks at how migration is intrinsically linked to other forms of exchange, notably flows of goods, ideas and money; and how this changes the initial conditions under which migration takes place, both in origin and destination societies.<sup>35</sup> Moreover, as Migration Transition Theory focuses on the long-term interlink between development and human mobility, a Migration Hump<sup>36</sup> is used to describe a short-term hike in emigration in the wake of a trade reform or other economic shocks. Such migration humps are colloquially referred to as a "wave of migration" when referring to disaster displacement.

Thus, yet again, these emerging concepts on international human mobility are unable to fully accommodate environmental factors, and thus explain the trajectories of climate change induced international human mobility.

This leads us to de Haas's Aspirations—Capabilities Framework.<sup>37</sup> This Framework creates a double axis of a person's aspirations and their capabilities, and focuses on the person of concern as a "migratory agent". For the purposes of the application of this framework, de Haas describes migration aspirations as "a function of people's general life aspirations and perceived geographical opportunity structures", whereas "migration capabilities are contingent on positive ('freedom to') and negative ('freedom from') liberties". Additionally, a person of concern will have a certain extent of access to economic, social and cultural resources to be able to move. This provides a theoretical categorisation of five ideal-typical individual mobility types based on personal migration aspirations and capabilities, which are the following in my own interpretation: 1. voluntary immobility: due to low migration aspirations but potentially high migration capabilities; 2. acquiescent immobility: due to low migration aspirations and low migration capabilities; 3. involuntary immobility: due to high migration aspirations but low migration capabilities; 4. involuntary mobility: due to low migration aspirations but potentially high migration capabilities; and 5. voluntary mobility: high migration aspirations and high migration capabilities.<sup>38</sup> Moreover, based on the positive liberties, such as the freedom to do something, and negative liberties, such as the freedom from external constraints, de Haas identifies the following theoretical migration categories: 1. precarious migration: referring in general to short-distance, often internal human mobility by relatively poor people vulnerable to exploitation, i.e. poor rural-urban migrants, undocumented labour migrants, unsuccessful asylum seekers, internally displaced persons, which is characterised by the low level of positive and negative liberties; 2. distress migration:

<sup>35</sup> DE HAAS et al. 2020: 68.

<sup>36</sup> DE HAAS et al. 2020: 61.

<sup>37</sup> DE HAAS et al. 2020: 17.

<sup>38</sup> DE HAAS et al. 2020: 22.

referring to the deprivation of mobility freedom with no reasonable option to stay, characterised by high level of positive liberties and low level of negative liberties; 3. improvement migration: both internal and international human mobility for the purposes of improving one's economic circumstances, characterised by low level of positive liberties and high level of negative liberties; and 4. free migration: relatively unconstrained human mobility in and between wealthy countries or by wealthy people or skilled workers, characterised by high level of positive and negative liberties.<sup>39</sup>

While these established categories may not seem practical at first, in my understanding, they do more service to persons of concern in case of climate change induced human mobility, than any other conceptual framework. The Aspirations—Capabilities Framework essentially ends the debate on whether those persons who are displaced by the negative effects of climate change qualify as "voluntary migrants" or "involuntary migrants". The framework conceptually explains that human mobility moves on a scale. Recognising the essence of involuntary migration, which are external circumstances putting pressure on an individual's predisposed circumstances, and identifying on that scale of human mobility the point of intervention is the key to regulate climate change induced human mobility under international law and provide protection to those most vulnerable to climate change.

# Conceptualising climate change induced international human mobility

Before we identify and adapt the most relevant concepts to climate change induced international human mobility, it must be reinforced that environmentally induced human mobility has not always been so undertheorised. At first, a behaviourist current in geography during the 1960s had a significant interest in human mobility. Wolpert's Stress Threshold Model<sup>40</sup> perceived human mobility as an adjustment to environmental stress and considered human mobility a decision as the result of stressors affecting individuals up to a certain threshold, beyond which persons of concern decided to relocate. Wolpert even elaborated a true mathematical model but 'environmental' factors incorporated therein were rather urban environmental factors such as noise, green areas, personal safety, congestions, than natural environmental factors.41 Subsequently, from the 1970s onwards, migration theories concentrated on economic inter-state relations as already described above. Up until the political discourse on climate change exploded, migration scholars only sporadically addressed the nexus between environmental factors and human mobility. However, even today, scholarly literature remains limited and can be characterised by the broadening of mainstream migration concepts, with limited results.

As a premise, classic migration concepts divides 'migrants' into persons who leave for economic reasons and those who leave for other reasons, that are non-

<sup>39</sup> De Haas et al. 2020: 27.

<sup>40</sup> Wolpert 1966: 95.

<sup>41</sup> Wolpert 1966: 101.

economic. On the one hand, as demonstrated above, neoclassical theories of migration, as well as new economics of migration, and even sociological theories, all perceive human mobility as a process through which people seek better general economic conditions. On the other hand, scholars like Póczik<sup>42</sup> establish that the traditional "push and pull" model's macro perspective identifies a two-by-two table of economic and non-economic push factors and economic and non-economic pull factors, which is then facilitated by the migratory network. Mayer summarises the "great semantic heterogeneity in the literature on environmental migration" as he refers to it, by dividing it into two schools, the minimalist and the maximalist. As such, Mayer qualifies Myers as a maximalist, who perceives a strict distinction between people who are displaced because of environmental factors and those who are displaced by other causes, such as economic, social or political causes.<sup>43</sup> While according to Mayer, minimalists maintain that environmental and other factors may not be distinguished so "neatly" from each other, and often times economic factors result from underlying environmental causes, thereby the environmental causation of a displacement is often indirect and complex.<sup>44</sup> Mayer continues to explain that the effect of environmental factors must be conceived as part of a cluster of causes, and causation, especially with regards to international mobility, may be indirect.<sup>45</sup> Focusing on climate change induced human mobility instead of environmentally induced human mobility makes this even more complex and vague, as climate change increases the likelihood of certain phenomena but it cannot be considered the cause of an individual environmental phenomenon.

A pivotal milestone in the literature on climate change induced human mobility, synthesising available research and scholarly literature, was the 2011 Foresight Report commissioned by the U.K. Government. The report established that human mobility is complex, multi-casual and non-linear, and that an environmentally deterministic approach is destined to fail because it does not account for the importance of human agency in migration outcomes. He report also introduced a new conceptual framework based on the classis Push–Pull Model, with the premise that environmental change can affect human mobility through influencing existing drivers of migration. In fact, there are thus five, interdependent drivers of human mobility: economic, social, political, demographic and environmental. Hinting at the Stress Threshold Model, the report established that human mobility happens based on the relative importance of a driver to the person of concern. Moreover directly and

<sup>42</sup> Póczik 2008: 68.

<sup>43</sup> Mayer 2017: 28.

<sup>44</sup> Mayer also notes that the 2004 Toledo Initiative on Environmental Refugees and Ecological Restoration was based on maximalist concepts (MAYER 2017: 29).

<sup>45</sup> Mayer 2017: 33.

<sup>46</sup> Foresight 2011: 31.

<sup>47</sup> Foresight 2011: 32.

indirectly available ecosystem services, as environmental drivers, through interaction with other drivers cause human mobility. $^{48}$ 

Apart from identifying the causal link between climate change and international human mobility, for the sake of prognosis for policy formation purposes, identifying key geographical areas of concern, as well as key groups of persons of concern, has also gained support recently. One such approach to international human mobility, and in particular climate change induced international human mobility is the Migration Hotspots approach. This concept is rooted in, for example, the World Bank report on natural disaster hotspot,49 and climate change hotspot,50 and climate change in-migration and out-migration hotspots, 51 as well as the EU's hotspot approach to migration.<sup>52</sup> Another approach is identifying groups as multidimensionally vulnerable. As such, marginalised groups are most exposed to climate hazards and have the least capability to adapt to the effects of climate change. Marginalised persons of concern may belong to a certain social group or may be children, older people, disabled or sick, or even members of an indigenous group. Moreover, once displaced, vulnerability increases.<sup>53</sup> Simperingham defines the simple equation of "exposure + vulnerability = climate displacement" to explain climate change induced human mobility. Simperingham maintains that more often than not, it is exposure to climate hazards combined with the local vulnerability of an individual or community that leads to displacement.<sup>54</sup>

At this point we must also note that differentiating among vulnerable people perpetuates discrimination, inequality as well as local and global social and political tension. Echoing the human rights based approach, all measures to prevent and manage climate change induced human mobility must ensure that the rights of affected communities are respected, protected and fulfilled, that all measures are designed and implemented with the meaningful participation of affected communities, that non-discrimination is ensured across all measures, and that the particular needs of the most vulnerable are addressed.<sup>55</sup>

Furthermore, Boswell explains that theories on migration may be classified into three levels: the macro, the meso and the micro level assessments. Within this framework: 1. 'macro theories' emphasise the structural, objective conditions which act as "push and pull" factors for human mobility; 2. 'meso theories', rejecting the macro focus on push and pull factors, locate human mobility flows within a complex system of linkages between states; and 3. 'micro theories' focus on the factors influencing individual decisions to move, analysing how persons of concern 'weigh up the various

<sup>48</sup> Foresight 2011: 44.

<sup>49</sup> The World Bank 2005: 15.

<sup>50</sup> Turco et al. 2015: 1.

<sup>51</sup> CLEMENT et al. 2021: viii.

<sup>52</sup> European Commission s. a.

<sup>53</sup> Simperingham 2017: 88.

<sup>54</sup> Simperingham 2017: 88.

<sup>55</sup> SIMPERINGHAM 2017: 89.

costs and benefits' of moving.<sup>56</sup> While Boswell states that these three approaches are not mutually exclusive,<sup>57</sup> I would go as far as to say that these three levels of assessment should be applied at once or in three consecutive steps for the sake of efficiency. Thus, when analysing international human mobility flows, a multilevel perspective should be applied. In this case, regarding climate change induced human mobility, the effects of climate change should be incorporated on all three levels, as demonstrated in the table below.

Table 1: Multilevel perspective on Climate Change Induced Human Mobility

Classification	Description	Aspects of Climate Change Induced Human Mobility
Macro level	Structural conditions, Push-and-Pull models	Concepts of Climate Justice The principle of Common but Differentiated Responsibility
Meso level	Complex system of linkages between States	Interdependence of drivers Adaptation through development
Micro level	Individual decision- making	Identifying climate change hotspots Identifying multidimensionally vulnerable groups

Source: Compiled by the author.

#### Conclusions

Assessing the most relevant migration theories it must be highlighted that no theory or concept denies the climate change - human mobility nexus. Those concepts and models which ignore environmental factors, simply do not wish to be more than were originally intended, a limited economic model to demonstrate 20th century migratory flows. Those concepts and theories which accommodate environmental factors as potential drivers of human mobility vary from an environmentally deterministic perspective to a more contributory perception. Interestingly, unless commissioned for operational purposes for an international organisation such as the World Bank or for a particular government, scholarly literature fails to focus on climate change and inconsistently researches natural hazards or gradual deterioration of the natural environment. Such lack of focus and inconsistency, coupled with the segmentational and unidimensional approach to human mobility, renders it almost impossible to draw well-established, well-substantiated scientific conclusions on the causal effects of climate change with regards to international human mobility. Nonetheless, synthesis reports focusing on the social effects of climate change, such as human mobility, produce evidence for the interlink between climate change and human mobility.

<sup>56</sup> Boswell 2002: 3.

<sup>57</sup> Boswell 2002: 4.

Once the problem is well-established by the relevant scholarly literature, research finding may be used to elaborate policy recommendations. Consequently, the triangle of 1. multicausal, interdependent drivers of international human mobility; 2. climate change hotspots; and 3. the multidimensional vulnerability of certain groups, lay out the blueprint for the international community to act together. Incorporating the requirements of the Human Rights Based Approach with a Multilevel Perspective enables policy makers to anticipate and plan ahead instead of implementing ad hoc, emergency responses.

#### References

- Boswell, Christina (2002): Addressing the Causes of Migratory and Refugee Movements: The Role of the European Union. *UNHCR Working Paper*, No. 73.
- BOURDIEU, Pierre (1986): The Forms of Capital. In RICHARDSON, John (ed.): *Handbook of Theory and Research for the Sociology of Education*. Westport, CT: Greenwood. 241–258.
- Bueno, Xiana Prieto-Rosas, Victoria (2019): Migration Theories. In Gu, Danan Dupre, Matthew E. (eds.): *Encyclopedia of Gerontology and Population Aging*. Cham: Springer. Online: https://doi.org/10.1007/978-3-319-69892-2
- CLEMENT, Viviane RIGAUD, Kanta K. DE SHERBININ, Alex JONES, Bryan ADAMO, Susana Schewe, Jacob Sadiq, Nian Shabahat, Elham (2021): *Groundswell. Acting on Internal Climate Migration. Part II.* Washington, D.C.: The World Bank. Online: https://doi.org/10.1596/36248
- De Haas, Hein Castles, Stephen Miller, Mark J. (2020): *The Age of Migration*. London: Bloomsbury.
- De Haas, Hein (2021): A Theory of Migration: The Aspirations-Capabilities Framework. *Comparative Migration Studies*, 9(1). Online: https://doi.org/10.1186/s40878-020-00210-4
- European Commission (s. a.): *Hotspot Approach*. Migration and Home Affairs. Online: https://home-affairs.ec.europa.eu/networks/european-migration-network-emn/emn-asylum-and-migration-glossary/glossary/hotspot-approach\_en
- Foresight (2011): *Migration and Global Environmental Change. Final Project Report.* London: The Government Office for Science.
- Horváтн, Valéria (2021): The Right to Seek Asylum of 'Climate Refugees'. *Acta Humana*, 9(1), 119–136. Online: https://doi.org/10.32566/ah.2021.1.8
- HUNTER, Lori M. (2005): Migration and Environmental Hazards. *Population and Environment*, 26(4), 273–302. Online: https://doi.org/10.1007/s11111-005-3343-x
- KENDE, Tamás NAGY, Boldizsár SONNEVEND, Pál VALKI, László eds. (2014): Nemzetközi jog. Budapest: Complex Kiadó.
- Lee, Everett S. (1966): A Theory of Migration. *Demography*, 3(1), 47–57. Online: https://doi.org/10.2307/2060063
- MASSEY, Douglas S. Arango, Joaquin Hugo, Graeme Kouaouci, Ali Pellegrino, Adela Taylor, J. Edward (1998): *Worlds in Motion. Understanding International Migration at the End of the Millennium.* Oxford: Clarendon Press. 17–60.
- MAYER, Benoît (2017): Critical Perspective on the Identification of 'Environmental Refugees' as a Category of Human Rights Concern. In Manour, Dimitra Baldwin, Andrew Cubie, Dug

- MIHR, Anja THORP, Teresa (eds.): *Climate Change, Migration and Human Rights.* London: Routledge. 28–42. Online: https://doi.org/10.4324/9781315622217
- PIGUET, Etienne (2013): From "Primitive Migration" to "Climate Refugees": The Curious Fate of the Natural Environment in Migration Studies. *Annals of the Association of American Geographers*, 103(1), 148–162. Online: https://doi.org/10.1080/00045608.2012.696233
- PÓCZIK, Szilveszter (2008): A nemzetközi migráció tendenciái a 20. és 21. században elméleti és történelmi nézőpontból. In PÓCZIK, Szilveszter DUNAVÖLGYI, Szilveszter (eds.): Nemzetközi migráció Nemzetközi kockázatok. Budapest: HVG Orac. 31–111.
- SIMPERINGHAM, Ezekiel (2017): State Responsibility to Prevent Climate Displacement: The Importance of Housing, Land and Property Rights. In Manour, Dimitra Baldwin, Andrew Cubie, Dug Mihr, Anja Thorp, Teresa (eds.): Climate Change, Migration and Human Rights. London: Routledge. 86–98. Online: https://doi.org/10.4324/9781315622217
- Sriskandarajah, Dhananjayan (2005): *Migration and Development*. Global Commission on International Migration, September 2005.
- Turco, Marco Palazzi, Elisa von Hardenberg, Jost Provenzale, Antonello (2015): Observed Climate Change Hotspots. *Geophysical Research Letters*, 42(9), 3521–3528. Online: https://doi.org/10.1002/2015GL063891
- The World Bank (2005): Natural Disaster Hotspots. A Global Risk Analysis.
- WISSINK, Marieke DÜVELL, Franck MAZZUCATO, Valentina (2017): The Evolution of Migration Trajectories of Sub-Saharan African Migrants in Turkey and Greece: The Role of Changing Social Networks and Critical Events. *Geoforum*, 116, 282–291. Online: https://doi.org/10.1016/j.geoforum.2017.12.004
- WOLPERT, Julian (1966): Migration as an Adjustment to Environmental Stress. *Journal of Social Issues*, 22(4), 92–102. Online: https://doi.org/10.1111/j.1540-4560.1966.tb00552.x
- Zelinsky, Wilbur (1971): The Hypothesis of the Mobility Transition. *Geographical Review*, 61(2), 219–249. Online: https://doi.org/10.2307/213996