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From Displacement to Home:

★ **How can emergency architecture assist Climate Refugees
in fostering a sense of home beyond shelter housing?** ★

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Figure 1 Farahmand, D. (2023) Digital collage exploring the cause and consequences of the concept of displacement. [Illustration]

Introduction

"Considering home as constituted by intersubjective relations and as a human construction in both its materiality and imagination, home becomes crucial for senses of self, belonging, well-being, marginalization, estrangement, and mental health." (Gronseth and Thorshaug, 2022)

At the age of 15, I moved to a small city in Switzerland from my home country, Iran. After three years, I migrated to the UK to continue my studies. Although my migration experience is nowhere near that of displaced communities, I often found myself feeling lost and disconnected from my culture and community, searching for a sense of belonging that would bring me closer to home. In addition, the lack of stability left me in a period of uncertainty between physical spaces and the allusive feeling of home. Having this experience, I found myself inquisitive regarding the issue of climate migrants and the notion of forced displacement, especially since "Climate migrants have been invisible for many years on the migration and climate debates" (Ionesco, 2019) as we more frequently hear about refugees and the situation of refugee camps in the context of war and political conflicts. In the context of Climate Emergency, which refers to a critical and urgent state of environmental crisis caused by human activities, resulting in extreme weather changes and ultimately global warming, "its consequences also extend far beyond its immediate natural impacts." (Wiertz and Graaf, 2022)

In an era defined by the extreme march of climate change, a new pattern of displacement has developed through climate crisis leading to the formation of 'Climate Refugees' legally known as 'Climate Migrants'. Therefore, the terms 'Refugees', 'Migrants', and 'Asylum' have been used interchangeably to portray the complex landscape of displacement, raising questions about the nuance required in understanding the diverse experiences within these categories. Thus, the factors that unite displaced people are temporary housing, camps, and their polysemic function. As itemized by Nerea Elorduy (2021, p.18) "In the camps, human actors transform the physical spaces while simultaneously those alter the identity of refugees, surrounding communities, host governments and the perception others have of them." It can be suggested that the 'transformation' that Elorduy argues can be interpreted as a lack of character and mono functionality that the structure of these temporary settlements offers.

Interior and Spatial design is a language, allowing designers to address different social issues and express their thoughts and feelings in various forms. Community engagement, equity, inclusion, and most importantly, social justice, are the core elements of this notion as they provide essential aspects of common concerns that often directly impact shaping one's environment. In this thesis, I will examine the potential role of Emergency Architecture in providing more than temporary housing for those affected by climate-induced displacement. With no legal status, the endeavor to establish a sense of home in an unconventional location becomes a complex problem for those forcibly dislocated due to climate-related problems. While 'Home' is often described as "a person's house", it is not necessarily confined to four walls or a set boundary and can be seen as a sense or a concept. Therefore, the phenomenon of Emergency Architecture being merely a structure is shallow and irrational, notably as "in various utopian or idealistic guises it tends towards a historical point of view." (Chun and Brisson, 2015, p.19) The practice not only transforms a space but also tells a story and creates an identity and character for the existing environment. Corresponding to the current struggles related to the displaced population, the argument may be made that historical methods and strategies have failed to implement a sustainable space to provide solutions. The following chapters will explore and identify the profound range of possibilities that architecture can offer Climate Migrants to recreate the concept of home where home is not meant to be. Learning from existing case studies in Asia and the Pacific, this thesis aims to ultimately develop a deeper understanding of how the future of Climate Refugees/ Migrants could look in relation to architecture and design.

Chapter 01 : Home through Resilient Solutions

Resilient Solutions through Temporary Spaces

This chapter centralizes the concept of 'Sustainable Design' and investigates the relationship between Home and stability in the form of design and architecture. Embracing Eric Baldwin's description of 'Architecture of healing', the buildings of our daily lives directly shape our experience (Baldwin, 2020). Therefore, designing sustainable and durable structures could convey a sense of insurance and contribute to the perception of permanence for those affected by climate issues.

Connecting with the innovative approach of the Flat-pack Ikea Shelter by Better Shelter, although not specifically created for Climate Refugees, the use of adaptive and environmentally friendly materials such as metal frame and clad, has provided the inhabitants the feeling of security and insulation. "If you compare life in the tents and life in these shelters, it's a thousand times better" (Oliver, 2017). The project offers flexible and spacious shelters with the intention of withstanding climatic conditions. As explained by the CEO of the company "You can put it together in different ways to make small clinics or temporary schools. A family could also take it apart and take it with them, using the shelter as a framework around which to build with local materials." (Heggnes, 2017) Hence, It can be suggested that the functionality of these shelters highlights the multi-dimensionality of Emergency Architecture; while both tents and shelters act as temporary dwellings, stability and the firm structure of these shelters promote lastingness and longevity. In addition, to Continue with this notion, it is important to understand that 'rebuilding' the sense of belonging and dignity is not necessarily limited to physical temporary spaces, it is more about the key elements that transform these transitional settlements into 'durable solutions'.

When comparing Ikea's shelter project with other types of temporary housing, although more sustainable and has a longer lifespan, it lacks crucial features that make it far from creating a sense of protection for Climate Refugees. As mentioned in the article 'Places for People' by Tom Scott-Smith, "They approach shelters as structures with universal aspirations that respond primarily to concerns of price and mass production, rather than engaging with how people actually use space and improving the quality of their environment." (Scott-Smith, 2019) From being criticized for not meeting the Swiss fire standards, to the absence of architectural elements, the lack of protection from wind and not considering accessibility and inclusive design; it can be concluded that the varying expectations of what a shelter should be or do make it impossible to address different needs and emerge the sense of home for climate migrants. Given the above, to link the idea of resilient design with the experience of dwelling, one must carefully observe the performance of emergency architecture in countries damaged by climate Emergency.



Figure 3 R. Cox. (2013). An Ikea "Better Shelter" prototype, Hilawyen refugee camp, Dollo Ado, Ethiopia. [image] Available at: https://bettershelter.org/projects/_2013_unhcr_ethiopia/ (Accessed 15 November 2023).



Figure 4 Dezeen. (2014). DIY repairs to the frame of a prototype Better Shelter. [image] Available at: <https://www.dezeen.com/2017/04/29/united-nations-admits-10000-ikea-better-shelter-refugees-mothballed-fire-fears/> (Accessed 15 November 2023).



Figure 5 Hagman. E. (2016). Interior of a Shelter in Iraq. [image] Available at: <https://www.theguardian.com/artanddesign/2017/jan/27/why-ikea-flatpack-refugee-shelter-won-design-of-the-year> (Accessed 15 November 2023)

Figure 6 Better Shelter. (2021). New prototype of the shelter for communities affected by Climate Change in Colombia Caribbean Islands. [image] Available at: https://bettershelter.org/projects/_2021_unhcr_colombia-2/ (Accessed 23 January 2024)



Figure 7 Hossain.S. (2022). The rain harvesting canal that separates the hospital in section and acts a protective barrier against flooding. [image] Available at: <https://www.aljazeera.com/gallery/2022/11/31/pictures-world-best-new-building-bangladesh-friendship-hospital-riba-award> (Accessed 13 November 2023)

Vernacular Architecture and the Essence of Home

In a country like Bangladesh where thousands have been forcibly dislocated due to rising sea levels, cyclones, and river erosions, one might analyse the role of emergency and post-disaster architecture in shaping and creating the experience of 'dwelling' for the displaced population. Nurul Hashem, a schoolteacher in Bangladesh describes the situation as "The sea water is rising every day ... We lost everything. We are not happy, because we must move again. Climate change is making thousands of people homeless." (Hashem, n.d, cited in Moving Stories,2015) The design of the Friendship Hospital in Satkhira by Kashef Chowdhury represents the integration of 'Emergency' architecture with 'Architecture', blurring the boundaries between the two. Facing substantial barriers in adequately meeting healthcare needs particularly in rural areas, the Friendship Hospital aims to assist displaced communities and locals by making healthcare accessible, especially in times of climate emergency.

This portrays the need for more permanent and durable structures with versatile aims, going beyond the idea of traditional shelters and camps to contribute to the needs of people and eliminate life-threatening risks to convey a sense of stability and home. It can also be suggested that prioritizing materiality and incorporating vernacular architecture in the design of spaces for livelihood in climate-vulnerable regions has the potential to encourage climate migrants to perceive transitional spaces as lasting residences, fostering a sense of local belonging. As argued by Bruno Latour in his book 'Reassembling the Social' regarding transitional spaces "it is a network of people and objects" (Latour, 2005).



Figure 8 Hossain.S. (2022). One of the wards at the Freindship Hospital. [image] Available at: <https://www.aljazeera.com/gallery/2022/11/31/pictures-world-best-new-building-bangladesh-friendship-hospital-riba-award> (Accessed 13 November 2023)

Following the idea of resilient design, Chowdhury gives character to the surrounding water to play a key role in his design, performing as a rainwater-collecting canal that separates the hospital from the outpatient departments but also acts as a lifeline in times of emergency. Moreover, the use of local materials by local craftsmanship such as the exposed brick pavilions reflects the colloquial architecture and facilitates the seamless integration of the building into the fabric of native culture and society. In line with the chapter's intention, structures that emulate this example have the potential to restore a sense of 'home' for climate refugees. By employing local, sustainable, and durable materials, and prioritizing community well-being, they can convey a palpable sense of locality and security. Ultimately, the Friendship Hospital can be seen as a possible solution to what Scott-Smith argues in Places for People "Emergencies are often used to justify measure that would ordinarily be far from ideal." (Scott-Smith, 2019)

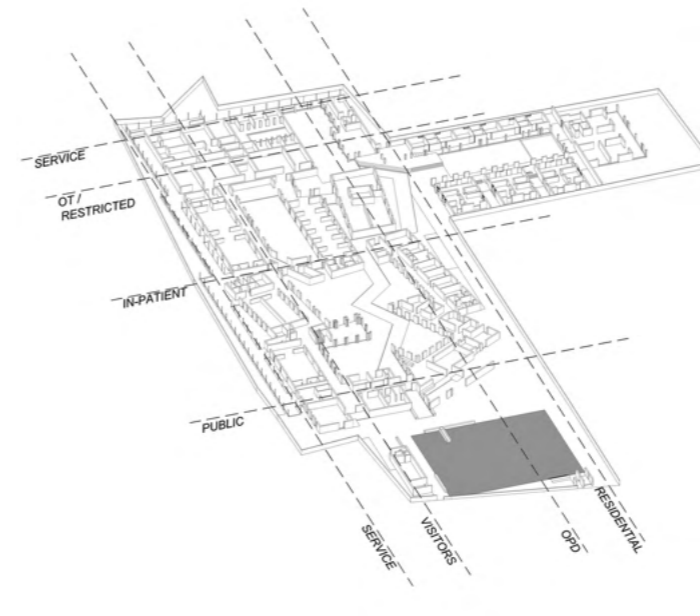


Figure 9 URBANA. (2021). Functions Diagram. [image] Available at: <https://www.archdaily.com/926305/friendship-hospital-satkhi-ra-kashef-chowdhury-urbana/5d9f2f06284dd1ca5000054-friendship-hospital-satkhi-ra-kashef-chowdhury-urbana-functions-diagram> (Accessed 13 November 2023)



Figure 10 URBANA.(2021). Plan of the hospital's courtyards. [image] Available at: <https://www.archdaily.com/926305/friendship-hospital-satkhi-ra-kashef-chowdhury-urbana/5d9f2f06284dd1ca5000054-friendship-hospital-satkhi-ra-kashef-chowdhury-urbana-functions-diagram> (Accessed 13 November 2023)



Figure 11 Zaman. M. (2019). Aftermath of flooding in Khulna, Bangladesh. [image] Available at: <https://www.nytimes.com/2019/05/05/world/asia/cyclone-fani-bangladesh-evacuation.html> (Accessed 11 November 2023)

Chapter 02: Redefining Home through Participatory Architecture

Home through Community, Community through Home

In Henry Sanoff's book 'Community Participation Methods in Design and Planning,' participation is portrayed as 'contextual,' where "Genuine participation occurs when people are empowered to control the action taken." (Sanoff, 2000, p.8) Cultivating a communal sense of home becomes pivotal in the vision of 'beyond temporary housing,' particularly for individuals displaced by climate issues. Inspired by the village of New Gourna of Hassan Fathy, the fundamental principle shaping the perception of 'home' revolves around the active involvement of the community in reimagining their dwellings. The 'Superadobe' of the Iranian American architect Nader Khalili is evidently a clear example of community participation in constructing temporary structures that can be then transferred to long-term spaces of inhabitation. Deceptively simple yet resilient, the domes withstand various climatic issues, and their versatility extends

to providing insulation against extreme temperatures and quick construction by diverse groups of people. The process involves layering sand-filled bags that are coiled upon each other and securely fastened using wire where additional stability is achieved by bonding the adobe (constructed of sun-dried clay or soil bricks) with cement, lime, or asphalt emulsion.

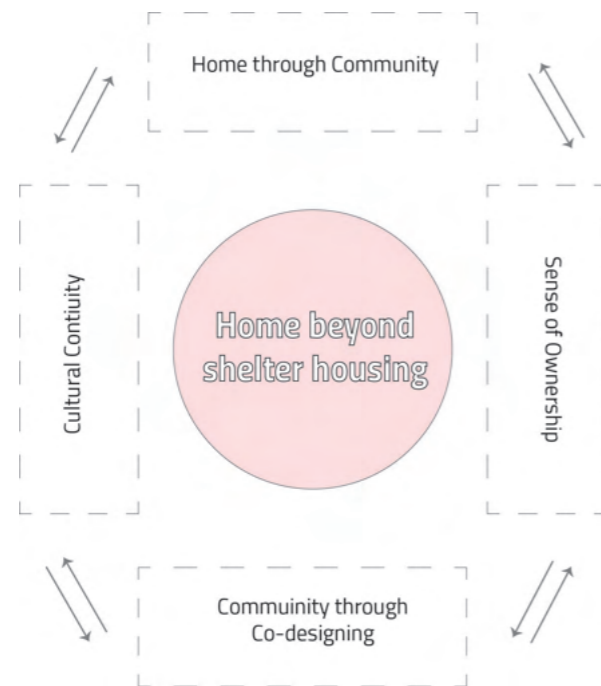


Figure 12 Farahmand, D. (2024) Diagram highlighting different aspects of participatory design. [Illustration]



Figure 13 Caya, A. (2012) Local Villagers working on the final stages of the eco-dome in a remote village in the Tadjourah region of Djibouti. [Image] Available at: <https://www.dvidshub.net/image/591295/new-eco-dome-signals-changes-local-village#ixzz1wU2WbVgJ> (Accessed 20 December 2023)



Figure 14 Cal-Earth. (n.d) Image of Nader Khalili and members of UNCHR working on disaster relief housing. [Image] Available at: <https://www.calearth.org/our-founder> (Accessed 30 December 2023)

Khalili's work signifies the empowerment of community participation as a strong tool aligning with his beliefs on the importance of co-designing, which refers to "design approaches that are tailored to local contexts enabling participants to transform their current situations in their own creative ways by using elements that are familiar to them" (Galabo, 2020, p.22). In his book 'Racing Alone', Khalili mentions that "The idea was not only to house people but to give them a feeling of ownership... to allow them to build something that's theirs." (Khalili, 2000, p) This portrays his engaging and participatory method, gathering displaced communities to form their own space based on their preference in terms of shape and scale with accessible, local, and sustainable materials as they need to rebuild a sense of community to adapt to the concept of displacement. Although Khalili's technique has been used by Calearth (Khalili's organization) to combat housing crises caused by war and natural disasters in countries like Pakistan, Iran, and Haiti, it has never been used to battle climate-induced displacement. Therefore, it can be suggested that

the Superadobes could communicate a deeper narrative in countries affected by the phenomenon of climate emergency and migrants. When delving into the intricate relationship between Emergency Architecture and community participation within the context of the climate crisis, crucial questions come forward regarding the absence of such techniques for climate migrants. Therefore, it is important to examine how active community engagement plays a vital role in supporting climate refugees amidst displacement, unraveling the multifaceted dynamics at the intersection of temporary spaces, and the challenges of conveying the sense of 'dwelling'.



Figure 15 Cal-Earth (n.d) Construction of Superadobe. [Image] Available at: <https://www.calearth.org/intro-superadobe>



Figure 16 BBC Future. (2019) The process of making the Superadobe. [Image] Available at: <https://www.bbc.co.uk/future/article/20190228-what-is-superadobe> (Accessed 29 December 2023)



Figure 17 BBC Future. (2019) Final structure of the Superadobe houses. [Image] Available at: <https://www.bbc.co.uk/future/article/20190228-what-is-superadobe> (Accessed 29 December 2023)



Figure 18 BBC Future. (2019) Interior of a Superadobe house. [Image] Available at: <https://www.bbc.co.uk/future/article/20190228-what-is-superadobe> (Accessed 29 December 2023)

Cultural Inclusion in Emergency Architecture for Climate Migrants

"We lost our livestock and now we are trying to rebuild our livelihood by starting from the beginning" (Zulaiakar, n.d, cited in *Moving Stories*, 2015)

In challenging how home could be channelled through participatory design for climate-induced displacement, the Barefoot social architecture project in Pakistan by Yasmeen Lari vividly exemplifies the potential of emergency architecture alongside community engagement in providing more than temporary dwellings. Over the past decade, Pakistan has been affected by heavy monsoons and rains resulting in massive flooding which has caused forced

migration within Pakistan; however, Pakistan is also an international destination for refugees from other countries, leaving a vast number of displacees and a minimum amount of funding for accommodating these displaced communities. Thus, working with affected communities and employing local materials to construct sustainable, Flood Resistant structures within the context of climate emergency can be seen as focal elements of Lari's project.



Figure 19 Hussain, A. (2022) Destroyed houses in Pakistan due to heavy flooding. [Image] Available at: <https://www.dawn.com/news/1724134> (Accessed 15 January 2024)



Heritage Foundation of Pakistan. (2023) Emergency Instant Shelter. [Image] Available at: <https://www.archdaily.com/1010265/yasmeen-lari-sets-out-to-build-one-million-flood-resistant-homes-in-pakistan-by-2024/65647c66ad68bf1239812d68-yasmeen-lari-sets-out-to-builld-one-million-flood-resistant-homes-in-pakistan-by-2024-image> (Accessed 15 January 2024)



Figure 21 Heritage Foundation of Pakistan. (2023) Flood resilient community space designed by locals. [Image] Available at: (<https://www.heritagefoundationpak.org/mi/6/sindh-floods-rehabilitation>) (Accessed 15 January 2024)

Using structural Bamboo panels, mud, and lime, the target program “aims to move away from the model of humanitarian aid that fosters dependency, and instead help empower the communities.” (Florian, 2023) The process of constructing the shelters, like Khalili’s Superadobe structures, is characterized by its simplicity and effectiveness. However, what distinguishes these spaces from ordinary shelters is their emphasis on fostering the integration of cultural design and elements through affected communities to rebuild a sense of familiarity and comfort. Moreover, it can be argued that the engaging method of building these spaces assists climate migrants in creating a sense of shared identity and cultural continuity where it is often referred to as Bottom-up innovation and can be defined as “the way in which crisis-affected communities engage in creative problem-solving, adapting products and processes to address challenges and create opportunities” (Betts, Bloom, and Weaver, 2015, p.3) For instance, the traditional smokeless and zero carbon Chullahs (fuel-efficient double stoves) built on an elevated earthen platform portray the collaborative and creative community dynamic where “The Barefoot entrepreneurs are training other women to build the chullahs, making a



Figure 22 Heritage Foundation of Pakistan (2023) Image of the Chulah. [Image] Available at: <https://www.heritagefoundationpak.org/mi/6/sindh-floods-rehabilitation> (Accessed 15 January 2024)

chain of skilled artisans” (Rathi, 2023) This also illustrates how migrants and refugees, as Brun and Fábos (2015, p.14) argue re-create places as particular articulations of their past and current realities, as environments that exist “in a range of different places across space and time” and “within circumscribed geographic, historical, and political contexts.” (Wari, Chitchian and, Momic, 2021)

In addition, it can be suggested that the Superadobe and the Barefoot project are very much community-oriented, allowing displaced people and locals to interact, build, and create long-term spaces that go beyond traditional camps and shelters whether as climate migrants or war refugees, bringing together displaced communities through participatory architecture can not only close the existing gap between transitional spaces and permanent structures but also advocate the need for a more sufficient approach in designing for climate-induced displacement. Allowing, these spaces to develop their own social, communal, and ecological context and rather than being limited to the existing concept of emergency architecture.



Figure 23 Yasmeen Lari Archive. (2023) Process of designing flood resilient houses by displaced communities. [Image] Available at: <https://metropolismag.com/profiles/yasmeen-lari-starchitect-turned-climate-activist/> (Accessed 15 January 2024)

Chapter 03: Adapting Spaces for Climate Migrants: The Role of Flexible and Adaptive Design in Emergency Architecture

Acknowledging the dynamic nature of communities facing displacement due to climate-related challenges, there is a significant need for spaces that prioritize flexibility in design. As mentioned by Nathanael Dorent in the article 'Transitory Cities' "the concept of emergency architecture offers an unfolding, alternative transitory space intended to underscore connectivity and reconfiguring networks within the city. Erasing borders between what are too often conceived as closed communities of settled citizens and refugees, it could also be a way of supporting a flexible migratory life" (Dorent, 2011). The creation of Home for Climate Migrants although faced with various climatic challenges, follows the same path and notion as other groups of displaced people. Hence, recognizing the significant role of Emergency Architecture in shaping the sense of dwelling emphasizes the need for its equitable application across all categories and contexts. Utilizing case studies including the Jarahieh Refugee School and the Paper log houses of Shigeru Ban, this chapter critically explores the value and potential of Adaptive design through Emergency Architecture and assesses the disparity between design solutions tailored for Climate Refugees and those for other displaced groups.

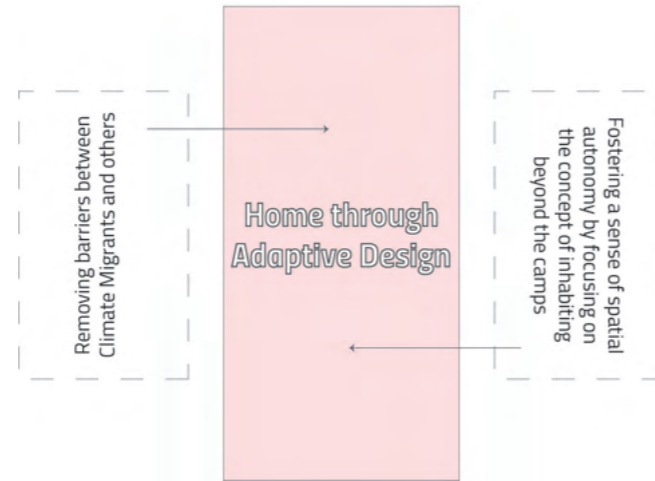


Figure 22 Farahmand, D. (2024) Diagram illustrating main aspects of adaptive design. [Illustration]

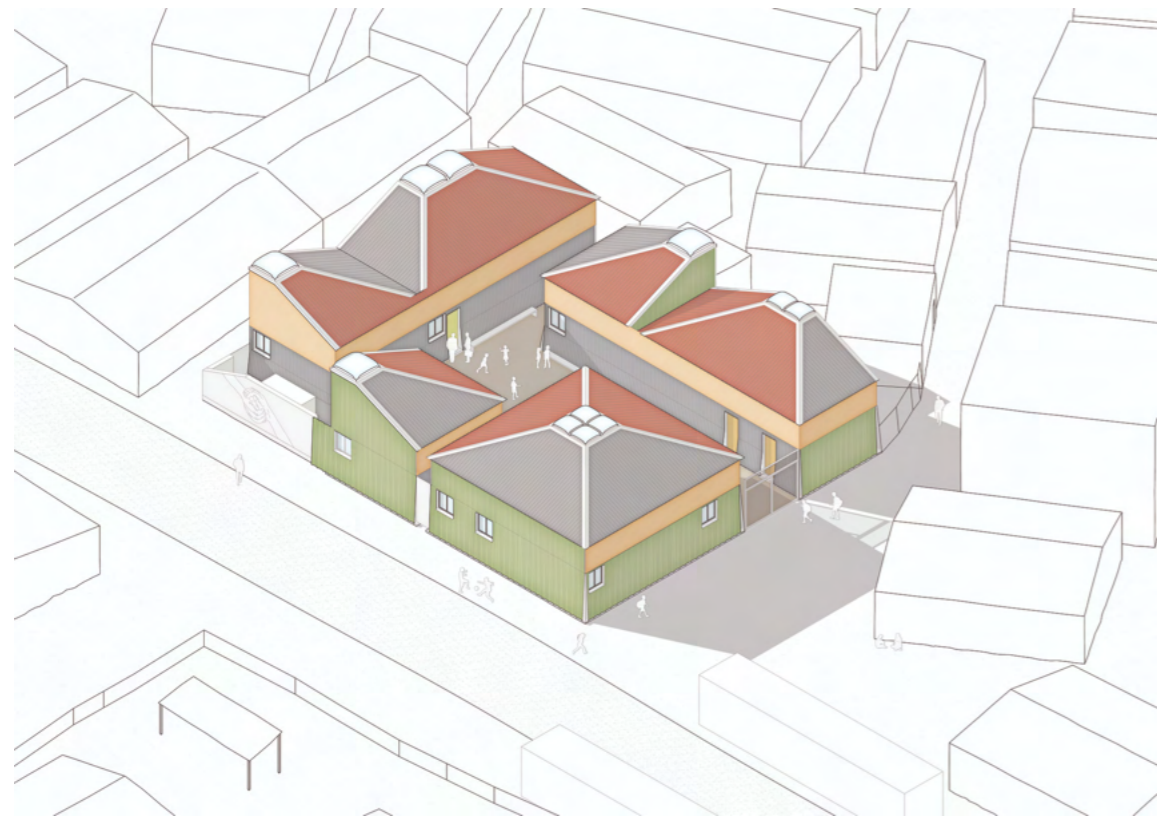


Figure 23 CatalyticAction. (2016) 3D view of the Jarahieh Refugee school, highlighting the potential of adaptive spaces. [Image] Available at: <https://catalyticaction.org/jarahieh-school/> (Accessed 28 December 2023)

Tailoring Spaces to Changing Needs

It is not uncommon for Migrants and Refugees to feel disconnected from others. Andrew Herscher in his book *Displacements: Architecture and Refugees* provocatively challenges and questions the prevailing social narrative that views displaced individuals as those who are "out of place" within the built environment (Herscher, 2017, p.12). Thus, one significant aspect of Reconfigurable Spaces is having the capacity and the ability to cater to diverse needs. As climate migrants arriving from varied cultural backgrounds, such spaces can act as platforms for cultural exchange and interaction and can accommodate communal activities. For instance, the Jarahieh Refugee School in Lebanon can be seen as a good example of Adaptive Design. The project was designed by the non-profit design studio CatalyticAction using a donated pavilion from Milan Expo 2015, the studio "dismantled the pavilion, transported it to Jarahieh refugee camp in Lebanon—home to 500,000 displaced Syrian children—and adapted it to create a functional and sustainable educational and social facility" (zilliacus, 2017). This Educational facility serves a multifaceted role beyond its primary function as it transforms into an adult school during the evenings, extending its impact to empower adults within the community with educational opportunities. Furthermore, it seamlessly transitions into a public cinema on weekends, and it also becomes a crucial site for aid distribution, providing a recreational and versatile space for residents by targeting the diverse needs of the community. In essence, the Jarahieh School stands as a compelling example of how Emergency architecture has the transformative potential of extending beyond temporary housing, fostering a sense of shared identity and belonging amongst its occupants. Hussein El-Weis, one of the local skilled labourers shares his thoughts about the project like "You feel the child will learn more, he will be focused and grab the knowledge. Why? Because it feels like home, things are in order, not like teaching inside a tent, but in a proper school." (Weis, 2016). Thus, it can be suggested that the improvement of "social cohesion" and the opportunity to work together in this project is what builds a shared



Figure 25 CatalyticAction. (2016) Image of the school at night, functioning as a cinema and adult school. [Image] Available at: <https://bit.ly/3Ukg4iO> (Accessed 28 December 2023)

"social infrastructure" (Sawa, 2016), helping a diverse range of Syrian ethnic groups, the local Lebanese people, and more importantly children, to come together to grow and develop confidence.

However, the project although commendable, portrays the broader issue of a deficient approach to designing such spaces for climate migrants. This divergence not only creates borders between environmental migrants and other groups of refugees but also perpetuates a cycle of inadequate support for climate migrants. Symbolic in nature, it contributes to their exclusion from comprehensive and effective emergency architectural solutions. Moreover, the lack of adaptive spaces that consider the environmental challenges that cause displacement, not only limits the sense of reimagination of home for climate refugees but also proves that "climate emergency design requires a culture shift and a new ethical position" (Pelsmakers, Donovan, Hoggard, and Kozminska, 2022)



Figure 26 CatalyticAction. (2016) Floor plan drawing of the school. [Image] Available at: <https://bit.ly/3Ukg4iO> (Accessed 28 December 2023)



Figure 27 CatalyticAction. (2016) Image illustrating community participation during teaching hours. [Image] Available at: <https://catalyticaction.org/jarahieh-school/> (Accessed 29 December 2023)



Figure 28 CatalyticAction. (2016) Image portraying the multi-functionality of the school. [Image] Available at: <https://catalyticaction.org/jarahieh-school/> (Accessed 29 December 2023)

Urban Refuge and Flexible Design: Rethinking Refugee Accommodations

During my research, I came across an interesting concept known as 'Urban Refuge' which closely resembles the patterns of climate-induced displacement. In other words, the term 'Urban Refuge' focuses on Refugees who decide or are obliged to settle in an urban area rather than traditional camps. In the book *Inhabiting Displacement*, Samah Al Jundi-Pfaff, a Syrian Refugee in Germany critically questions the potential of camps like "Could camps be built with the intent of creating places, which are meaningful, functional, and economical so the camp residents can produce the needed products and have better access to services? Could camps be designed with the intent to remove barriers, reduce stress, and lower heart rates?" (Pfaff, 2021) Linking this idea with the vision of flexible design and Climate migrants, it can be argued that this perspective requires a paradigm shift in the design and philosophy of refugee accommodations, aiming for spaces that connect displaced people to the urban environment, remove limits and blur the boundaries between the "formal and the informal, the individual and the communal, the architectural and the urban." (Mehran, 2022).

"We are not allowed to go back and live in the place where our old house stood as the government says it's at risk of flooding if there is another typhoon. We will have to find somewhere else to live and build a house there, but I don't know when." (Ticala, n.d, cited in *Moving Stories*, 2015)

Examining the case study of the climate crisis in the Philippines, the 2013 typhoon Haiyan (locally known as Yolanda) reveals the urgent need for adaptive design in order to regain



Figure 29 Keegan, C. and Dublin, C. (2013). *Aftermath of Typhoon Haiyan in Tacloban, the Philippine*. [image] Available at: <https://www.flickr.com/photos/oxfamireland/11406406373> (Accessed 29 December 2023)

spatial autonomy and cultivate a sense of home amidst climate-induced displacement. In the past decade, the Philippines has become more vulnerable to natural hazards such as severe cyclones, floods, and Landslides, and it is quite evident that these disasters have gotten extreme in warmer years where "Regardless of the connection to climate change, for many hundreds of thousands of people, displacement due to disasters has become a reality." (Moving Stories, 2015) Japanese architect and humanitarian designer, Shigeru Ban combats the issue of displacement by innovatively designing and building temporary settlements tailored for various groups of migrants and refugees. His Paper Log houses in the Philippines, built in 2013 because of the severe typhoon, can be seen as spaces with simple structures that despite their temporary nature, exemplify the vision of reconfigurable spaces for people displaced due to climate and environmental challenges. Transcending the conventional notion of temporary housing, the innovative use of paper tubes alongside "an arrangement of plastic beer and soda crates that are anchored by sandbags" (Chin, 2014) provides a quick approach to assembling and disassembling the houses and can be suggested as a pragmatic solution for the constantly changing circumstances of the displaced community due to the ongoing climate crisis.



Figure 30 Shigeru Ban Architects. (2014). Construction process of the Paper Log houses in the Philippines. [Image] Available at: <https://shigerubanarchitects.com/works/hh/houses/paper-temporary-shelter/> (Accessed 29 December 2023)

Chapter 04: The Future Landscape of Home for Climate Migrants



Figure 31 Shigeru Ban Architects. (2014) Completed structure of the Paper Log House in the Philippines. [Image] Available at: <https://shigerubanarchitects.com/works/hh/houses/paper-temporary-shelter/> (Accessed 29 December 2023)



Figure 32 Shigeru Ban Architects. (2024) Process of constructing the Paper Log House. [Image] Available at: <https://shigerubanarchitects.com/works/hh/houses/paper-temporary-shelter/> (Accessed 29 December 2023)

The use of such sustainable materials can be linked to the concept of 'Urban Refuge', where these structures serve as transitional spaces that connect displaced individuals with the surrounding environment and community. Additionally, the modular design of Ban's houses allows for various spatial configurations, communicating a sense of independence and self-determination among the inhabitants which can be referred to the context of Spatial autonomy, implying that individuals or communities can exert influence over the use and arrangement of their shelter as they want. Thus, this adaptability is crucial for climate migrants, as it acknowledges their agency in responding to changing conditions and preferences.

In brief, both the paper log houses in the Philippines and the Jarahieh school in Lebanon can be seen as examples that underscore the evolving role of emergency architecture in fostering the sense of home by implementing a sense of flexibility and merging displaced communities with others. However, these case studies also lack a key factor, 'permanence', which can be used to form more questions about the

future perspective of Climate Refugees and argue the insufficiency of emergency architecture. In consequence "Work on architecture and architectural history on displacement and forced migration, limited as that may be, focuses on the camp and the tent as the key sites and objects of analyses and how they have constituted spaces of architectural experimentation and education" (Herscher 2017; Siddiqi 2018; Sanyal 2011).

Symbolized as spaces of inhabitation, Refugee camps, tents, and shelters bring foreseeable controversy between the exclusion of climate migrants/refugees and the necessity of housing. As seen in previous case studies, a critical evaluation of the key question of this paper suggests that the solutions provided by emergency architecture fall short of promising lasting solutions and therefore it is not quite sufficient by itself when facing the challenges brought up by climate-induced displacement. As argued by Romola Sanyal, associate professor of urban geography at the London School of Economics "This is deeply problematic as subjects and spaces co-consti-

tute each other and understanding how identities of refugees evolve requires one to be attentive to the kinds of spaces they occupy and remake over time." (Sanyal, 2011, p.181) Yet, as examined in the previous chapters, encouraging the feeling of home does not have to be limited to creating a physical space such as refugee camps, and it goes far beyond what has been approached as a standard solution for many years. This chapter advocates two significant components that can bridge the gap and integrate Climate Migrants and other groups of displaced people and communities: establishing legal status and moving toward permanent solutions.

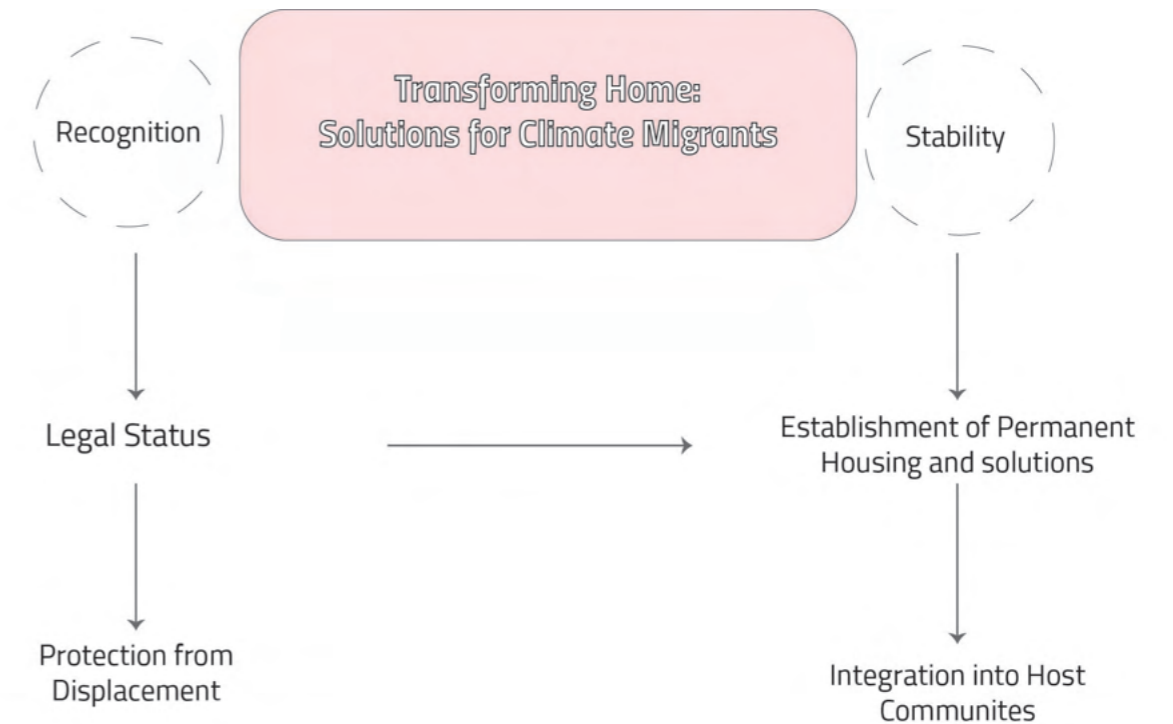


Figure 33 Farahmand, D. (2024) Flow Diagram of the ideal future for Climate Migrants. [Illustration]

Legal Status: Protection Dilemma for Climate Refugees

Despite the slow path of climate-related migration, I think the process of conveying a sense of home for such group of migrants and envisioning their future would not be possible or even close to complete without the establishment of a climate-specific legal status. This particularly applies to small state islands in the Pacific and Global South such as Kiribati illustrating the need for a Climate Refugee treaty. This small island is in the Pacific Ocean between Hawaii and Australia, and over the previous years, it has encountered challenges not only in terms of its economic condition but also like Bangladesh, concerning the matter of rising sea levels. This problem, along with the gradual sinking of the island, has forced the residents to begin a migration journey in search of a haven. Unfortunately, their efforts have been met with disappointment, as countries like Australia and New Zealand have rejected them due to the lack of a comprehensive definition of the term 'Climate Refugee' in international legal systems. Thus "To ensure the long-term viability of resettlement programs, refugees fleeing the effects of climate change should be accorded a status that is both stable and permanent, which will give them access to various forms of protection." (McDave and Dagadu, 2023) Equally, initiating a Climate Refugee treaty can be a complementary solution alongside emergency architecture, playing a significant role in removing boundaries and providing protection and funding for the relocation of such displaced communities.

The extent of the issue becomes evident when examining the encounters and listening to the perspectives of the migrant population originating from Kiribati. Ioane Teitiota is one of many Kiribati's who migrated and applied for asylum in New Zealand to secure a better future for his family. In 2013 he was denied and sent back to the island due to the United Nations' acknowledgment of the term 'Climate refugees' considering Dina Ionesco's description of the failure "to recognize important elements that define human mobility within the context of climate change and environmental degradation" (Ionesco, 2019). Teitiota explained his feelings towards this exclusion like "Yes, I'm the same as people who are fleeing war, those are afraid of dying, it's the same as me. The sea level is coming up, and I will die, like them." (Teitiota, 2015) Nevertheless, it is worth noting that the emphasis is not fully on recognizing the suggested term, but rather on the advantages that come

with the acceptance as Refugees. Admittedly, "Regardless of the differences in legal status, all groups have in common that they had to flee and leave their place of origin and seek protection and another place of residence outside or inside of their country of origin." (Wari, Chitchian and Momic, 2021) This is a key aspect when considering the implications of emergency architecture in providing appropriate solutions for those affected by climate challenges. Allowing fairness amongst all groups and nations, the concept of granting legal status goes beyond legalities; it is a cornerstone for building a sense of home by recognizing and protecting the rights of those displaced by climate change. Without this factor, Emergency Architecture would be incapable of creating resilient, participatory, and adaptive spaces that contribute to the feeling of home.



Figure 34. Gratzner, J. (2023) A family in Kiribati walking through the seawater that flooded their village. [Image] Available at: <https://www.theguardian.com/environment/2023/jun/28/indigenous-languages-climate-crisis-threat-pacific-islands> (Accessed January 15 2024)

The Shift Towards Permanence



Figure 35. Jazbec, C. (n.d) A house lifted and placed on stilts in Tarawa, Kiribati to prevent flooding. [Image] Available at: <https://www.globalonenessproject.org/library/photo-essays/kiribati-gone#photo-12=&sm=pe21520.8582&info=true> (Accessed January 15 2024)

Emergency architecture is seen and understood as something "transitory, temporary and not conclusive, aiming at not to be prolonged for long" (Oliviera and Campos, 2019) Reshaping the future landscape of climate migrants, particularly in the context of Emergency architecture requires a major shift towards permanence. Besides the Friendship Hospital by Kashef Chowdhury in Bangladesh, other examples shown in this paper portray temporary and short-term solutions for climate-induced displacement. This temporality although effective in addressing urgent needs, permanent structures can offer stability and continuity, signifying the need for spaces that accommodate the emotional, social, and cultural dimensions of home. When considering the case of Kiribati, the absence of legal rights has a direct link with the lack of long-term solutions for climate refugees causing what Basel describes Emergency architecture as "it is a domain of both displacement and inhabitation, of dis-placing and re-placing." (Wari, Chitchian and Momic, 2021, p.13) Therefore, with long-term displacement becoming the 'new normal' (Brun and Fabos, 2017) short-term solutions become unsuitable for rebuilding the sense of home. Following the case of forced migration of small state islands like Kiribati, the government has implemented a long-term policy known as 'Migration



Figure 36. Jazbec, C (n.d) A sea wall in Maneaba, Kiribati to protect buildings from flooding. [Image] Available at: <https://www.globalonenessproject.org/library/photo-essays/kiribati-gone#photo-12=&sm=pe21520.8573&info=true> (Accessed 15 January 2024)

with dignity' to relocate the population in purchased lands from Fiji. This policy has paved the way for imagining what the future of climate migration could look like as social praxis. The evaluation of such policies can be seen as a major step in transitioning more towards long-term strategies to maintain a 'Home'. However, reaching a level of permanence where refugees and migrants can stay for a long period and reestablish a sense of home without any legal problems would not only be possible with these policies as "an experience of displacement does not have a finite conclusion" (Fabos, 2017). Hence, the creation of a sense of dwelling can be temporary but with a long-term purpose, an intersection of Humanitarian Design and Emergency architecture alongside legal policies to form a space that holds culture, memories, and networks to connect climate migrants with other displaced communities. "While imaginings of movement, migration, and global spaces were seen to impact on locality, place, and dwelling, visions of homeland and permanence were also enlisted as shaping factors behind mobility, migration, and diaspora" (Hermann and Kempf, 2017)

Conclusion

In line with the vision of Marc Augé in his book 'non-places', "The term 'space' is more abstract in itself than the term 'place'" (Augé, 1992, p.67). In this context, 'home' does not necessarily refer to a place but rather to a collection of feelings within a space that can be used as solutions in rebuilding the sense of dwelling for climate migrants. Resilient design solutions like the 'Ikea shelter' project and the 'Friendship Hospital' highlighted the importance of stability and long term spaces. Meanwhile, the concept of participatory design focused on community empowerment and how "humanitarians should help people shelter themselves, rather than providing a completed building to inhabit." (Scott-Smith, 2019). Despite Emergency Architecture being portrayed as a tool in providing a home for Climate Migrants, its urgency has often failed it to convey this notion due its temporary nature. Learning from the significance of flexibility in designing spaces for refugees and migrants, integration is a multidimensional process where 'space' in a broader sense often acts as a tool that allows host communities to connect with newcomers. However, these projects also provided a new perspective on the existing gap between climate migrants and others, advocating the need for equal application of design across both groups. (Calissano, Denicke-Polcher, Giacco, and Haenschel, 2022)

Undoubtedly, there are many unexplored possibilities of various directions that Emergency Architecture can assist such displaced groups beyond the traditional temporary systems in finding a collection of elements that define Home. For example, 'Fostering a sense of community through recreational design', aiming for creating spaces with long term purposes to shape a collective identity through architecture. Expanding on the idea of community and Adaptive design, 'home' post-migration can become its own contextual space where it could be a social hub, an educational facility, an exhibition, and more. In conclusion, it can be said that fostering a sense of Home through Emergency Architecture for Climate migrants relies both on innovative design approaches and international laws where its value lies in its potential to alter the narrative of spaces through home-making factors as well as its role in connecting displaced communities.

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Donya Farahmand [Research Journal]

