

Reconquering Homeland

by
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Author's Declaration

I hereby declare that I am the sole author of this thesis. This is a true copy of the thesis, including any required final revisions, as accepted by my examiners.

I understand that my thesis may be made electronically available to the public.

Abstract

In a world plagued by refugee crisis, the urgency of addressing this persistent challenge remains a constant thread, especially as the root and stem of the crisis are yet to be fully understood and resolved. The complexities surrounding the Rohingya crisis demand deeper exploration and innovative solutions, empowering not only Rohingyas but also everyone facing the harsh challenges of displacement. This thesis delves into the intricate challenges of displacement faced by the Rohingyas, seeking to unravel the layers of their struggles and proposing an architectural roadmap for their future well-being and sovereignty.

Starting with a contextual overview, it explores the global backdrop, environmental impacts of displacement, and immediate issues confronted by the Rohingya tribe. The comprehensive literature review, supplemented by case studies, unlocks proposed architectural visions. The heart of the thesis lies in a pilot project for their makeshift camp, emphasizing food security, sovereignty, and self-sufficiency, aiming to enhance mental health and foster independence. Beyond addressing physical needs, the design provides institutional support to reduce dependence on humanitarian aid, rebuild confidence, and empower the Rohingya community.

As a broader vision, the thesis explores the potential application of the first phase of the design on a larger scale in a government-designated remote island for the Rohingyas. This approach aspires to transform it into an active, vibrant urban community, enriching both individual Rohingya and their collective identity, while pushing the boundaries of evolving urbanism. The thesis acts as a call to immediate action, encouraging a balance between government policies and human aspirations to tangibly improve the lives of forcibly displaced individuals globally.

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I express my deepest gratitude to my Supervisor, Robert Jan van Pelt, who has been a true game-changer in my academic journey. His exceptional support and understanding, especially in restructuring the program during visa processing delays, allowed me to seamlessly transition into my thesis term. RJ's profound knowledge of history, astute understanding of politics, and insights into refugee crises have provided invaluable guidance for this thesis. His transformative advice, emphasizing the importance of "choosing passion over perfection," has left an indelible mark, and I have strived to incorporate these principles into my work.

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support has been instrumental in fostering both my academic and personal growth.

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Heartfelt thanks to my parents, siblings, in-laws, and my beloved husband, who not only supported me emotionally but also provided invaluable insights as my personal reviewer.

Finally, I extend my acknowledgment to the resilient refugee individuals whose enduring strength has been a guiding force throughout the development of this thesis.

Dedication

For those resiliently facing the harsh realities of displacement.

Table of Contents

ii	Author's Declaration
iii	Abstract
iv	Acknowledgements
vi	Dedication
ix	List of Figures
xvi	Note to those viewing this electronically
1	Chapter One - Introduction
3	Exigency of the Rohingya community
5	How can architectural interventions contribute in shaping their future?
5	History of Ethnic Conflict Leading to Ethnic Cleansing in the Region
25	Environmental Impacts of the Refugee Camp
25	The Dilemma of Stability
29	Chapter 2 - Literature Review
33	Emerging Urban Resilience, Amid Economic Hardship
39	Exploring the Entrepreneurial Resilience of Refugee's Distinct Business Ventures
41	From Camp to city, The Birth of a New Urban Condition
45	Neighborhood Theory
47	Central Place Theory
49	The Aspiration of Thriving beyond mere Survival
49	Reconciliation, Dispersion, Integration, Institutionalization, and/or Relocation?
53	Chapter 3 - Design Proposals
53	Part One: Acupuncture
55	A Diagnosis of the Dynamic Context
61	Factors Influencing the Dynamics of Camps in Cox's Bazar
67	Determinants of Structural Prerequisites
69	Determinants of Program Prerequisites
73	Holistic Food Security Programs
73	Vertical Terrace/Land Innovation Outcome
77	Cultivating Resilience Amidst Adversity
81	Institutionalizing Self-Sufficiency

83	Chapter 3 - Design Proposals
83	Part Two: Adaptive Reuse
85	A controversial history of Rohingya Relocation in Bhasan Char and rise in Power Dynamics
89	Evaluating and Analyzing the Executed Project
91	Navigating Controversy and Adversity
93	Adapting to Controversy and Adversity
95	Assessing Climate Compatibility Stability, and Vulnerability of Current Building Typology
99	Mangrove Metropolis: Nurturing Growth for both People and Nature
101	Transformative Resilience: A Symbiotic Bond between Ecology and Economy
103	City's Central Components
105	Reshaping the Island for Rohingya Autonomy
107	Making Sense of Orientation and Urban Living
108	Integrating Agriculture into Urban Living
128	Conclusion
128	Embracing Centuries-Old Adaptability
128	Navigating Towards Sovereignty
129	Balancing Concrete with Terraced Agriculture
129	Utopian Visions as Transformative Tools
130	Reflection on global refugee crisis
130	Resilience Beyond Borders: Finding Home amidst adversity
133	Bibilography

List of Figures

Figure. 1.1. Nestled in South Asia, Bangladesh is intricately shaped by river systems, hosting the world's largest Rohingya refugee camps in Cox's Bazar on the mainland and on the recently emerged silted island of Bhasan Char, situated in the Bay of Bengal. Illustrated by Author. 3

Figure. 1.2. The territories that were at one time or another part of British Empire [Composed maps of various sources describing The Crown's holdings underlined in red] and British possessions [marked red] Source: Imperial Gazetteer of India. 5

Figure. 1.3. The prevailing religions of the British Indian Empire, 1909, Pink - Hindu, Green - Muslim, Yellow - Buddhist [Arakan Hill Tracts - Part of Burma and Chittagong Hill Tracts - Part of Bengal] Source: Imperial Gazetteer of India. 5

Figure. 1.4. View of bomb damage in Rangoon after the Japanese aerial attack in December 1941. Source: Public Domain. *From, Japan: Friend or Foe?* by Bipin Behari Kapur, Rangoon Gazette Limited, Rangoon, published in Lucknow, India, March 1942 6

Figure. 1.5. Divided Sub-Continent; by the Radcliffe Line, 15th August 1947. Re-illustrated by Author. Source: Multiple Online Images. 9

Figure. 1.6. Language Movement of 1952, Source: Banglapedia. 10

Figure. 1.7. Language Movement of 1952, Source: The New Nation. 11

Figure. 1.8. A March 1962, copy of The Guardian newspaper covers the military coup. The Burmese military, led by General Ne Win, overthrows the elected government and establishes military rule. Burma's Path to Genocide. Image Source: United States Holocaust Memorial Museum. 12

Figure. 1.9. A copy of The Working People's Daily newspaper shows Ne Win addressing members of the government days before it passed the new citizenship law. Image Source: Rangoon Central Library 13

Figure. 1.10. Rohingya camp, Cox's Bazar, Bangladesh, 1978. Photo: MSF. 15

Figure. 1.11. Rohingya refugees set up shelters at a camp in Cox's Bazar, Southern Bangladesh, 1992 © MSF/Liba Taylor. 15

Figure. 1.12. Rohingya refugees arrive in Bangladesh, 1992. © MSF/Liba Taylor. 17

Figure. 1.13. Rohingya camps in Ukhiya, Cox's Bazar, Bangladesh. Ongoing documentary photography project since 2018. © Sayed Asif Mahmud. <https://sayedasifmahmud.com/works/scars-wounds-traces-of-genocide/rohingya/> 19

Figure. 1.14. “Rohingya Exodus” by © KM Asad, kmasad.com/about, Source: biennialgrant.com/k-m-asad 21

Figure. 1.15. Population density, 2022 The number of people per sqkm of land area. Bangladesh ranked #1 Source: Our World in Data²³

Figure. 1.16. Landscape transformation, from 2012 [Top] to 2020 [Bottom]. source: re-thinkingthefuture.com/city-and-architecture/a6075-10-examples-of-architecture-for-the-rohingya-community-in-bangladesh/ 25

Figure. 2.1. The camp in contrast to the surrounding urban area and it’s close proximity to the Parliament Building of Dhaka 33

Figure. 2.2. View of the Geneva camp on March 1972 right after the independence of Bangladesh. Source: Research Gate 33

Figure. 2.3. Chronological development of Geneva Camp. Settlement Evolution © Alvi Muhtasim/AIUB, 2018 35

Figure. 2.4. Different type of zones shown in the layout of the whole Geneva camp. © Masud Ur Rashid/Research Gate, 2020 35

Figure. 2.5. Life in the Geneva Camp of Dhaka [Left] © Sazzad Hossain. Source of the Bottom right image: The Daily Star 37

Figure. 2.6. A Glimpse into the Entrepreneurial Spirit and Unique Business Ventures within Geneva Camp’s Bihari Community, Illustrated by Author. 39

Figure. 2.7. Community resilience shines brightly in the face of hardship under the night sky. Source: https://www.reddit.com/r/UrbanHell/comments/vgge4v/geneva_camp_dhaka_bangladesh_the_neighborhood/ 39

Figure. 2.8. West Africa, with Western Sahara in gray and locations of refugee camps in red. © Manuel Herz/Humanity Journal 41

Figure. 2.9. Early Camps built by UNHCR © Polisario/Humanity Journal and Later Camps built by refugees © Manuel Herz/ Humanity Journal⁴¹

Figure. 2.10. Goat Barns, From Camp to City, Refugee camps of Western Sahara, © Manuel Herz 43

Figure. 2.11. Family Garden Project in El Aiun, From Camp to City, Refugee camps of Western Sahara © Manuel Herz 43

Figure. 2.12. Elements of the Neighborhood Theory, Re-illustrated by Author. Source: Multiple

Online Images. 45

Figure. 2.13. Hierarchical arrangement of the Central Places, Re-illustrated by Author. Source: Multiple Online Images. 47

Figure. 2.14. In the initial thought process, the question arises of how to disperse the one million people concentrated in one place. Should they be dispersed individually, as communities, or relocated to a remote island? Illustrated by Author. 48

Figure. 2.15. The aim is to understand the desires of both refugees and the government, seeking a middle ground that respects human aspirations while addressing concerns of the host country and its landscape as well. Envisioning De Facto Spaces to Negotiate the Future of Rohingya Communities, Illustrated by Author. 50

Figure. 3.1. Agriculture on the bank of a branch river of Padma. *Boral River near Arani Rail Station in Bangladesh*, © Shahnoor Habib Munmun, 2011. 55

Figure. 3.2. Swandwip Island in the Bay of Bengal, It is adjacent to Bhasan Char where Rohingyas are being transferred. © Rafiqul Islam Montu, 2020 55

Figure. 3.3. *The historic practice of constructing floating gardens has been part of regional heritage in southern Bangladesh for centuries* © BBC/Fahmida Akter, 2022 56

Figure. 3.4. *As sea levels rise, a historic agricultural practice is offering respite to farmers who are losing their land* © BBC/Fahmida Akter, 2022 56

Figure. 3.5. *Agriculture has to adapt to watery conditions, whether that is through floating vegetable gardens, or farming on raised beds – as in the sorjans of Pirojpur*, Source: BBC/Getty Images 57

Figure. 3.6. *Water hyacinth is an invasive weed in parts of Bangladesh, but now it is being used to form soil-free beds for the country's floating gardens*, Source: BBC/Getty Images 57

Figure. 3.7. 3D Rendered Topographic Map of the region, Hilly terrain on the east side, © FrankRamspott, Source: iStock 58

Figure. 3.8. R i v e r i n e Geography of Bangladesh, Re-illustrated by Author, Source: NordNordWest 59

Figure. 3.9. Cox's Bazar features a blend of coastal beauty, lush hills, and a vibrant culture, making it a unique and captivating geographical location. © Masud Al Manun, 2019 61

Figure. 3.10. Rohingya Refugees living on the brittle valley of Cox's Bazar, © OCHA/Vincent Tremeau, 2020 61

Figure. 3.11. Rohingya refugee camps map (updated on August 2018) © Azad et al, 2019.
63

Figure. 3.12. Aerial Map of Camp 12 [left] and zoomed in [right], © UNHCR and IOM, 2020.
64

Figure. 3.13. Topography Map, Camp12. Illustrated by Author. Source: ArcGIS online, 2022
66

Figure. 3.14. To facilitate the need for living spaces for refugees, stairs and terraces were cut into the existing landscapes so quickly that it resulted environmental disaster such as flash floods and mudslide, 2021, Top and middle right image Source: UNHCR 67

Figure. 3.15. Using traditional stilted building techniques is essential to avoid triggering lethal mudslides, flooding, and other natural disasters when constructing terraces. Bottom right diagram illustrated by Author. 67

Figure. 3.16. Campsite activities, 5 images of this page, © Samara Hamid, IOM 2020 68

Figure. 3.17. *“The aim is to strengthen access to fresh foods and food security amongst the most vulnerable, and support refugees’ economic empowerment, focusing on demand created by the camps through skills development activities like homestead vegetable gardening, seed production, aquaculture and tailoring.”* 6 images of this page © Nihab Rahman, WFP 2022 69

Figure. 3.18. Potential locations highlighted with dots for structures aimed at food cultivation and ensuring food security. Credit: Author 70

Figure. 3.19. Site Plan of the highlighted area, showing contrast between various Land types and Makeshift Structures, Credit: Author. 71

Figure. 3.20. All Level Plans including Building Programs [Left] Credit: Author.73

Figure. 3.21. Gardening Plot Size Determination, Credit: Author. 73

Figure. 3.22. Structural Concept: 1. Avoiding terraces cutting. 2. Traditional Stilted Method in fusion with Scaffolding. Overview of the building and garden [bottom left]. Credit: Author.
74

Figure. 3.23. Cultivation of food on the exterior and surface of the structure [top right], alongside permaculture-style rice and fish farming in the lowlands [bottom right], Credit: Author 75

Figure. 3.24. Roof Gardening [top left] and Cross-Section [bottom left] Illustrating Harvest-time Collaborative Activities within the Building, and Cultivation of food on the exterior and surface of the structure [bottom right] Credit: Author. 77

Figure. 3.25. Life Cycle of the Project: Harvesting, Storing, Processing, Composting and Repeating, Illustrated by Author. 78

Figure. 3.26. A Planting Calendar is designed to encourage self-discipline within the community, promoting structured and organized cultivation practices, Illustrated by Author. 79

Figure. 3.27. List of Foods Loved by Both Bengalis and Rohingyas, Illustratrated by Author. 80

Figure. 3.28. Bhasan Char, Bay of Bengal: Developed by the Bangladesh government to house 100,000 Rohingya refugees, the island currently accommodates 28,000 residents. Many of the constructed houses remain unoccupied, and inhabitants are prohibited from ascending the shelter buildings unless there is an impending storm. Image sources: Reddit [top left] and Google Maps Satellite Image [bottom left], 2023. 85

Figure. 3.29. Bhasan Char Project details: The 5-story shelter building stands against 12 shed buildings, each accommodating 16 refugee families, forming a cluster housing a total of 768 people. Sources: Mukta Dinwiddie Maclaren Architects, Atlanta Housing Ltd, UNOCHA. 87

Figure. 3.30. The exterior view of the houses and the interior of bunk-bed rooms. Credit: Shamsuddin Illius/The Business Standard, 2019. 87

Figure. 3.31. An overview of the entire project highlighting the shelter buildings, adjacent ponds, and the widespread arrangement of shed buildings. Source: Google Maps Satellite Images, 2023. 89

Figure. 3.32. Navigating Bhasan Char: Existing Built and Enterpreneural Activities of refugees. Images Source: Photos shared in Google Maps by people Visiting the Island. 91

Figure. 3.33. A new perspective on Bhasan Char, the Rohingyas' new home: Collective activities showcasing adaptive resilience and adaptive reuse, Images Source: Google Maps Photos shared by people Visiting the Island. 93

Figure. 3.34. Map of Cyclone-Prone Zones [left], providing insights into the vulnerability of the region to cyclones, coupled with the summer and winter wind directions. The Neighborhood Cluster Typology [top right] illustrates the varied structures and layouts within the community, Credit: Author. 95

Figure. 3.35. Recent Tropical Cyclone Data, Source: Microsoft Corporation. 95

Figure. 3.36. Regional Map highlighting Vital Natural and Manmade Resources along with adaptive farming and fishing livelihood methods, Credit: Author. 97

Figure. 3.37. Proposed Landscape Plan: Preserving the Mangrove Forest and Existing Built Structures, Fostering a Sustainable Ecosystem and Economy for the Growth of both Mangroves

and Refugees, Credit: Author. 99

Figure. 3.38. Proposed Urban Plan: Fostering Evolving Urbanism and a Thriving Economy within the Ecosystem, Embracing Adaptation and Disruption of the Existing Grid, Credit: Author. 101

Figure. 3.39. City's central components in correlation with the community corridor, adhering to Urban Design Theories outlined in the proposed plan, Credit: Author. 103

Figure. 3.40. The floor plan of the small mosques [bottom left] and a sectional diagram [top left] suggesting that the top floors are open to necessities such as vocational training institute or municipality offices, while the large mosque can accommodate all administrative programs of the city, Credit: Author. 106

Figure. 3.41. 14% of cluster houses were removed to incorporate essential urban spaces that were lacking in the existing built environment. Credit: Author. 107

Figure. 3.42. Harvest time overview of the envisioned project through adaptive reuse and retrofitting, aiming to integrate agriculture into urban living. Credit: Author. 109

Figure. 3.43. Street Community during Jumma day, a weekly ritual occurring every Friday afternoon. Individuals heading to the mosque [highlighted], while others resume business activities during prayer time. Credit: Author. 111

Figure. 3.44. The adapted education building features distinctive open spaces, with each high school boasting a larger playfield [highlighted building], while the primary school is equipped with a smaller playfield. Credit: Author. 112

Figure. 3.45. The open spaces are versatile and can be repurposed into parks, providing recreational areas for occasional ceremonies, fairs, and fostering a welcoming environment for people to linger, socialize, and engage in community activities. Credit: Author. 115

Figure. 3.46. Each neighborhood courtyard features a pond, promoting increased aquaculture, and incorporates additional vegetation platforms that extend up to the roof levels of the houses around the pond. On the left side, the image shows extended terraces from the shelter buildings facing southeast, contributing to the overall functionality of gardening and the aesthetic appeal of the neighborhood. Credit: Author. 116

Figure. 3.47. Railings and soil pots serve a dual purpose in this design, functioning as both safety barriers and containers for soil. The concrete low-wall is filled with soil, creating space for orchard gardens. The highlighted area allows for the placement of additional pots, enhancing the greenery and agricultural potential of the space. Credit: Author. 119

Figure. 3.48. These diagrams illustrate the achievement of an urban Hierarchy, addressing the fundamental issue the existing project has. The scale variations, including the big mosque, small

mosques, terrace buildings, and houses, contribute to the improved urban design. Credit: Author.
120

Figure. 3.49. Different buildings can be painted in a variety of colors, contributing to a diverse and visually dynamic urban landscape. Credit: Author. 121

Figure. 3.50. The absence of roofs exposes the interiors of the houses, presenting a configuration of cages for refugees. However, this perception is open to interpretation. The interior of each house is adaptable, allowing for modifications such as rearranging walls to create more extensive spaces. This flexibility enables various possibilities, such as combining two rooms to form a larger classroom or apartment for a single family, utilizing four rooms for a substantial shop, or converting the entire house into a community center. The design prioritizes versatility, accommodating diverse needs and functions within the available space. Credit: Author. 122

Figure. 3.51. The structures on the right side are typical shed buildings, **illustrating the current scenario** where two families reside in adjacent small rooms within a cluster house. This depiction captures the existing living conditions, emphasizing the cramped spaces that multiple families share within these accommodations. Meanwhile, the 5-story shelter buildings on the left side are currently vacant or not being used, leaving a massive footprint that has been balanced out with extended terraces for gardening. Credit: Author. 125

Figure. 3.52. This is **illustrated for a generational spread**, the shelters have been adapted to serve a dual purpose as living spaces and community hubs, accommodating various activities on both the ground and roof levels. The shed buildings have been repurposed to house farm animals, with cows, goats, or lambs residing on the upper levels, while a chicken coop occupies the space below. This adaptive transformation not only maximizes the functionality of the structures but also integrates communal and agricultural elements into the living environment. Credit: Author.
127

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This thesis is best viewed as spreads. In Adobe Acrobat, go to Menu > View > Page Display > Two-page view. Make sure Show Cover Page and Show page gutters during Two-page view is enabled. In most of the pages Drawings and Images should be on the left, and text on the right.

Chapter One - Introduction



Nepal

Bhutan

Tibet

China

India

Bangladesh

India

Dhaka

Yunan

West Bengal

Myanmar

Bhasan Char
Chittagong
Cox's Bazar
**Rohingya
Camps**
Teknaf

Rakhine State

Laos

Bay of Bengal

Thailand

Andaman Sea

Gulf of Thailand

Sri Lanka

Penang

Sumatra

Exigency of the Rohingya community

The Rohingya, a stateless ethnic group of predominantly Muslim, and Burmese speaking, have endured unimaginable suffering in Myanmar's Rakhine State. For generations, they have faced persecution, discrimination, rape, and genocide, leaving a deep scar on their collective identity. Fleeing for their lives, over a million Rohingya have sought refuge in neighbouring Bangladesh, where their plight continues to unfold.¹ Within this backdrop of anguish, the Burmese military's ruthless campaign has added fuel to the fire. Burning down Rohingya villages, they have inflicted further devastation on a community already shattered by unimaginable horrors.² Despite global attention, condemnation, and calls for justice, evidence of ongoing oppression against the Rohingya persists.

Bangladesh, a riverine country with a unique geographic location in South Asia, plays a pivotal role in the lives of the Rohingya. Originated from Himalayan foothills, its delta region is formed by the convergence of the Ganges/Padma, Brahmaputra/Jamuna, and Meghna rivers, creating a landscape that shapes the nation's economy, culture, and identity. In this land of rivers, Dhaka stands as the capital city, a vibrant hub of resilience and Chittagong serves as the major port city.³

Notably, Cox's Bazar, home to the longest sandy beach in the world, bears witness to the most significant Rohingya refugee camp. Additionally, Bhasan Char, a recently emerged silted island, is becoming a focal point for refugee relocation. Here, amidst the natural beauty, a human tragedy unfolds.

It is within this context that architectural vision emerges, seeking to communicate the urgency of the Rohingya crisis. This thesis intends to address the pressing needs of the Rohingya through proposed architectural interventions in Cox's Bazar and the urban settlement of Bhasan Char, Bangladesh. Beyond physical infrastructure, it envisions symbolic spaces reflecting compassion, dignity, and hope. Recognizing the collective trauma, these architectural proposals aim to ignite dialogue, facilitate healing, and amplify the voices of a marginalized community. The ultimate goal is to contribute to urban evolution and sustainable growth, paving the way for the well-being and prosperity of generations of Rohingyas.

Figure. 1.1. Nestled in South Asia, Bangladesh is intricately shaped by river systems, hosting the world's largest Rohingya refugee camps in Cox's Bazar on the mainland and on the recently emerged silted island of Bhasan Char, situated in the Bay of Bengal. Illustrated by Author.



How can architectural interventions contribute in shaping their future?

The Rohingya crisis represents a deeply intricate issue entangled in complex political dynamics. This thesis embarks on a journey to unravel the root causes of this crisis, seeking to understand the underlying political motivations behind the violence and persecution faced by the Rohingya people. By delving into critical questions, such as the reasons behind their forced displacement and the long-term implications for this stateless community, it aims to shed light on the future prospects of the Rohingyas.

This section will explore the historical context and larger political forces at play, questioning the actions and policies that have led to the tragic plight of the Rohingya. By peering beyond the immediate circumstances, it seeks to unearth the social and political factors that have perpetuated their suffering.

Figure. 1.2. The territories that were at one time or another part of British Empire [Composed maps of various sources describing The Crown's holdings underlined in red] and British possessions [marked red] Source: Imperial Gazetteer of India.

History of Ethnic Conflict Leading to Ethnic Cleansing in the Region

The history can be traced back over 100 years to when Indian sub-continent was larger. More prosperous and culturally diverse. The region's heritage dates to more than four thousand years and is characterized by farming and literature. Prior to the colonial era, there was no class or religious discrimination within their society. However, the introduction of colonialism brought about a shift in power dynamics, leading to the exploitation and marginalization of certain groups, including the Rohingya during World War II.

In 1942, during World War II, Myanmar, formerly known as Burma, was a British colony. When Japan invaded Burma, Burmese nationalists welcomed their arrival, but the Rohingya community remained loyal to the British in hope to become an independent country after the war. This difference in political allegiance contributed to a significant ethnic conflict between Buddhist South and Muslim North in Rakhine State of Myanmar.⁴

Figure. 1.3. The prevailing religions of the British Indian Empire, 1909, Pink - Hindu, Green - Muslim, Yellow - Buddhist [Arakan Hill Tracts - Part of Burma and Chittagong Hill Tracts - Part of Bengal] Source: Imperial Gazetteer of India.

Figure. 1.4. View of bomb damage in Rangoon after the Japanese aerial attack in December 1941. Source: Public Domain. From, *Japan: Friend or Foe?* by Bipin Behari Kapur, Rangoon Gazette Limited, Rangoon, published in Lucknow, India, March 1942

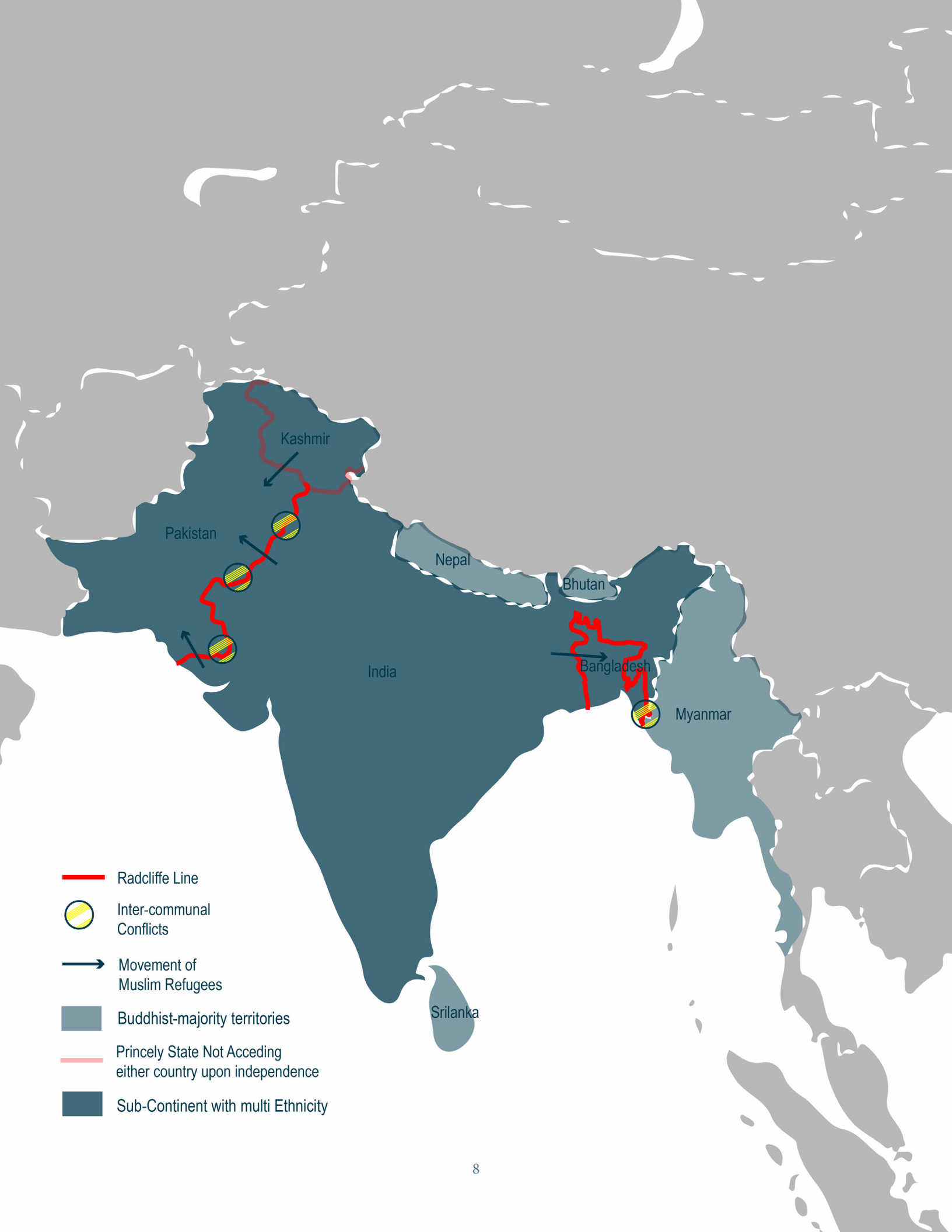


What remains

How can architectural interventions contribute in shaping their future?



Wrecked of Rangoon's 39th Street.



- Radcliffe Line
- Inter-communal Conflicts
- Movement of Muslim Refugees
- Buddhist-majority territories
- Princely State Not Acceding either country upon independence
- Sub-Continent with multi Ethnicity

In 1947, post-World War II, the British Empire, which had long been the ruling power in India, found themselves unable to afford administering the Indian subcontinent. The British government, therefore, decided to leave India as quickly as possible, which led to the division of the region into two separate countries based on religion: Hindu-majority India and Muslim-majority Pakistan.

The Radcliffe Line, which was drawn hastily on 15th August 1947, served as the border between the newly formed nations following the partition of India. This partition was marred by violence, mass displacement, and loss of life. The failure to acknowledge minor ethnic groups like the Rohingyas and many others, notably by the British border commissioner, had severe repercussions, resulting in human rights violations, cultural erasure, hindered access to aid, limited political representation, and compromised international advocacy. This oversight also contributed to regional instability. Addressing this issue is imperative to safeguard the rights of marginalized communities and foster peace and stability in this affected region. Additionally, the division of the region led to the formation of East Pakistan, later becoming Bangladesh.⁵

Figure. 1.5. Divided Sub-Continent; by the Radcliffe Line, 15th August 1947. Re-illustrated by Author. Source: Multiple Online Images.

A constitution was drafted by the people of Burma for enacting their independence and to be known as Union of Burma on September 24th, 1947.⁶

In the post-colonial era, the region grappled with significant struggles, conflicts, and discrimination centred on possession of land and ethnicity; fuelling narrow-mindedness and discrimination based on religion, culture, language, colour, and appearance.

In 1948, Burma, the region with a Burmese speaking population and Buddhist majority, officially gained independence from British colonial rule. However, the path to stability and unity was not without its challenges. Burma faced numerous internal conflicts, ethnic tensions, and struggles for power, which continued to shape its political landscape in the post-independence era. The path to Burmese independence was influenced by a combination of factors, including nationalist movements, the impact of World War II, and growing demands for self-governance.⁷

In 1952, there was a Language Movement defending the Identity of the Bengali people, it unfolded in what was then East Pakistan, as the Bengali-speaking population revolted

Figure. 1.6. Language Movement of 1952, Source: Banglapedia.



against the imposition of Urdu as the state language by the West Pakistani ruling authorities. This movement became a pivotal moment in the history of Bangladesh, representing the struggle for linguistic and cultural rights and ultimately leading to the recognition of Bengali as an official language.

The Language Movement emerged from the growing sense of marginalization and cultural suppression experienced by the Bengali-speaking people of East Pakistan. Even though Bengali was widely spoken and deeply rooted in the region's history and identity, the ruling authorities sought to establish Urdu as the sole state language. This decision was met with widespread opposition from the Bengali community.

On February 21, 1952, students and activists gathered at the University of Dhaka to peacefully protest the imposition of Urdu. However, the authorities responded with force, leading to clashes and the tragic loss of lives. The Language Movement not only highlighted the linguistic rights of the Bengali people but also became a catalyst for a broader movement for autonomy and self-determination. The protests resonated deeply among the Bengali population, leading to an increased demand for political and cultural autonomy, which eventually culminated in the Bangladesh Liberation War in 1971.

This movement remains a significant event in the history of Bangladesh, showcasing the power of language in shaping cultural identity and inspiring political activism. It stands as a testament to the unwavering spirit of the Bengali people in defending their language and heritage, and it continues to be commemorated annually as International Mother Language Day on February 21st, recognized by UNESCO.⁸

Figure. 1.7. Language Movement of 1952, Source: The New Nation.

In 1962, ethnic minorities in Burma faced increasing discrimination from Buddhist extremists within the country. The rise of Buddhist extremism, coupled with oppressive government policies, led to marginalization, violence, and displacement of ethnic minority communities. Rohingya, Karen, Kachin, and others suffered restrictions on rights, limited resources, and cultural suppression.⁹

It's important to distinguish that these actions were perpetrated by a subset of extremists and not representative of Buddhism as a whole. Resolving this issue requires inclusive policies, protection of human rights, and fostering dialogue between communities. By promoting understanding and equality, Burma could work towards a more harmonious



THE GUARDIAN



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RANGOON, SATURDAY, MARCH 3, 1962

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ARMED FORCES STAGE

BLOODLESS COUP

PRESIDENT, C.J. UNION, SPEAKERS, P.M., CABINET MINISTERS, FEDERAL LEADERS DETAINED

NEW ADMINISTRATION LED BY GENERAL NE WIN

NEUTRAL FOREIGN POLICY TO BE FOLLOWED

COUNTRY CALM THROUGHOUT

(BY OUR STAFF REPORTER)

IN A PRE-DAWN SWOOP YESTERDAY MORNING ON ALL STRATEGIC PLACES IN THE CAPITAL, THE ARMED FORCES, LED BY GENERAL NE WIN, THE COMMANDER-IN-CHIEF, EFFECTED A BLOODLESS COUP D'ETAT AND TOOK OVER THE REINS OF GOVERNMENT IN THE COUNTRY.

In a nation-wide broadcast made yesterday morning, General Ne Win announced that the "armed forces have taken over the responsibility and the task of keeping the country's safety owing to greatly deteriorating conditions in the Union."



GEN. NE WIN

GENERAL NE WIN'S BROADCAST MESSAGE

The following is a translation of the Radio Broadcast of General Ne Win, C-in-C of the Armed Forces

PEOPLE OF THE UNION:

I HAVE TO INFORM THAT THE ARMED FORCES OF THE UNION HAVE TAKEN OVER THE RESPONSIBILITY AND THE TASK OF KEEPING THE COUNTRY'S SAFETY OWING TO GREATLY DETERIORATING CONDITIONS IN THE UNION.

I APPEAL TO ALL THE PEOPLE TO CARRY ON WITH THEIR DAILY TASKS AS USUAL AND TO BE IN PEACE OF MIND AND TO HAVE NO FEAR OR ANXIETY.

I ALSO WISH THE GOVERNMENT SERVANTS TO CONTINUE TO ATTEND TO THEIR DUTIES WITHOUT ANY INTERRUPTION.

I URGE ESPECIALLY THE EDUCATION AUTHORITIES AND THE STUDENTS WHO ARE IN THE MIDDLE OF THEIR EXAMINATIONS TO CARRY ON WITH THEIR TASKS UNINTERRUPTED.

I ASSURE ALL THE PEOPLE THAT WE SHALL EXERT OUR UTMOST EFFORTS FOR THE HAPPINESS AND WELL-BEING OF ALL THE PEOPLE OF THE UNION.

NEW ADMINISTRATION

By about 1 p.m. yesterday, the Revolutionary Council which was formed that morning announced the formation of a new administration. The following persons were entrusted to take

(Continued on page 10, col. 2)

THOSE DETAINED

- The following persons were under detention:
- 1. U Win Maung (President)
- 2. Sao Wunna
- 3. Sao Hkun Kyi
- 4. Sao Hkun Hlaik
- 5. Thakin Tin
- 6. U San (Kawah)
- 7. Sao Pyi (Mongnai Sawwa)

(Continued on page 10, col. 4)

THOSE RELEASED

- 1. U Bu Saw
- 2. Sao Hla Tun
- 3. U Ba Myaing
- 4. U Zare Linn
- 5. Sao Hkun Kyi (Speaker, Nationalities)
- 6. Maha Ba Saing (Speaker, Deputies)
- 7. Sao Man Hpa.

Condolence for casualty

The Revolutionary Council Chairman General Ne Win is to send messages of condolence in respect of the only unfortunate casualty incurred during yesterday morning's bloodless coup

(Continued on page 10, col. 4)

B.B.C. REPORT

The following is the text of BBC Broadcast from London monitored here at 3:45 p.m. The Burmese Army has taken control of the country. The Prime Minister, U Nu, and members of his Cabinet, are reported to be under house

(Continued on page 10, col. 5)

District situation

Reports reaching from the district stated that there were no arrests in the districts and administration by the civil officials continued as usual. Army officers in the districts explained the situation and urged the people to remain calm, and to carry on their daily work as usual.



DR. NU AND GEN. NE WIN

FOREIGN POLICY UNCHANGED

POSITIVE NEUTRALITY, FRIENDLY RELATIONS WITH ALL COUNTRIES

The following is the text of foreign policy announcement issued by the Foreign Office yesterday: The Revolutionary Council and Government of the Union of Burma, desirous of maintaining and strengthening Burma's existing friendly relations with all countries, hereby make the following declaration:

1. They reaffirm their unwavering dedication to the ideal of peace, friendly relations and cooperation between all nations based on international justice and morality.
2. They reaffirm their wholehearted support for and

(Continued on page 10, col. 4)

LONDON REACTION

LONDON, Mar. 2.—Burma's foreign policy of non-alignment is likely to stay unaffected by the Army takeover in Rangoon, usually reliable sources said here today.

The coup is believed to have internal causes and to have no foreign connections.

The news of the coup was splashed on the front pages of London evening newspapers.

—Reuter

Political reactions

(By Our Staff Reporter)

As soon as the news of the coup became known members of the Executive Committee of the AFPFL gathered at U Ba Nwe's house. They decided to wait and watch developments. When The Guardian Reporter attempted to see U Ba Nwe at his house, later to ask for his comments, he sent out his reply that he had none to make.

Thakin Lu Aye, a member of the NUP Presidium said he had no suggestions to make while Thakin Chit Maung of the NUP was not at

(Continued on page 10, col. 3)

Chief Secretary briefs Secretaries

(By Our Staff Reporter)

The Chief Secretary, U Shwe Mta, called a meeting of all the Secretaries of the Government yesterday afternoon and asked them to carry on with their duties as usual.

In the case of those Ministers where no Minister has been appointed yet, the Secretaries were to keep the Ministers going as usual until Ministers had been appointed for them, the Chief Secretary said.

Transport services run as usual

(By Our Staff Reporter)

The Burma Railways and the JVT services operated yesterday normally but the UBA cancelled all its internal flights. The UBA however issued an announcement in the evening that all scheduled flights will be operated as usual today.

Passengers due to fly by UBA yesterday may make their flights today or on subsequent flights, it is learnt.

External air services which were temporarily suspended yesterday morning resumed operations by noon the same day.

STOP PRESS

U.S. REACTION

WASHINGTON, Mar. 2. The State Dept. was today issuing false details of military coup in Burma before announcing officially on reports to power of Gen. Ne Win. News of the coup was reported calmly. Asian Affairs experts received with satisfaction that during his 1958-1960 regime, the General took energetic measures at home to cut down Communist influence in Burma. Another fact favourably recalled here was the General's decision to abdicate power when Burma voted by a big majority in 1960 elections for

RANGOON NORMAL: Rangoonians carry on their work as usual yesterday after the news of the take-over was announced. The schools remained open and examinations continued, and picture houses and diplomatic functions went through last night as usual. The picture shows left to right vegetable market near the Therygyze, and the scenes on the Sule Pagoda Road yesterday.



B.C. GLUCOSE
PURE GLUCOSE TABLETS
FORTIFIED WITH VITAMINS B & C
FOR
★ INSTANT ENERGY
★ VITALITY
★ STAMINA
AND
PEAK PERFORMANCE
IN
A Quality Product

Figure. 1.8. A March 1962, copy of The Guardian newspaper covers the military coup. The Burmese military, led by General Ne Win, overthrows the elected government and establishes military rule. Burma's Path to Genocide. Image Source: United States Holocaust Memorial Museum.



Figure. 1.9. A copy of The Working People's Daily newspaper shows Ne Win addressing members of the government days before it passed the new citizenship law. Image Source: Rangoon Central Library



society that embraces the diversity of its population.

In 1971, Bangladesh, a region with a Bengali-speaking Muslim majority, achieved independence and emerged as a sovereign country separate from Pakistan. The struggle for independence, known as the Bangladesh Liberation War, was marked by a series of political, social, and military events. The people of Bangladesh, led by political and military leaders such as Sheikh Mujibur Rahman and General Yahya Khan, fought for self-determination and freedom from perceived economic and political oppression.¹⁰ The war resulted in significant loss of life, displacement, and human rights abuses. The independence of Bangladesh represents a significant milestone in the history of the region and the aspirations of its people for autonomy and sovereignty.

Figure. 1.10. Rohingya camp, Cox's Bazar, Bangladesh, 1978. Photo: MSF.

In 1977, Burma initiated 'Operation Dragon King' (Naga Min) in the Rakhine state, marking the beginning of a troubling cycle of forced displacement and persecution for the Rohingya ethnic minority. The Rohingya people were labelled as "illegal" after being stripped of their citizenship, exacerbating their vulnerability and marginalization. The operation, accompanied by discriminatory policies and acts of violence, led to a mass exodus of Rohingya refugees fleeing persecution. The ongoing plight of the Rohingya population has drawn international attention due to the human rights abuses and humanitarian crisis they continue to face.¹¹

In 1978, Operation Dragon King resulted in widespread mass arrests, persecution, and unspeakable acts of violence, compelling approximately 200,000 Rohingya individuals to flee across the border into Bangladesh. In response, Bangladesh opened refugee camps, with Doctors Without Borders, Médecins Sans Frontières (MSF) providing critical medical aid. Regrettably, the living conditions within the camps were woefully inadequate, leading to a humanitarian crisis.

Figure. 1.11. Rohingya refugees set up shelters at a camp in Cox's Bazar, Southern Bangladesh, 1992 © MSF/Liba Taylor.

By 1979, the majority of the Rohingya were forcibly repatriated to Burma. However, for those who remained in Bangladesh, around 10,000 people, predominantly children, tragically lost their lives due to severe food ration cuts. This devastating toll underscores the urgent need for improved conditions, support, and justice for the Rohingya community during this distressing period.





Figure. 1.12. Rohingya refugees arrive in Bangladesh, 1992. © MSF/Liba Taylor.

In 1982, under the leadership of dictator Ne Win, a significant event unfolded in Myanmar. The Citizenship Act, held at Ne Win's residence, resulted in the stripping of Rohingya people's citizenship. This unjust law rendered the entire Rohingya population stateless, denying them the rights and recognition in their ancestral homeland. The act further exacerbated the plight of the Rohingya, pushing them into a vulnerable and marginalized position. This historic event marks a tragic chapter in the Rohingya's struggle for recognition, equality, and justice. (Rohingya Center of Canada 2023)

In 1989, Burma underwent a significant change when it was renamed as Myanmar. Unfortunately, this renaming coincided with a surge in military presence in Northern Rakhine State, where the Rohingya people reside. Disturbing reports emerged, documenting the widespread suffering experienced by the Rohingya, including forced labour, forced relocation, rape, summary executions, and persecution. Faced with these harrowing conditions, approximately 250,000 Rohingya sought refuge in Bangladesh, their neighbouring Muslim-majority country. This mass exodus reflects the desperate measures taken by the Rohingya to escape the ongoing violence and oppression they faced in Myanmar. The events of 1989 serve as a sombre reminder of the ongoing plight and urgent need for support for the Rohingya community. (MSF 2022)

In 1992, Following their perilous journey, Rohingya refugees arrived in Bangladesh, carrying only the belongings they could carry, seeking safety and solace. The governments of Bangladesh and Myanmar entered into an agreement to repatriate the refugees, resulting in the closure of the camps to new arrivals during the spring. However, by the fall, forced repatriation commenced, despite international outcry and protests. In the subsequent years, hundreds of thousands of Rohingya individuals were forcefully sent back to Myanmar, where they had fled from persecution. Tragically, new refugees attempting to escape similar circumstances and seek refuge in Bangladesh were met with denial and were barred from entry.

This series of events highlights the immense challenges faced by the Rohingya community, as their search for security and protection was met with repatriation efforts and denial of asylum. The forced return of Rohingya refugees



to Myanmar, where they originally faced persecution, exacerbates their vulnerability, and compromises their safety. It underscores the urgent need for international attention, support, and intervention to address the plight of the Rohingya people and ensure their right to seek refuge and live a life free from violence and persecution.

By 2003, the number of makeshift camps in Bangladesh had reached 20, although only two of them remained from the early 90s camps. One of these camps was the larger Kutupalong camp, situated near Ukhiya, while the other was the smaller Nayapara camp, located near Teknaf in Cox's Bazar district. A distressing study conducted during this time revealed that 58 percent of children and 53 percent of adults in these camps were suffering from chronic malnutrition. The substandard conditions within the camps, particularly in terms of water supply and hygiene, contributed to the prevalence of various diseases. Outbreaks of diarrhoea, respiratory infections, and malnutrition were common due to inadequate access to clean water and sanitation facilities. The dire circumstances in the camps further exacerbated the vulnerability and suffering of the Rohingya refugees, intensifying the challenges they faced in maintaining their health and well-being.

In 2006, the Rohingya refugee camps in Cox's Bazar faced the devastating consequences of heavy rainfall and subsequent flooding. The fragile shelters were particularly susceptible to landslides, and the heavy monsoon rains battered the already vulnerable structures. According to reports, an alarming 79 percent of the two camps in Cox's Bazar were submerged during the rainy season. The floodwaters not only disrupted the daily lives of the Rohingya refugees but also exacerbated the already dire living conditions within the camps. The floodwaters posed risks to the safety, health, and well-being of the displaced population, further exacerbating their already precarious situation. (MSF 2022)

In October 2016, during the second week of the month, a tragic and devastating series of events unfolded for the Rohingya population. Reports indicate that at least 1,000 Rohingya individuals lost their lives during this period. The Burmese military launched military operations in the region, resulting in the deliberate burning and destruction of hundreds of Rohingya villages. These military actions



Figure. 1.13. Rohingya camps in Ukhiya, Cox's Bazar, Bangladesh. Ongoing documentary photography project since 2018. © Sayed Asif Mahmud. <https://sayedasifmahmud.com/works/scars-wounds-traces-of-genocide/rohingya/>





were accompanied by the targeting and killing of thousands of Rohingya civilians. The atrocities committed against the Rohingya population during this time extended beyond loss of life. Rohingya women were subjected to horrifying acts of sexual violence and abuse, constituting severe crimes against humanity. The scale of these human rights violations and the immense suffering inflicted upon the Rohingya community during this period are deeply distressing.¹²

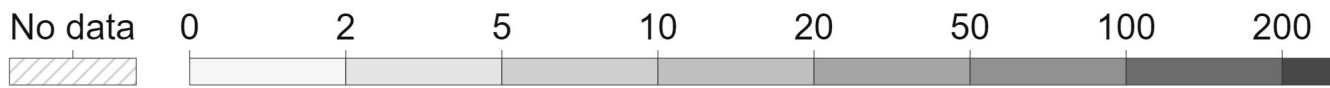
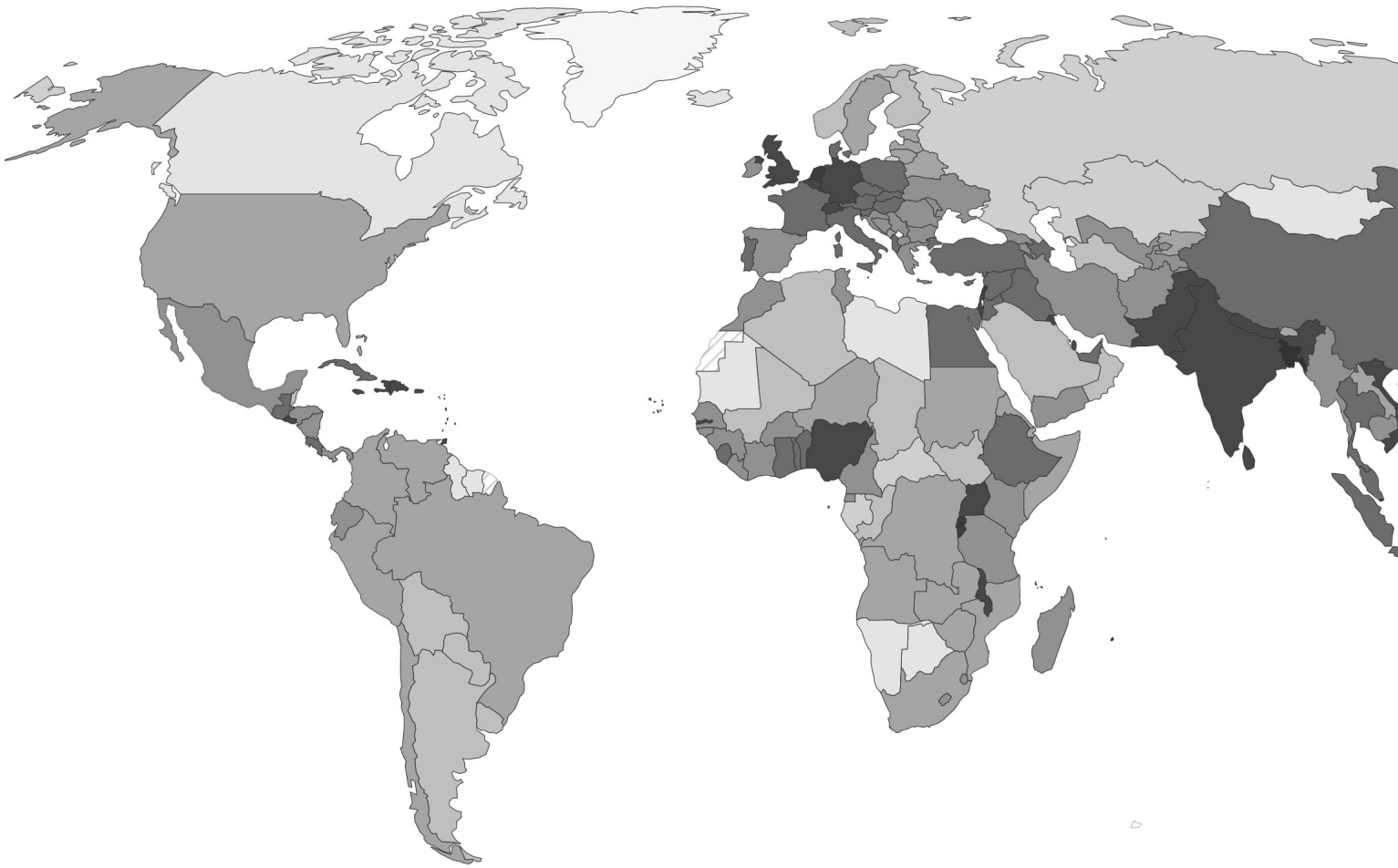
“The October 9 Rohingya militant attacks on border police in Myanmar’s Rakhine state trigger reprisals against the Rohingya community, bringing a new wave of refugees across the border and an influx of patients to the MSF clinic in November and December.” – MSF staff

In 2017, the genocide, ethnic cleansing, and persecution against the Rohingya population continued to unfold in Myanmar’s Rakhine state. The systematic targeting and violence perpetrated by the military and extremist groups resulted in a massive displacement of Rohingya people. By January of that year, over 700,000 Rohingya individuals were forced to flee from Myanmar, seeking refuge in neighbouring countries, particularly Bangladesh. A documentation revealed that more than 6,700 Rohingya individuals had lost their lives as a result of the atrocities committed against them. These figures serve as a grim reminder of the immense suffering and loss experienced by the Rohingya people during this period.

The events of 2017 drew global attention to the urgent need for action, intervention, and accountability to address the ongoing persecution and violence against the Rohingya community. International bodies, human rights organizations, and governments have since condemned these acts as genocide and ethnic cleansing. Efforts must continue to bring justice to the victims, hold the perpetrators accountable, and work towards a sustainable solution that ensures the safety, dignity, and rights of the Rohingya people.¹³

By 2018, a significant number of Rohingya refugees in Bangladesh had experienced or witnessed violence, resulting in the loss of family members or friends. While many expressed their desire to return home, the foremost concern was the guarantee of their safety. (MSF 2022)

Figure. 1.14. “Rohingya Exodus” by © KM Asad, kmasad.com/about, Source: biennialgrant.com/k-m-asad



In 2019, The emergency has become a protracted crisis, with no end in sight. Until the necessary conditions are in place to ensure their well-being and security, the hope for their safe return remains uncertain. Addressing the underlying issues, including the restoration of their rights and the establishment of a conducive environment, is essential to create a sustainable and safe future for the Rohingya people. (MSF 2022)

In 2020, the Bangladeshi government, in response to COVID-19 isolation requirements, initiated the relocation of some Rohingya refugees to Bhasan Char, a newly formed silt island in the Bay of Bengal. Previously uninhabited, the island's remote location and unstable environment contributed to its lack of human settlement. The relocation aimed to ease overcrowding in the refugee camps in Cox's Bazar and provide better living conditions for the Rohingya population. However, concerns were raised regarding the island's vulnerability to natural disasters and its accessibility to essential services. The relocation sparked debates about the long-term sustainability and safety of the Rohingya community in Bhasan Char. (MSF 2022)

In 2021, the pandemic imposed severe restrictions on the freedom of movement and employment opportunities for Rohingya individuals. This limitation forced many to confront difficult choices regarding their future and livelihoods, as they grappled with the challenges and uncertainties presented by the ongoing situation.

By 2022, it has been five years since the Rohingya community endured the largest campaign of targeted violence in Myanmar. Over one million Rohingya people continue to reside in makeshift bamboo and plastic shelters in Cox's Bazar, Bangladesh. Their lives are entirely dependent on humanitarian aid provided by international organizations such as the United Nations and the World Food Program.

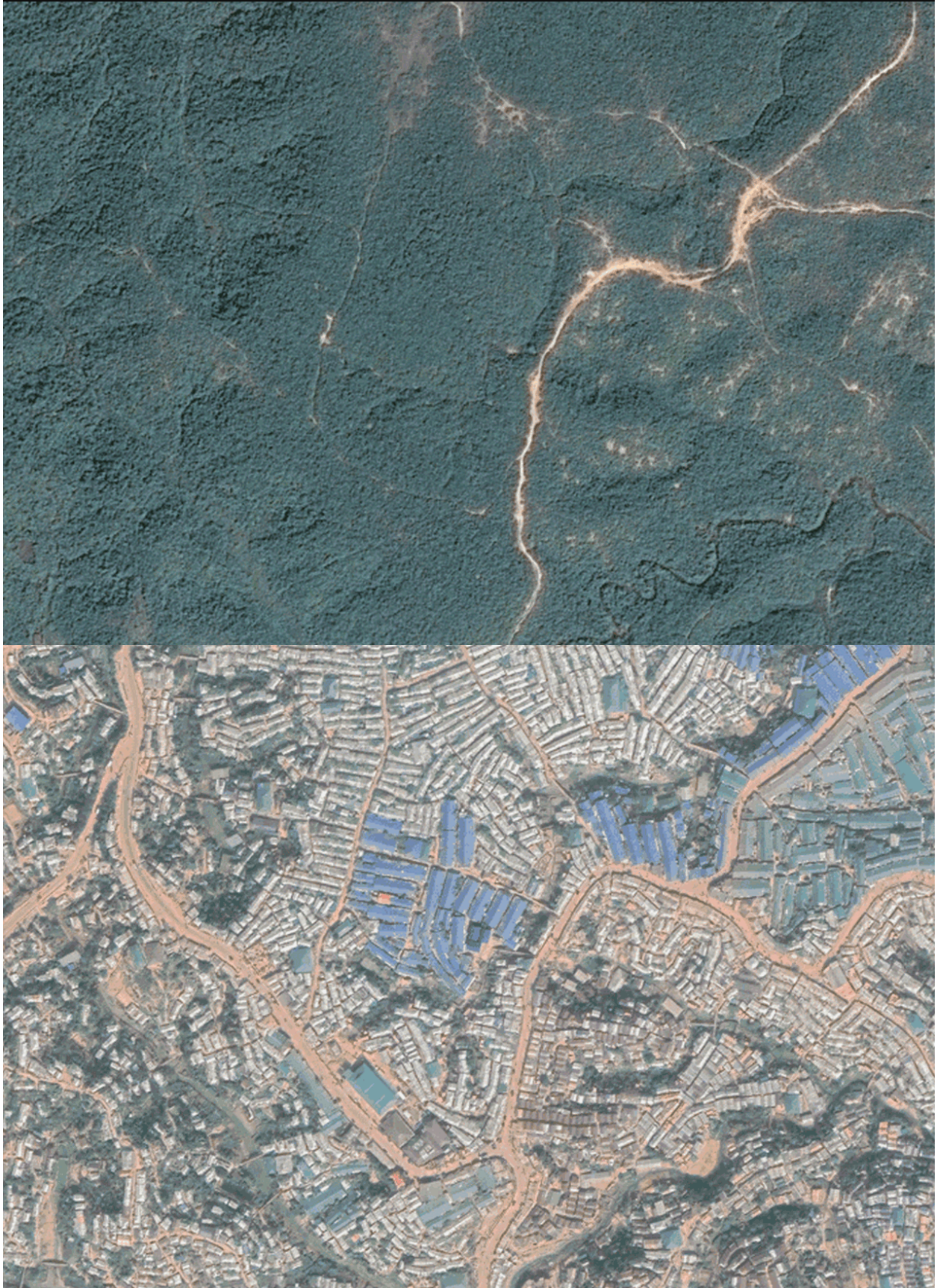
Yet, the question remains:

While their physical needs may be met, what about their spiritual and emotional well-being?

How can they cultivate confidence in their basic human rights, rebuild their shattered community, Economy, and find a sense of home in such distress?



Figure. 1.15. Population density, 2022 The number of people per sqkm of land area. Bangladesh ranked #1 Source: Our World in Data



Environmental Impacts of the Refugee Camp

In the Cox's Bazar region of Bangladesh, where Rohingya refugees are currently encamped, the environmental impact is significant. This area is already considered climatically vulnerable, with landslides, flash floods, and unpredictable tropical cyclones occurring frequently. The continuous influx of Rohingya people presents a massive burden for an already overpopulated country like Bangladesh.

The environmental consequences of hosting such a large refugee population are widespread. Forest degradation has occurred as trees are cut down to meet the settlement and cooking needs of the Rohingya. The once natural arboretum of Cox's Bazar has transformed into a grey landscape to accommodate 1.2 million individuals.¹⁴

To provide living spaces for the refugees, existing landscapes have been modified rapidly, resulting in further environmental degradation. Stairs and terraces have been carved into the land without proper planning or consideration, exacerbating the environmental disaster. Additionally, the expansion of the camps has encroached upon the migration route of endangered Asian elephants, further disrupting local ecosystems.

The situation calls for urgent attention and sustainable solutions to mitigate the environmental impact of the Rohingya refugee camps in Cox's Bazar. Efforts should also focus on preserving and restoring the natural environment, implementing sustainable practices, and ensuring the well-being of both the refugee population and the delicate ecosystems they now inhabit.

The Dilemma of Stability

The Rohingya, a minority community of indigenous Muslims, have tragically faced ethnic cleansing carried out by Buddhist extremists, leading to unspeakable persecution, sexual violence, and genocide. By now, more than a million Rohingya individuals have fled their homes in Myanmar, where their villages were systematically destroyed by the Burmese military. This sustained trauma has inflicted severe psychological distress upon the stateless people.

Figure. 1.16. Landscape transformation, from 2012 [Top] to 2020 [Bottom]. source: re-thinkingthefuture.com/city-and-architecture/a6075-10-examples-of-architecture-for-the-rohingya-community-in-bangladesh/

Presently, the Rohingya refugees find shelter in temporary camps located in the Cox's Bazar region along the border of Bangladesh which initially conceived as temporary solutions by the Bangladeshi government, these settlements were established with the hope that the refugees would eventually return to their country of origin. However, the Rohingya community, having sought safety in Bangladesh, is understandably hesitant to return, instead yearning for a more lasting rehabilitation plan.

This thesis seeks to navigate this intricate dilemma by examining the viability of two contrasting approaches: the temporary makeshift settlement in Cox's Bazar and the initiation of a more permanent rehabilitation program on the remote island of Bhasan Char. It aims to understand the desires and requirements of both parties involved, with the intention of finding a middle ground that respects the aspirations of the Rohingya refugees while acknowledging the government's original intentions.

The crisis at hand presents a profound challenge that demands thoughtful consideration and compassionate action. By exploring the possibilities inside and/or in between the temporary settlement and permanent rehabilitation, this research strives to discover architectural resolutions that uphold the rights and hopes of the Rohingya people while also addressing the concerns of the host country.

End Notes

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Chapter 2 - Literature Review

Timeline Map at a Glance: Shifts in Political Allegiance, Unsuccessful Border Creation, Ethnic Conflict Leading to Ethnic Cleansing, Resulting in Mass Displacement of Numerous Communities, Persecution, Violence, Genocide, and the Muslim Refugee Crisis in the Subcontinent. Multiple sources mentioned in Chapter One, Re-illustrated by Author.

Bihari Muslim Refugees

-  Radcliffe Line
-  Inter-communal Conflicts
-  Movement of Muslim Refugees
-  Buddhist-majority territories
-  Princely State Not Acceding either country upon independence
-  Sub-Continent with multi Ethnicity



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Five years after the largest campaign of **targeted violence ever committed against the Rohingya in Myanmar**, over one million people are living in the same **bamboo and plastic shelters** in Cox's Bazar, Bangladesh **DEPENDANT ON HUMANITARIAN AID**, with no better solutions in sight



Pandemic **restricted freedom of movement** and work opportunities for Rohingya people. **Many people have to make impossible choices about their future**

Due to COVID-19 isolation requirement **Bangladeshi government begins relocating some refugees to Bhasan Char**, a silt island in the Bay of Bengal that had remained uninhabited until now—due in part to its **remote location and unstable environment**

The emergency for over one million Rohingya refugees has become a **protracted crisis, with no end in sight**

Most of the Rohingya sheltering in Bangladesh have suffered from or witnessed **violence, lost family members or friends, or experienced persecution**.



Some 79 percent of the shelters in the two remaining camps in Cox's Bazar, Bangladesh are flooded during the rainy season



Of the 20 camps that were built in Bangladesh in the early '90s, two remain, Teknaf and Kutupalong camp in Cox's Bazar. **"Living conditions remain dire" 58% of children and 53% of adults are chronically malnourished**

Rohingya refugees arrive in Bangladesh, bringing only what they can carry

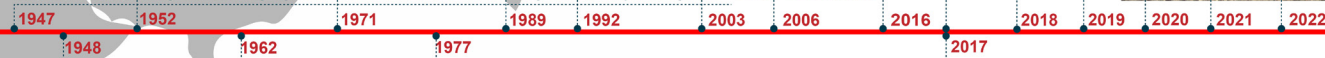
The Rohingya are reportedly subject to compulsory labor, forced relocation, rape and summary executions. **Some 250,000 Rohingya flee to Bangladesh**



Bangladesh Gained independence from urdu speaking country Pakistan

Bengali people sacrificed their lives for their mother tongue "Bangla"

POST WORLD WAR II: British were no longer able to afford administer Indian sub-continent and left as quickly as possible, splitting the country by the **RAFCLIFFE LINE** according to two major religions - Hindu and Muslim



POST WORLD WAR II: When Japan invaded Burma, Burmese nationalists welcomed their arrival, but the Rohingya community **remained loyal to the British** in hope to become an independent country after the war. **This difference in political allegiance** led to a significant ethnic conflict between Buddhist South and Muslim North in Rakhine State of Myanmar

Myanmar [Burmese speaking Muslim religion] gained independence from Britain

Military coup overthrows elected government and Ethnic Minorities faced increasing discrimination from Buddhist extremism

The Rohingya ethnic minorities were considered "illegal" and stripped off their citizenship



More than 700,000 Rohingya are driven out of Myanmar within weeks



Case Study One: Mohammadpur Geneva Camp

Emerging Urban Resilience, Amid Economic Hardship

Figure. 2.1. The camp in contrast to the surrounding urban area and its close proximity to the Parliament Building of Dhaka

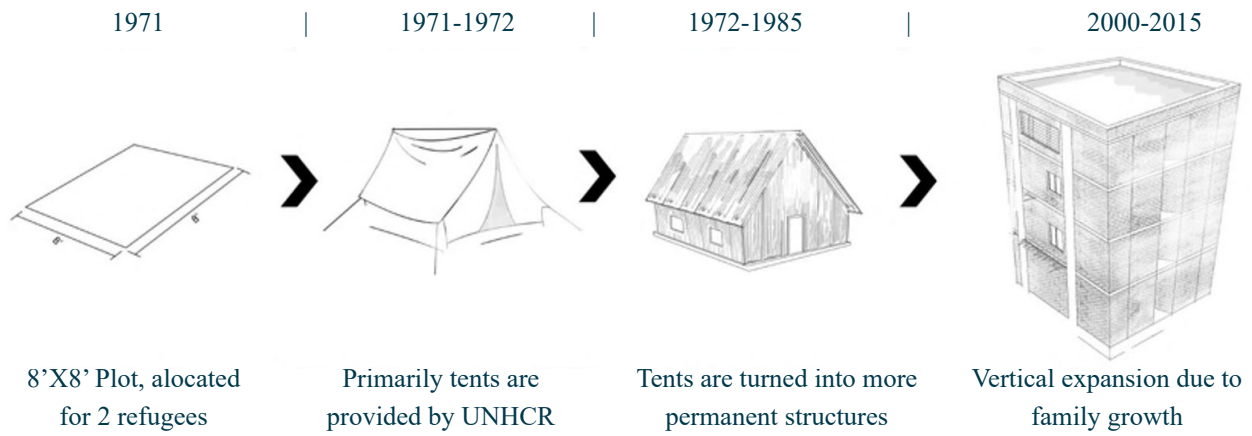
Located in the heart of Dhaka, Bangladesh, near the National Parliament building, the Geneva Camp holds a significant historical background. Established in 1971 during the Bangladesh Liberation War, it served as a temporary refuge for Urdu-speaking Biharis who had arrived in Bangladesh (then East Pakistan) following the partition of India in 1947. Originating from the Bihar region of India, these Biharis found themselves stranded in Bangladesh after the war, facing complex challenges due to their perceived collaboration with Pakistan, which labelled them as collaborators in the eyes of many Bangladeshis.

After the war, the Biharis were denied citizenship by both Pakistan and Bangladesh and were left stateless. The Geneva Camp became their home and over time it grew into a densely populated urban slum, with an estimated population of 50,000 to 60,000 people living in an area of less than one square kilometre.

Figure. 2.2. View of the Geneva camp on March 1972 right after the independence of Bangladesh. Source: Research Gate

The residents of the Geneva Camp faced numerous challenges including poor living conditions, lack of basic services like clean water and sanitation, limited access to education and healthcare, and discrimination from the wider society. They also faced the risk of eviction, as the government of Bangladesh has periodically tried to relocate the residents of the camp to other parts of the country. They faced numerous economic disasters that have had a profound impact on their livelihoods and overall well-being. These economic challenges have compounded their already vulnerable status as stateless refugees, exacerbating their struggles for survival.

One of the key economic disasters affecting the Bihari community in the Geneva Camp is the lack of viable employment opportunities. As stateless individuals, they face significant barriers in accessing formal employment. Many Biharis are limited to working in informal sectors, where wages are often meagre and job security is scarce. They engage in low-paying jobs such as manual labour, domestic work, or street vending, which offer little stability



and fail to provide a path out of poverty.

Figure. 2.3. Chronological development of Geneva Camp. Settlement Evolution © Alvi Muhtasim/AIUB, 2018

Moreover, the lack of educational opportunities within the camp has further perpetuated their economic challenges. Limited access to quality education restricts the skills and qualifications of Bihari youth, limiting their prospects for securing higher-paying jobs. This perpetuates a cycle of intergenerational poverty, making it difficult for families to escape the confines of the camp and improve their economic circumstances.

Another economic disaster faced by the Bihari community is the absence of formal financial institutions and banking services. Without access to formal banking, they are often reliant on exploitative informal lenders who charge exorbitant interest rates, pushing families further into debt. This lack of financial inclusion also restricts their ability to save, invest, or access credit for entrepreneurial ventures that could potentially improve their economic conditions.

The inadequate infrastructure within the Geneva Camp compounds the economic challenges faced by the Bihari community. Basic amenities such as clean water, sanitation facilities, and proper housing are lacking, making it difficult to maintain good health and live in dignified conditions. This not only impacts their overall well-being but also hampers their ability to engage in productive activities and pursue economic opportunities.

Figure. 2.4. Different type of zones shown in the layout of the whole Geneva camp. © Masud Ur Rashid/Research Gate, 2020

Additionally, the Bihari community in the Geneva Camp has faced discrimination and marginalization, further exacerbating their economic hardships. Prejudice and stigmatization from the broader society limit their access to resources, employment, and social support networks. This discrimination impedes their efforts to improve their economic situation and hinders their integration into the larger society.

“Notorious Narcos back in business: In the narrow alleys that interlace this dense sprawling settlement, drug trade goes on unabated despite there being a police check post right at its entrance.” - The Daily Star, November 15, 2020¹

The news article reports that the Mohammadpur Geneva Camp in Dhaka, Bangladesh, known for its involvement in drug trafficking, has resumed its illicit activities. Despite



previous law enforcement efforts to curb drug trade in the area, narcotics operations have re-emerged, posing a significant challenge for authorities. The camp, which houses a large number of Bihari refugees, has become a hub for drug cartels due to its location and lack of effective monitoring. This resurgence highlights the need for enhanced security measures and collaborative efforts to address the drug trade issue in the camp and ensure the safety and well-being of the residents. (The Daily Star, 2020)

In light of these economic disasters, it is crucial for comprehensive support and intervention to uplift the Bihari community in the Geneva Camp. Efforts should be made to provide vocational training and skill development programs to enhance their employability. Access to quality education should be prioritized to empower the younger generation with knowledge and skills needed for sustainable livelihoods. Establishing formal financial institutions and fostering financial inclusion can enable access to credit and savings, encouraging entrepreneurship and economic growth within the community.

Improving the infrastructure within the camp, including water and sanitation facilities, housing, and basic amenities, is essential for creating a conducive environment for economic progress.

Additionally, addressing discrimination and promoting inclusivity through awareness campaigns and advocacy efforts can help remove barriers and create equal economic opportunities for the Bihari community.

Figure. 2.5. Life in the Geneva Camp of Dhaka [Left] © Sazzad Hossain. Source of the Bottom right image: The Daily Star





-  School
-  Kabab Restaurant
-  Biryani Restaurant
-  Grocery Shop/ Kacha Bazar
-  Bicycle and Automobile Workshop
-  Repair and Hardware Workshop



Exploring the Entrepreneurial Resilience of Refugee's Distinct Business Ventures

Figure. 2.6. A Glimpse into the Entrepreneurial Spirit and Unique Business Ventures within Geneva Camp's Bihari Community, Illustrated by Author.

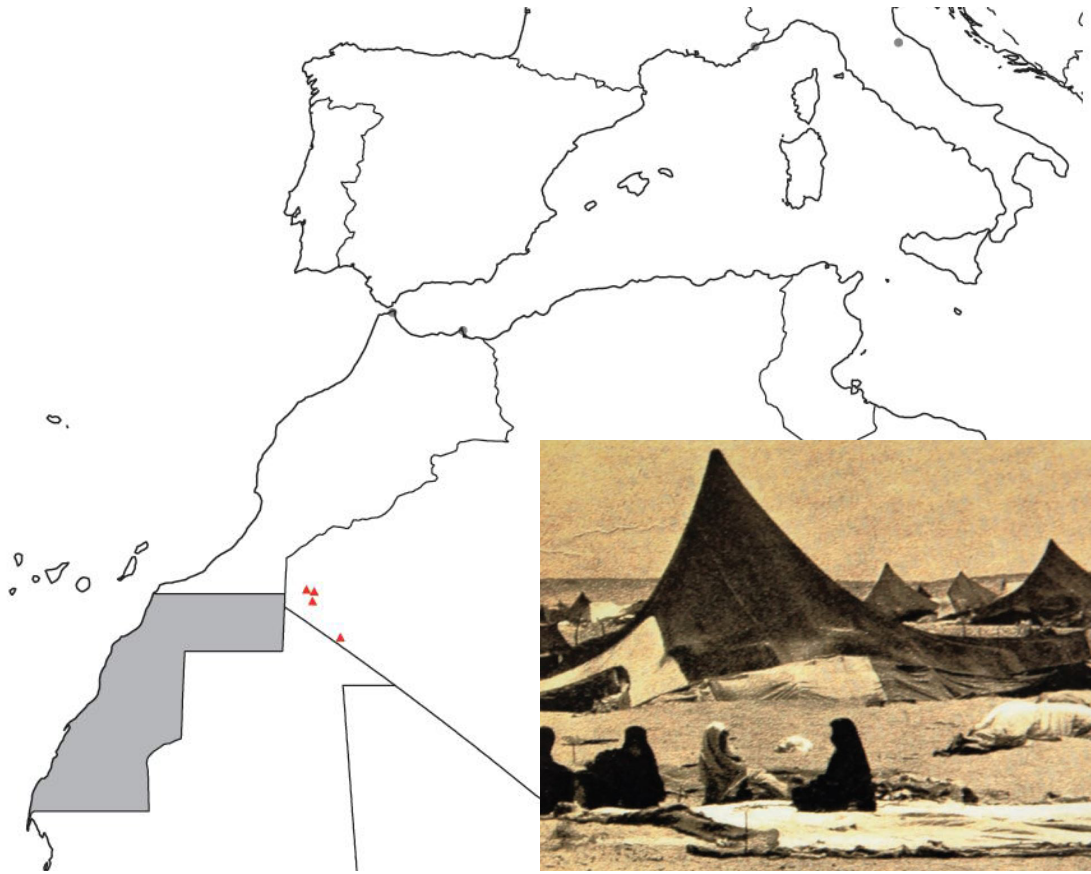
The economic vibrancy of Geneva Camp is highlighted through Camp Bazar, a bustling marketplace. The Biryani Restaurant, a culinary haven, serves as a cultural hub, offering not just a meal but a taste of identity. The mechanic workshop provides essential services, contributing to community self-sufficiency. Amidst this, the Mustakim Kabab, a flavorful creation by refugees², symbolizes resilience. This culinary innovation, including dishes like the Mustakim Kabab mentioned in Bengali rap music, resembles Bangladeshi street food culture and holds economic potential. By commercializing their unique food culture, refugees can create entrepreneurial opportunities, fostering economic well-being, community empowerment, and the preservation of cultural heritage.

In conclusion, the Bihari community in the Geneva Camp has faced numerous economic disasters that have perpetuated their marginalized status. Lack of employment opportunities, limited access to education, absence of formal financial institutions, inadequate infrastructure, and discrimination have all contributed to their economic hardships. It is crucial to address these challenges comprehensively, providing support and interventions to uplift the community and enable them to improve their economic circumstances. Only through concerted efforts can we ensure a brighter future for the Bihari community in the Geneva Camp.

Figure. 2.7. Community resilience shines brightly in the face of hardship under the night sky. Source: https://www.reddit.com/r/UrbanHell/comments/vgge4v/geneva_camp_dhaka_bangladesh_the_neighborhood/

Despite these challenges, the residents of the Geneva Camp have shown remarkable resilience and have formed a strong community over the years. They have established schools, clinics, and other community organizations to meet their basic needs and have even formed a football team that has represented Bangladesh in international tournaments.

Today, the Geneva Camp remains one of the most densely populated and impoverished areas of Dhaka, but it is also a vibrant and resilient community that continues to fight for its rights and dignity.



Case Study Two: Refugee Camps of Western Sahara

From Camp to city, The Birth of a New Urban Condition

The refugee camps of Western Sahara, situated in the harsh desert environment near Tindouf, Algeria, have given rise to a unique urban condition with limited support from the international community and minimal involvement of the UN. The history of these camps showcases their evolution from a collection of tents into a fully-fledged residential compound, highlighting the resilience and resourcefulness of the Sahrawi refugees.

Initially, the camps consisted of clustered and organized rows of tents. With the majority of men engaged in fighting against the Moroccans, women took on leading roles in enhancing the camp's infrastructure. They spearheaded the construction of medical stations and hospitals, gradually replacing the tents with clay huts as the population grew. This transformation laid the foundation for a self-sufficient community within the camp.

Remarkably, the refugees even managed to cultivate the barren desert lands and cultivate vegetables, reminiscent of their lush green home gardens. The camp's economic system was characterized by a unique approach to grocery shopping and trading, which operated successfully until the 1990s without the use of money. This alternative economy was founded on the principles of reciprocal exchange. For instance, an extra hour of work in administration would be rewarded with an additional portion of vegetables.

In the absence of defined codes or regulations from the UNHCR Handbook for Emergencies, the Sahrawi refugees took it upon themselves to create a wide range of de facto spaces within the camp for recreational and leisure activities. They transformed private spaces for tea ceremonies, erected tents for weddings and other ceremonies, and repurposed food distribution centres as sociable spaces for lingering, conversation, play, and even nightlife. Empty spaces were turned into playing grounds for soccer and served as venues for various cultural activities, including youth theatre and painting. It is important to note that these activities often carried political messages, reflecting the refugees' aspirations and their struggle for self-determination.³

Figure. 2.8. West Africa, with Western Sahara in gray and locations of refugee camps in red. © Manuel Herz/Humanity Journal

Figure. 2.9. Early Camps built by UNHCR © Polisario/Humanity Journal and Later Camps built by refugees © Manuel Herz/ Humanity Journal



From a literature review of the history of the Western Sahara camps, several valuable lessons can be drawn. First and foremost, the resourcefulness and determination of the refugees in building a sustainable community from limited resources is a testament to human resilience and adaptability. Despite challenging circumstances, they found innovative ways to meet their basic needs and create a sense of normalcy within the camp.

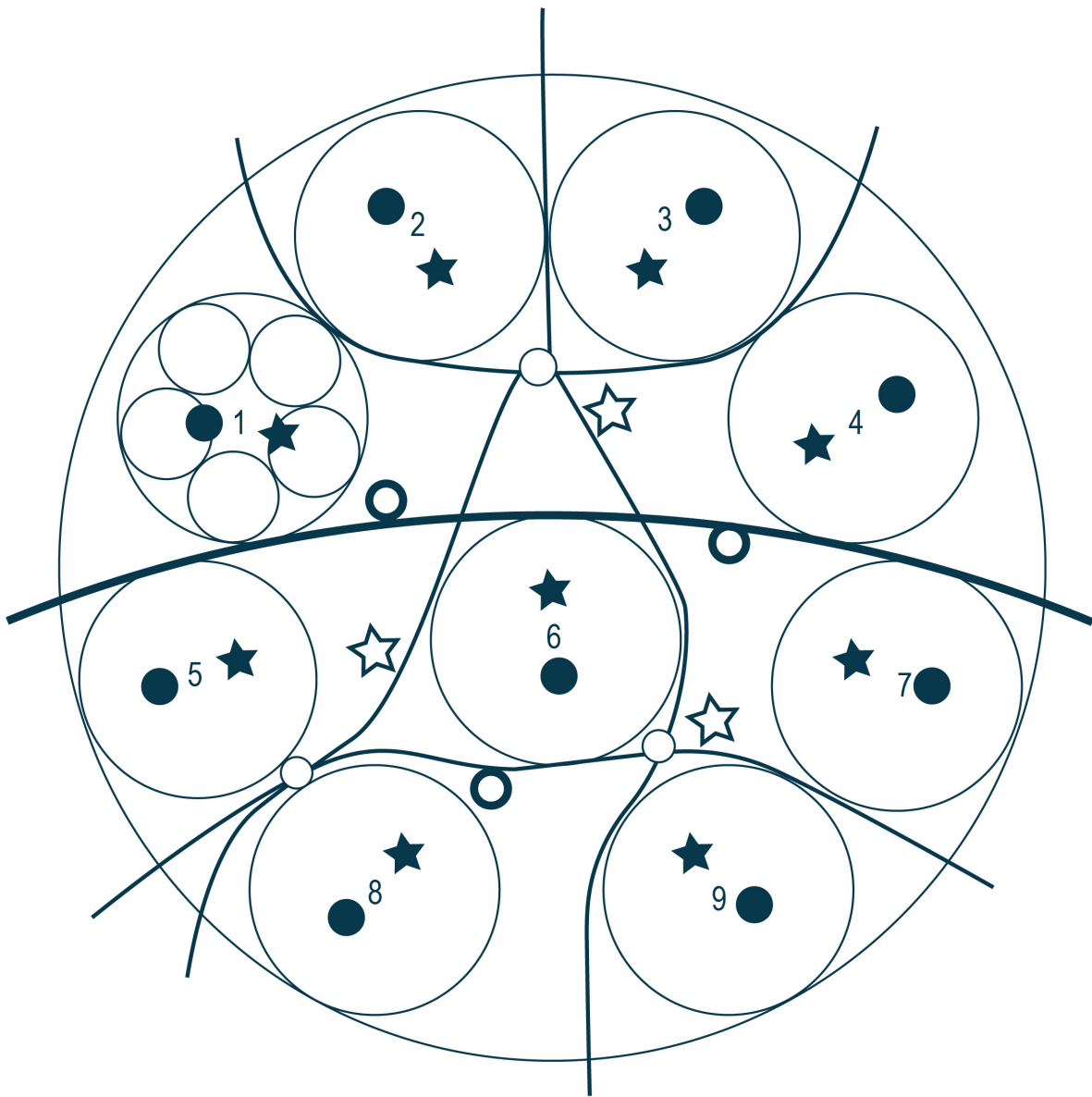
Figure. 2.10. Goat Barns, From Camp to City, Refugee camps of Western Sahara, © Manuel Herz

Furthermore, the camps highlight the importance of community participation and self-governance. In the absence of external guidance, the refugees took responsibility for organizing their living spaces and recreational areas. This grassroots approach empowered them to shape their own environment and cater to their social and cultural needs. The creation of spaces for communal activities fostered a sense of belonging, enabling the refugees to maintain their cultural practices and promote social cohesion.

The political dimension within the camps cannot be overlooked. The activities conducted within the recreational spaces carried deep political significance, reflecting the refugees' desire for self-determination and their struggle for justice. This highlights the interconnectedness of social, cultural, and political aspects within the context of refugee camps. It underscores the importance of recognizing the agency and aspirations of refugees beyond their immediate humanitarian needs.⁴

Figure. 2.11. Family Garden Project in El Aiun, From Camp to City, Refugee camps of Western Sahara © Manuel Herz

In conclusion, the refugee camps of Western Sahara near Tindouf, Algeria, exemplify a remarkable transformation from tents to a resilient and self-sufficient urban community. The history of these camps underscores the resourcefulness and adaptability of the Sahrawi refugees in overcoming adversity through farming and recreation. It also emphasizes the significance of community participation, self-governance, and the political dimension within the camp's recreational spaces. Understanding and learning from these experiences can inform future approaches to refugee camp management, emphasizing the importance of holistic support that addresses not only the basic needs of refugees but also their social, cultural, and political aspirations.



- | | | | | | |
|-----|-------------------------------|---|----------------------------|---|----------------|
| 1-9 | Residential Neighborhood Unit | ★ | Local Shopping Center | ○ | Village Center |
| — | Roads | ☆ | Subsidiary Shopping Center | ● | Primary School |
| — | Railway | ○ | High School | | |

Neighborhood Theory

Developed in the early 20th century, primarily in the 1920s, Clarence Perry's ideas were influential in shaping urban planning and community design.⁵ His neighborhood theory, often referred to as the "neighborhood unit concept," aimed to create functional and socially cohesive neighborhoods. Here are the key principles of neighborhood theory:

Functional Zones: Perry proposed dividing a neighborhood into several functional zones, each serving a specific purpose. These zones typically included residential areas, schools, parks, and commercial centers. The idea was to create a self-contained and balanced community where residents could meet most of their daily needs without traveling far.

Green Spaces: Perry advocated for the inclusion of green spaces within neighborhoods. Parks and open areas were seen as essential for recreation, aesthetics, and community gathering. These green spaces were meant to enhance the quality of life for residents.

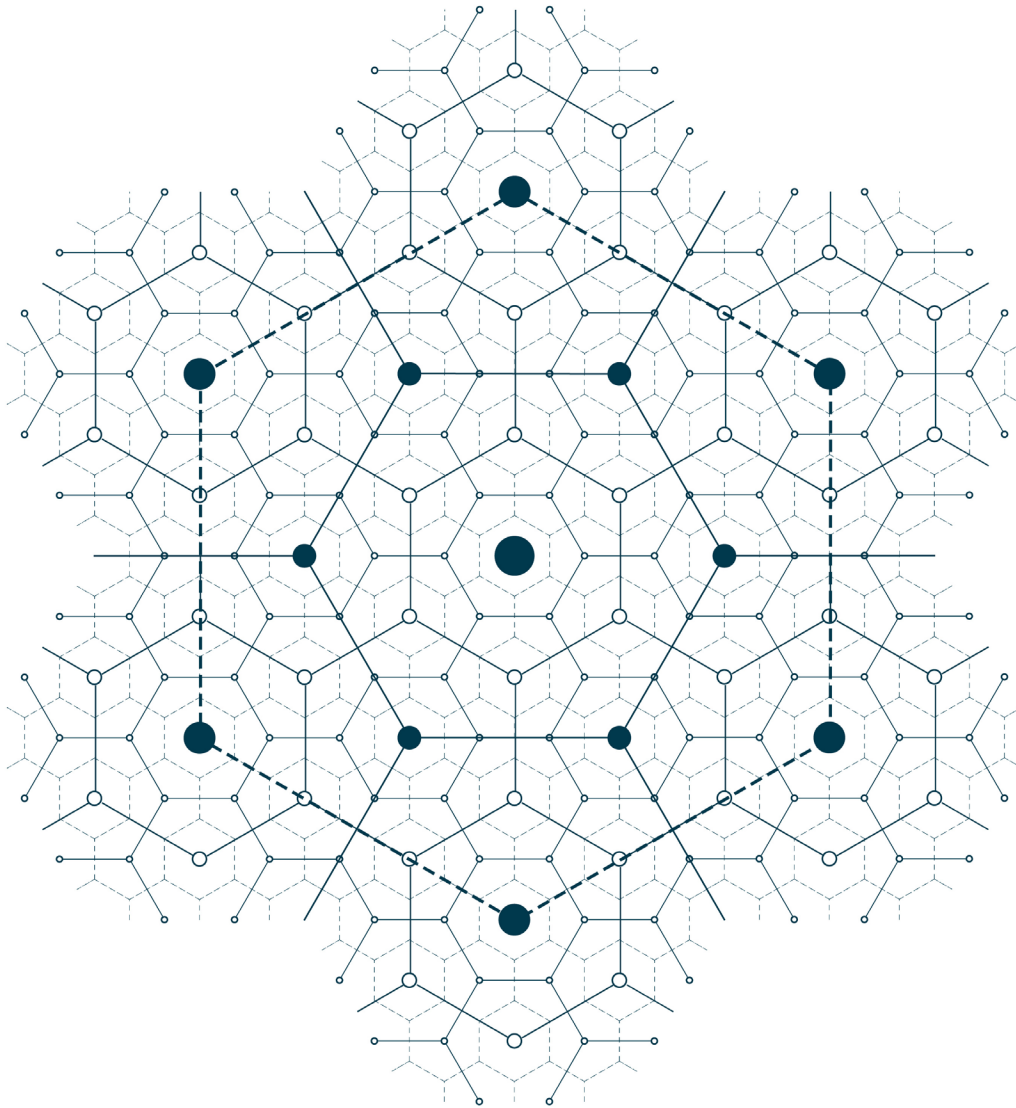
Schools as Community Centers: Perry proposed that schools should serve as central community hubs. They could function as places for education during the day and as community centers during evenings and weekends, hosting various social and recreational activities.

Local Commercial Centers: Perry recommended the inclusion of local commercial centers within neighborhoods, providing residents with easy access to essential goods and services. This would reduce the need for long-distance travel for daily necessities.

Residential Clusters: Perry suggested organizing residential areas into clusters, with each cluster having its own distinct character and identity. This arrangement was intended to foster a sense of community and social cohesion among residents.

Neighborhood unit concept had a significant impact on urban planning, influencing the design of suburban developments and community planning in the mid-20th century. However, over time, critiques have emerged, pointing out challenges such as the potential for monotony and the need for flexibility in response to evolving societal needs and preferences.

Figure. 2.12. Elements of the Neighborhood Theory, Re-illustrated by Author. Source: Multiple Online Images.



Central Places

Area Boundary

Residential Clusters	◦	Fifth Order	-----
Hamlets	○	Fourth Order	—————
Villages	●	Third Order	—————
Towns	●	Second Order	—————
Cities	●	First Order	-----

Central Place Theory

Central Place Theory is a geographical theory developed by Walter Christaller in the early 20th century, primarily in the 1930s. It's a theoretical framework used to explain the spatial distribution of human settlements and economic activities in a region.⁶ Central Place Theory is particularly concerned with the organization and hierarchy of cities, towns, villages, hamlets, and neighborhoods within a region. The key concepts and principles of Central Place Theory include:

Central Places: In this theory, a central place is a city or town that provides goods and services to the surrounding population. These services can range from basic necessities like groceries to more specialized services like medical care or higher education.

Threshold and Range: Central Place Theory introduces the concepts of threshold and range. Threshold is the minimum population required to support a particular type of service or good. For example, a small village might only support a convenience store, while a larger town can support a full supermarket.

Hierarchy of Central Places: Central Place Theory proposes a hierarchical arrangement of central places, with larger cities or towns at the top of the hierarchy and smaller ones at the bottom. Larger central places offer a wider range of services with higher thresholds, while smaller ones offer more basic services.

Hexagonal Pattern: Christaller's original theory often represents central places as hexagons on a map. This arrangement minimizes overlaps and ensures that each central place serves its surrounding population efficiently.

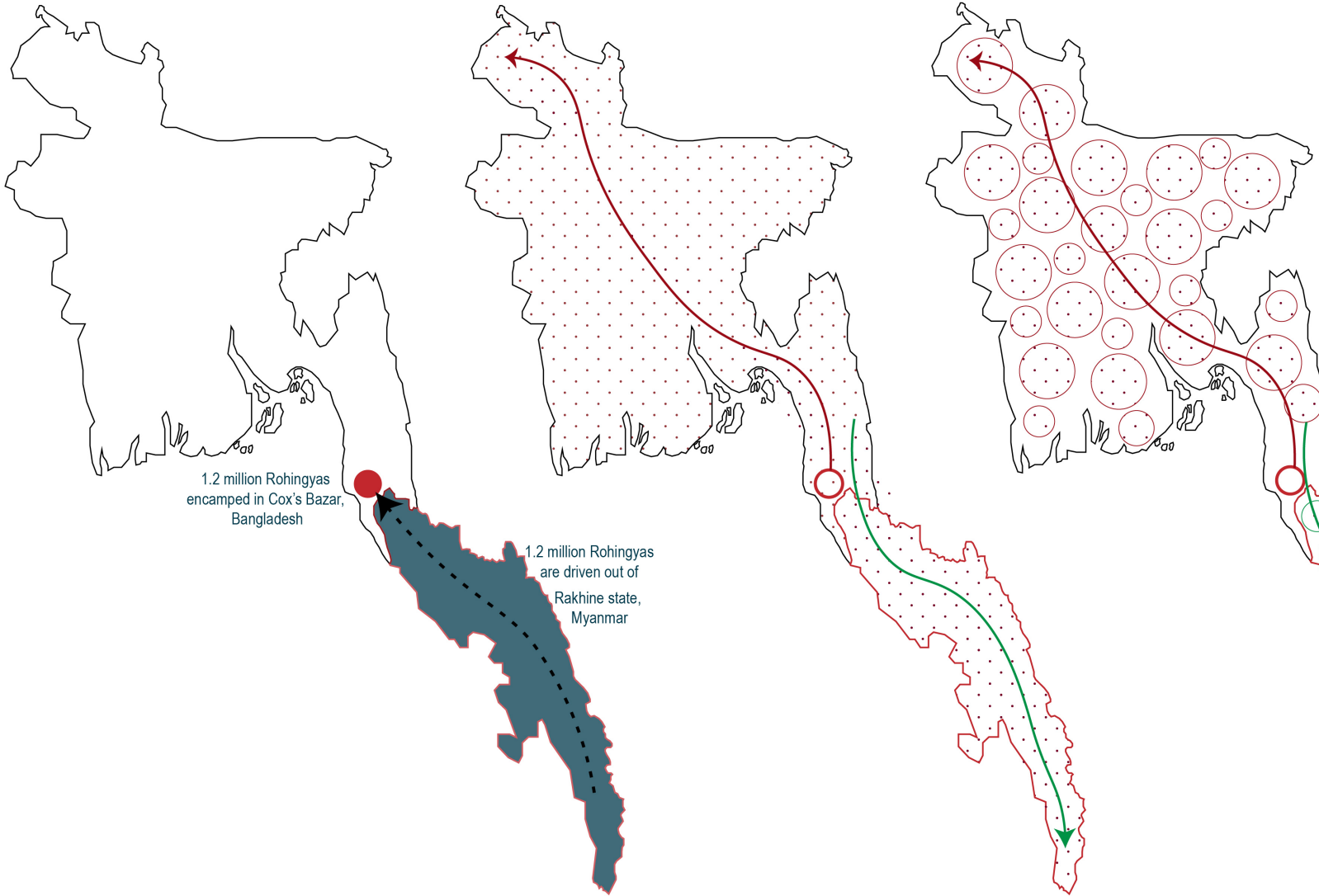
Transportation Networks: The theory assumes that transportation networks are efficient and that consumers will travel to the nearest central place that provides the desired service or good.

Central Place Theory has been influential in urban and regional planning, especially in understanding the spatial organization of cities and towns. However, it's important to note that while Central Place Theory provides valuable insights into settlement patterns, it has limitations. It assumes uniformity in factors like population distribution, transportation infrastructure, and consumer behavior, which may not always hold in the real world.

Figure. 2.13. Hierarchical arrangement of the Central Places, Re-illustrated by Author. Source: Multiple Online Images.

Dispersing them individually among
170 million Bangladeshi people

Dispersing them as groups of communities among
170 Bangladeshi communities



As individuals [relatively faster but against GoB policy
and they like being in community]

Figure. 2.14. In the initial thought process, the question arises of how to disperse the one million people concentrated in one place. Should they be dispersed individually, as communities, or relocated to a remote island? Illustrated by Author.

The Aspiration of Thriving beyond mere Survival

The Rohingya people confront immense challenges in their quest for prosperity and a sense of identity. They have been stripped of their land, their homes, and their citizenship, rendering them stateless and without a clear path to sovereignty. Without hope for a secure future, it becomes crucial to address not only their immediate needs but also their long-term aspirations.

Efforts must focus on empowering the Rohingya community by promoting education, skill development, and psychological support. Quality education can unlock the potential of the younger generation, instilling hope for a brighter future. Creating opportunities for vocational training and entrepreneurship can help them rebuild their lives and foster self-sufficiency. Moreover, psychological support and trauma healing initiatives are essential to help the Rohingya heal from the deep wounds of their past.

Furthermore, it is vital to work towards addressing the root causes of the Rohingya crisis, including advocating for their rights and recognition on the international stage. This involves pressuring Myanmar to ensure justice, accountability, and the restoration of citizenship for the Rohingya people.

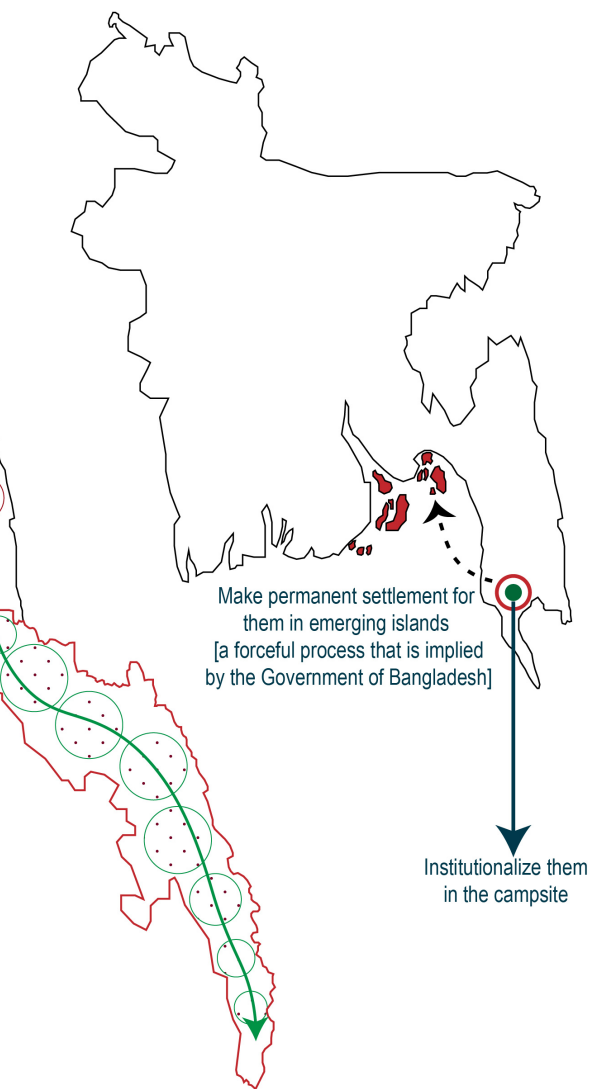
By addressing the physical, emotional, and socio-political aspects of the Rohingya's predicament, an endeavor can be made to help them not only survive but also thrive as individuals and as a resilient community. It is through these concerted efforts that can offer them a path from having nothing to reclaiming their dignity and achieving a hopeful and prosperous future.

Navigating the Challenges:

Reconciliation, Dispersion, Integration, Institutionalization, and/or Relocation?

What steps can be taken to promote reconciliation between the Rohingya community and the Myanmar government to facilitate safe repatriation, if desired by the refugees? [VERY CRUCIAL]

Addressing Historical Grievances: Acknowledging and addressing historical grievances, including the reasons for the Rohingya exodus, is a crucial first step.



In groups of communities [relatively longer process]

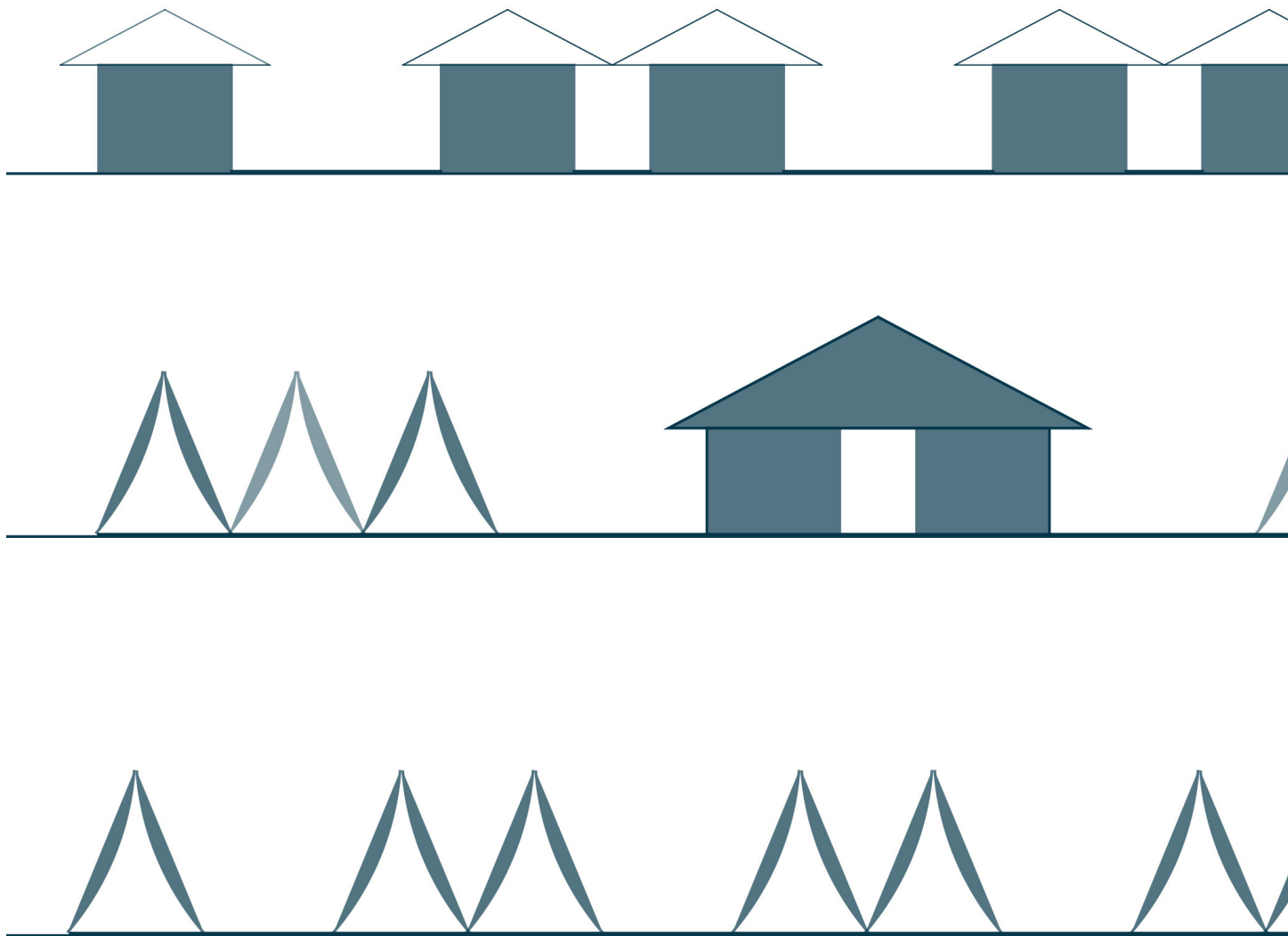


Figure. 2.15. The aim is to understand the desires of both refugees and the government, seeking a middle ground that respects human aspirations while addressing concerns of the host country and its landscape as well. Envisioning De Facto Spaces to Negotiate the Future of Rohingya Communities, Illustrated by Author.

International Mediation: Involving international organizations and diplomatic mediation to create a conducive environment for negotiation and repatriation.

Legal Protections: Ensuring that repatriated Rohingya have legal protections, citizenship rights, and guarantees of safety in Myanmar.

How can the dispersal of one million Rohingyas among the 170 million Bangladeshi population be effectively managed to ensure their integration and well-being? [UNPREDICTABLE]

Comprehensive Integration Policies: Developing policies that provide education, healthcare, and employment opportunities to both Rohingya and host communities.

Community Engagement: Encouraging social interactions and cultural exchanges to reduce tensions and foster a sense of belonging.

Infrastructure Development: Investing in infrastructure to support the increased population without straining resources.

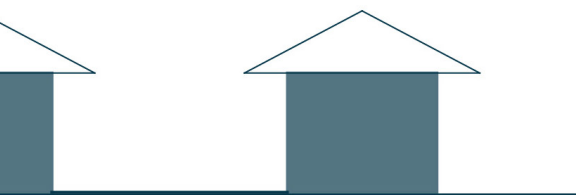
What are the potential challenges and benefits of institutionalizing the Rohingya community rather than dispersing them? [Probable --- should be analysed]

What are the potential implications and concerns surrounding the relocation of the Rohingya to the remote island, and what alternatives should be considered? [Adaptable --- should be analysed]

Insights derived from past refugee crises and successful resettlement programs can be used to inform the approach to the Rohingya situation in Bangladesh. Learning from historical experiences involves the study of both effective and unsuccessful approaches, with valuable lessons on what works and what doesn't being provided.

Moreover, best practices from successful resettlement programs can be identified and applied to shape policies and strategies for improving the Refugee situation, with an emphasis on the applicability of successful models.

These tools for healing the Rohingya situation may offer a potential avenue to address current challenges, drawing from valuable insights gained through past experiences, both failures and successes.



End Notes

- 1 Shaheen Mollah & Muntakim Saad, “Mohammadpur Geneva Camp: Notorious narcotics back in business”, The Daily Star, November 15, 2020, <https://www.thedailystar.net/city/news/mohammadpur-geneva-camp-notoriousnarcotics-back-business-1995157>.
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- 4 Manuel Herz, *From Camp to City: Refugee Camps of Western Sahara* (Zurich: Lars Müller Publishers: ETH Studio Basel, Winter and Spring 2011).
- 5 Visakhapatnam, “Neighbourhood unit (Clarence Perry)”, Slide Share, July 12, 2021, <https://www.slideshare.net/Thanujakullai/neighbourhood-unit-clarenceperry-249702397>.
- 6 Mark Altaweel, “Central Place Theory”, *Economic Geography*, November 21, 2020, <https://www.geographyrealm.com/central-place-theory>.

Chapter 3 - Design Proposals

Part One: Acupuncture



A Diagnosis of the Dynamic Context

Bangladesh, resided in South Asia, is a unique and captivating riverine country. Situated on the Bay of Bengal, it's crisscrossed by an intricate network of rivers, streams, and waterways originated from Himalayan and Meghalayan mountains in the North. The Padma, Jamuna, and Meghna rivers, collectively forming the world's largest delta, flow through its lush landscapes, defining the nation's geographic character.

The land is a mosaic of fertile floodplains, interspersed with wetlands, marshes, and countless water bodies. These rivers not only serve as lifelines for transportation, agriculture, and trade but also shape the very essence of Bangladeshi culture and livelihoods. The annual monsoon rains swell these waterways, often leading to flooding that both nurtures the land and presents challenges for its people.

In this riverine nation, water is not just a resource; it's a way of life. The stunning beauty of its water-rich landscapes and the resilience of its people coexist amidst the constant ebb and flow of the rivers.¹ Bangladesh's geography is a testament to the dynamic relationship between its people and the ever-changing waters that both sustain and challenge their way of life.

Hereditary fisherfolk living along the mouths of the Meghna river and the coasts of Chittagong and Cox's Bazar; this Dalit community now regularly faces one of the most fearsome effects of climate change – the Bay of Bengal swamps their homes at almost every high tide. (Montu, 2020)

Bangladesh's island culture is deeply rooted in its unique geography. The country is home to numerous river islands, also known as 'chars,' in the Ganges, Brahmaputra, and Meghna river systems. These islands are dynamic and ever-changing due to the shifting river courses and are an integral part of Bangladeshi culture.

Life on these river islands is closely tied to the ebb and flow of the water. Communities on the chars have adapted to the challenges posed by seasonal flooding and erosion. They have developed distinct traditions, including unique music, dance, and cuisine. Fishing and agriculture are central to their livelihoods.

The island culture reflects the resilience and

Figure. 3.1. Agriculture on the bank of a branch river of Padma. Boral River near Arani Rail Station in Bangladesh, © Shahnoor Habib Munmun, 2011.

Figure. 3.2. Swandwip Island in the Bay of Bengal, It is adjacent to Bhasan Char where Rohingyas are being transferred. © Rafiqul Islam Montu, 2020



Figure. 3.3. The historic practice of constructing floating gardens has been part of regional heritage in southern Bangladesh for centuries © BBC/Fahmida Akter, 2022

“This has made a great difference to my life. Now I have enough food in the floods” – Bijoy Kumar



Figure. 3.4. As sea levels rise, a historic agricultural practice is offering respite to farmers who are losing their land © BBC/Fahmida Akter, 2022

“It was something as common as having a small terrace garden in a city ” – Haseeb Irfanullah



Figure 3.5. Agriculture has to adapt to watery conditions, whether that is through floating vegetable gardens, or farming on raised beds – as in the sorjans of Pirojpur, Source: BBC/Getty Images

resourcefulness of the people who call the “chars” home, and it showcases a way of life deeply connected to the natural rhythms of the rivers and the land. This sentiment is echoed in the remarkable floating gardens of Bangladesh, where innovative agricultural practices thrive on the country’s



Figure 3.6. Water hyacinth is an invasive weed in parts of Bangladesh, but now it is being used to form soil-free beds for the country’s floating gardens, Source: BBC/Getty Images

waterways, embodying the harmonious relationship between the community and its environment.² The article explores how these floating gardens contribute to sustainable farming, offering insights into the adaptive strategies employed by Bangladeshi communities. (Sunder, 2022)



Figure. 3.7. 3D Rendered Topographic Map of the region, Hilly terrain on the east side, © FrankRamspott, Source: iStock

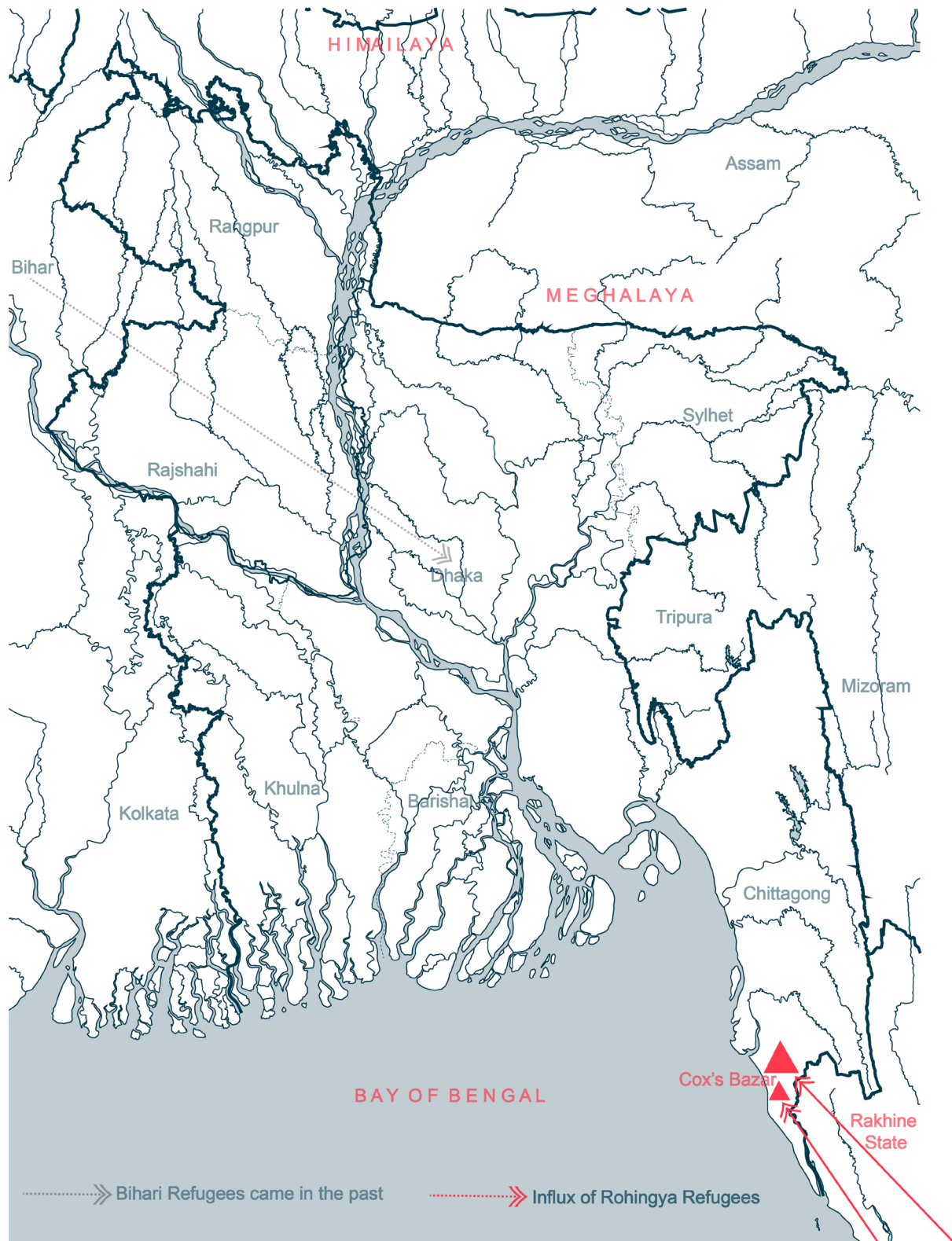


Figure. 3.8. Riverine Geography of Bangladesh, Re-illustrated by Author, Source: NordNordWest



Factors Influencing the Dynamics of Camps in Cox's Bazar

The Rohingya refugee camps in Cox's Bazar, Bangladesh, are situated in a hilly and forested area near the border with Myanmar. The camps were initially established to provide shelter for hundreds of thousands of Rohingya who fled violence in Myanmar. The geography is characterized by brittle terrain with dense vegetation, making it challenging for infrastructure development and access to services. The hilly landscape also poses potential risks during monsoon seasons, as heavy rainfall can lead to landslides and flooding.

Figure. 3.9. Cox's Bazar features a blend of coastal beauty, lush hills, and a vibrant culture, making it a unique and captivating geographical location. © Masud Al Manun, 2019

Despite these challenges, these camps have become a temporary home for a large, displaced population seeking safety and refuge.

A note from a friend with experience of working in Rohingya refugee camps of Cox's Bazar:

“This issue that the Rohingyas are grappling with is not solely a problem of one or two governments. It's a global crisis, and international communities should act. Unfortunately, some of them may not always act with long-term solutions in mind; instead, they may profit under the guise of humanitarian work by soliciting substantial donations from privileged nations. It's a paradox of our so-called educated civilization, where more suffering can sometimes mean more money. Sadly, some entities may benefit from this cycle, as they may not fully comprehend the depths of suffering. They might engage in verbose discussions about humanity while our government is genuinely benevolent and compassionate in this case, understanding the reality of suffering since we emerged from it. However, it's essential to acknowledge that not all efforts are effective or beneficial to the targeted population; some may be driven by individual gain.”

Figure. 3.10. Rohingya Refugees living on the brittle valley of Cox's Bazar, © OCHA/Vincent Tremeau, 2020

— Samara Hamid; Architect, 2019-2020, UNV/ IOM, Camp 12, Ukhiya, Cox's Bazar, Bangladesh.



Ukhia
Palong Khali

Thangkhali

Hakimpara

Jamtoli

Bagghona/Potibonia

Jalia Palong

Whykong

Shamlapur

Baharchhara

Bay of Bengal

Raja Palong
Naikhongchhari
Ghandung

Kutupalong RC

**Kutupalong MS + Balukhali MS
+ Expansion Sites**

Chakmarkul

MYANMAR

Unchiprang

Teknaf

Nhilla

Pankhali

Uluchamri

Leda MS

Leda

Teknaf

Nayapara RC

Nayapara

Jadimura

- Other Host Communities with refugees
- Highway
- Roads
- Refugee Camp
- Spontaneous Site
- Host Communities
- Myanmar
- Upazila
- Union



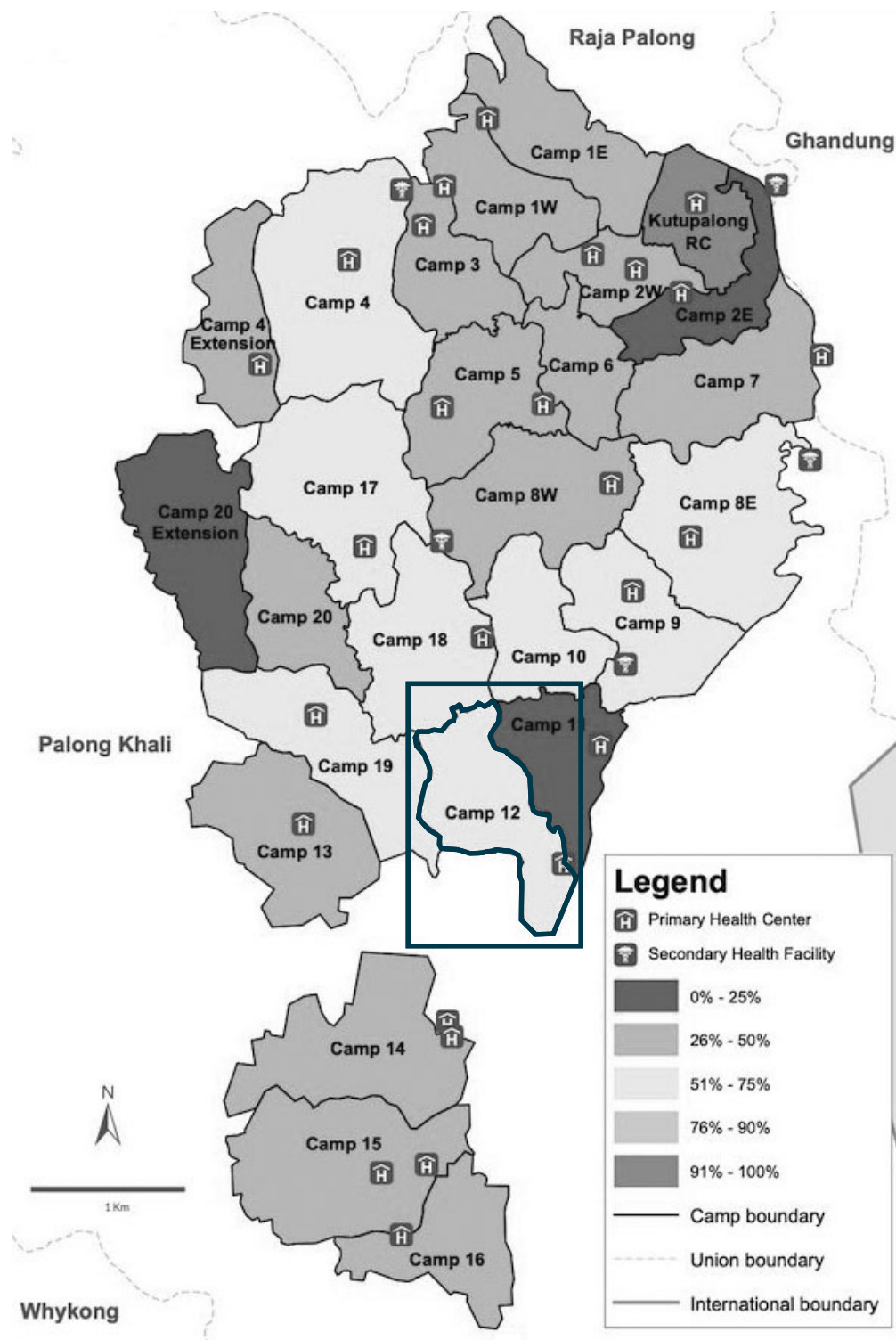


Figure 3.11. Rohingya refugee camps map (updated on August 2018) © Azad et al, 2019.

Figure. 3.12. Aerial Map of Camp 12 [left] and zoomed in [right], © UNHCR and IOM, 2020.





Rohingya Camp 12, Ukhiya,
Cox's Bazar, Bangladesh

Figure. 3.13. Topography Map,
Camp12. Illustrated by Author.
Source: ArcGIS online, 2022

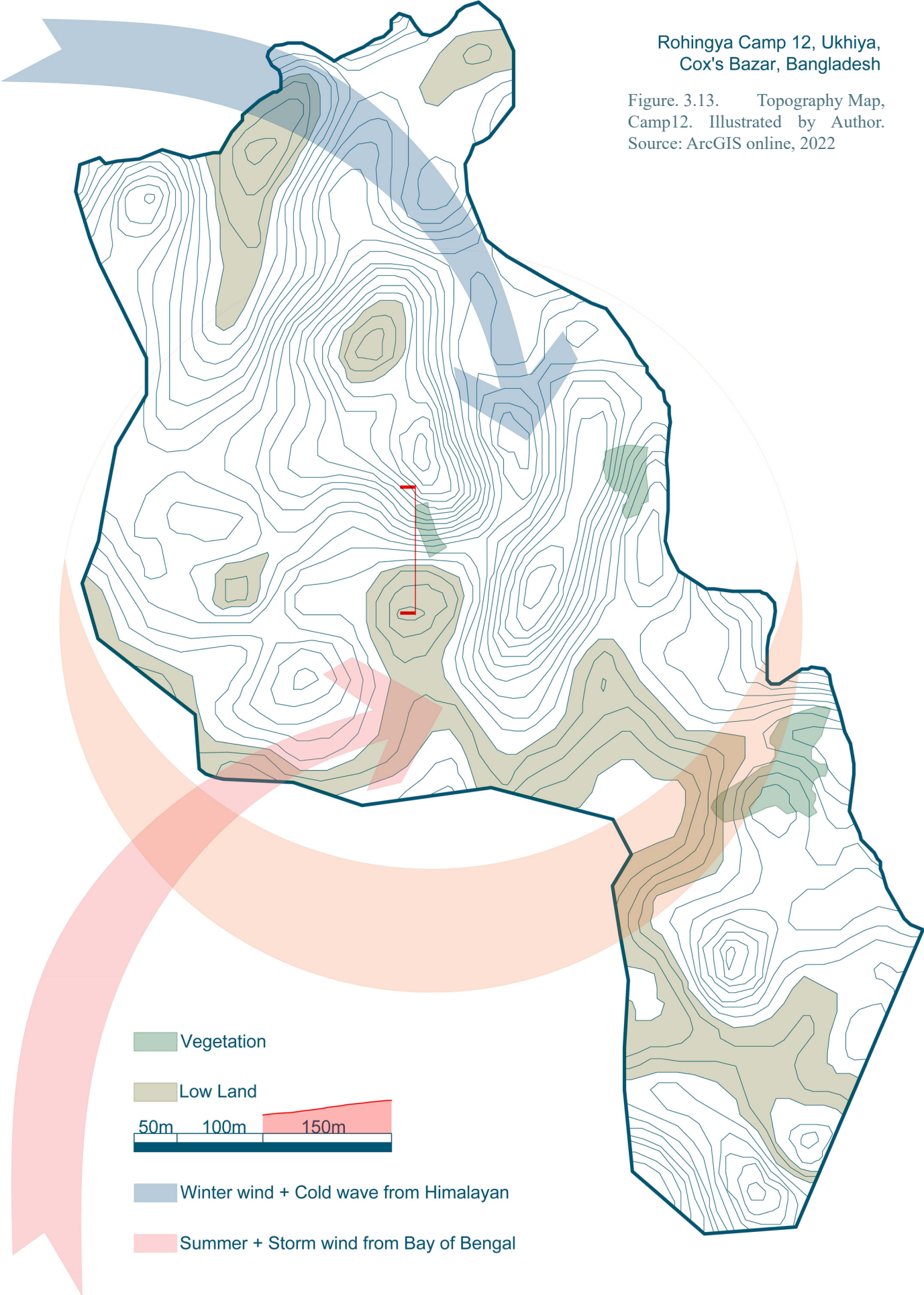




Figure. 3.14. To facilitate the need for living spaces for refugees, stairs and terraces were cut into the existing landscapes so quickly that it resulted environmental disaster such as flash floods and mudslide, 2021, Top and middle right image Source: UNHCR

Determinants of Structural Prerequisites

Figure. 3.15. Using traditional stilted building techniques is essential to avoid triggering lethal mudslides, flooding, and other natural disasters when constructing terraces. Bottom right diagram illustrated by Author.





Figure 3.16. C a m p s i t e activities, 5 images of this page, © Samara Hamid, IOM 2020

Determinants of Program Prerequisites



Figure 3.17. “The aim is to strengthen access to fresh foods and food security amongst the most vulnerable, and support refugees’ economic empowerment, focusing on demand created by the camps through skills development activities like homestead vegetable gardening, seed production, aquaculture and tailoring.” 6 images of this page © Nihab Rahman, WFP 2022

Rohingya Camp 12, Ukhiya,
Cox's Bazar, Bangladesh

Figure. 3.18. Potential locations highlighted with dots for structures aimed at food cultivation and ensuring food security. Credit: Author

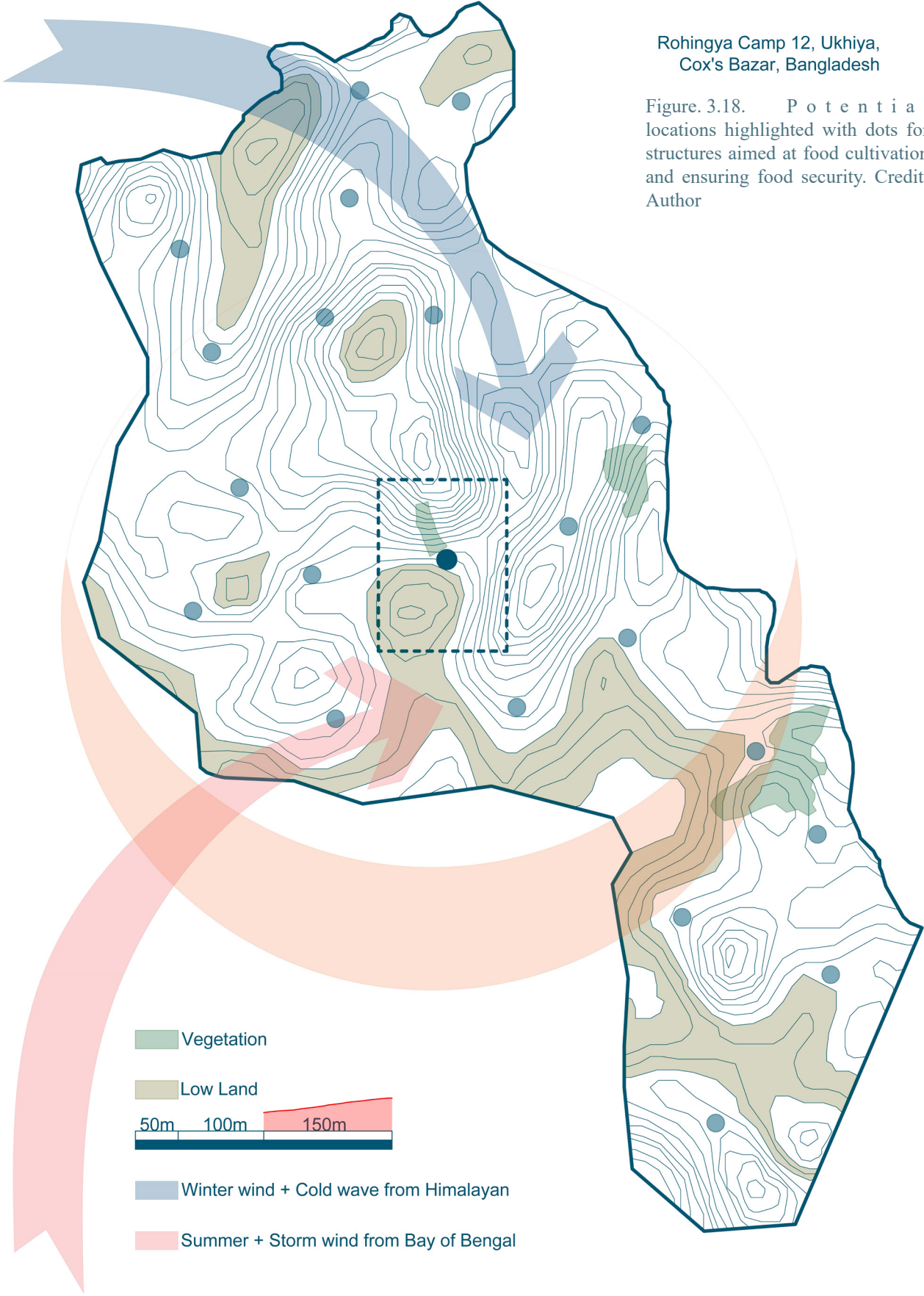
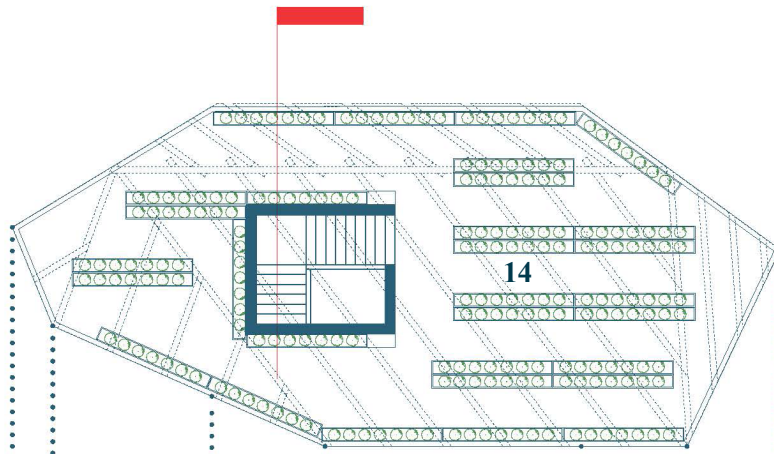


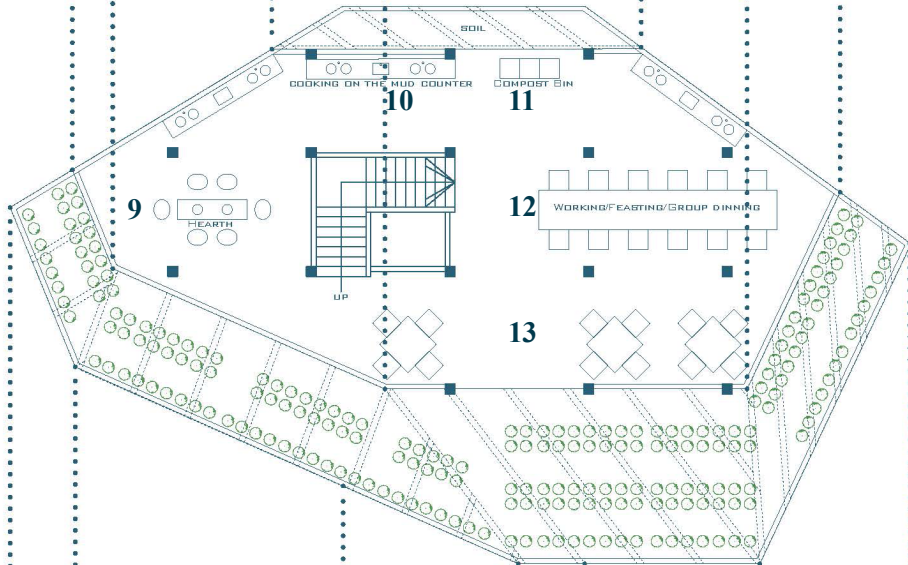


Figure. 3.19. Site Plan of the highlighted area, showing contrast between various Land types and Makeshift Structures, Credit: Author.

Roof Plan



Level 3 Plan



Level 2 Plan

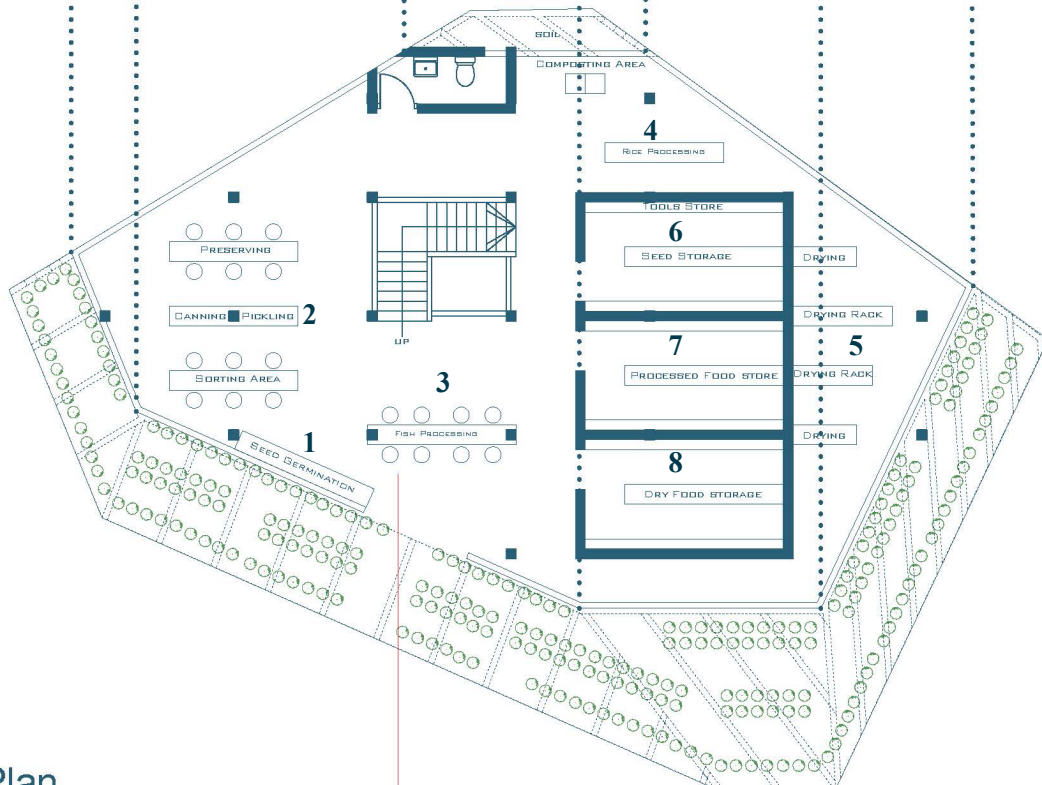


Figure. 3.20. All Level Plans including Building Programs [Left]
Credit: Author.

- 1 Seed Germination, Nursing**
- 2 Food Processing Area**
- 3 Fish Processing Area**
- 4 Rice Processing Area**
- 5 Food Drying Area**
- 6 Seed Vault**
- 7 Processed Food Storage**
- 8 Dry Food Storage**
- 9 Hearth for Rice Cake Making**
- 10 Community Cooking Area**
- 11 Composting Area**
- 12 Feasting/Group Dining**
- 13 Knitting/ Group Working**
- 14 Roof garden**

Holistic Food Security Programs:

Food security within the building takes a comprehensive approach, featuring dedicated spaces for seed germination and a nursery, ensuring continual crop generation. A seed vault safeguards diverse plant varieties for future cultivation, and a hearth fosters communal cooking, promoting a sense of community. An efficient composting area manages waste sustainably, while food processing and storage facilities complete the life cycle and recycling process. This integrated system addresses immediate food needs and contributes to long-term sustainability.

Vertical Terrace/Land Innovation Outcome:

The pilot project shows promise in addressing individual nutritional requirements. Aligned with a person’s daily caloric needs of 2000 calories, the gardeners’ rule of thumb suggests a 100 sqft or 9 sqm plot can effectively fulfill these dietary needs. The entire terrace of the elevated platform building, spanning 432 sqm, becomes transformative, potentially rendering 48 individuals or 12 families self-sufficient. Recognizing that 60% of people’s necessities are met by interconnected high and low lands, the initiative aims to replicate stilted vertical terrace buildings in defacto spaces, extending benefits to the remaining 40% of the population. This fosters environmental sustainability and enhances food security for a larger community portion. The pilot project success not only provides immediate relief but also serves as a model for scalable, community-centric solutions applicable across various regions.

Figure. 3.21. Gardening Plot Size Determination, Credit: Author.



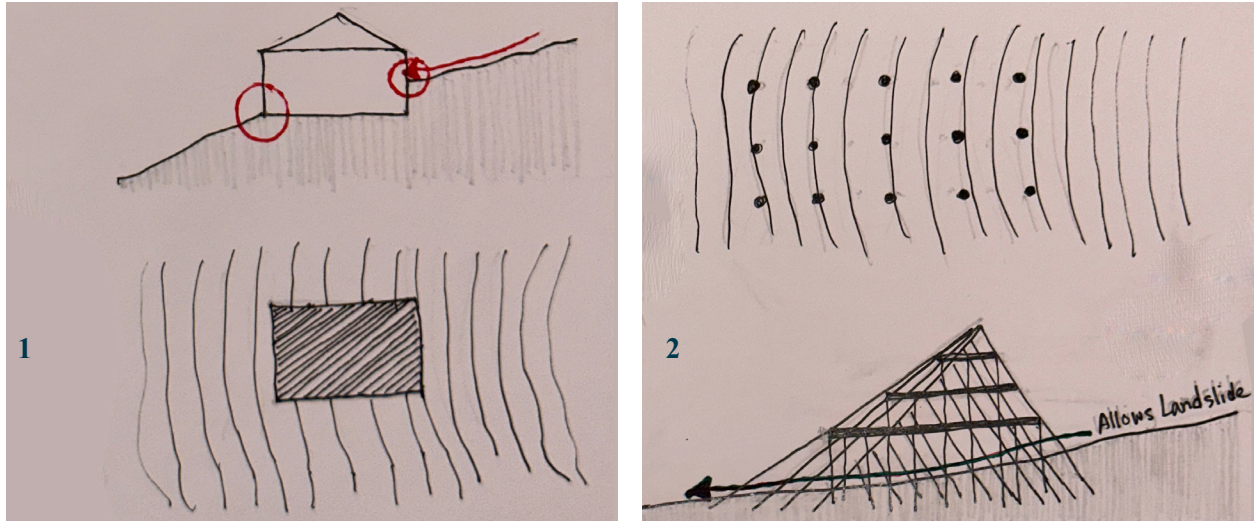
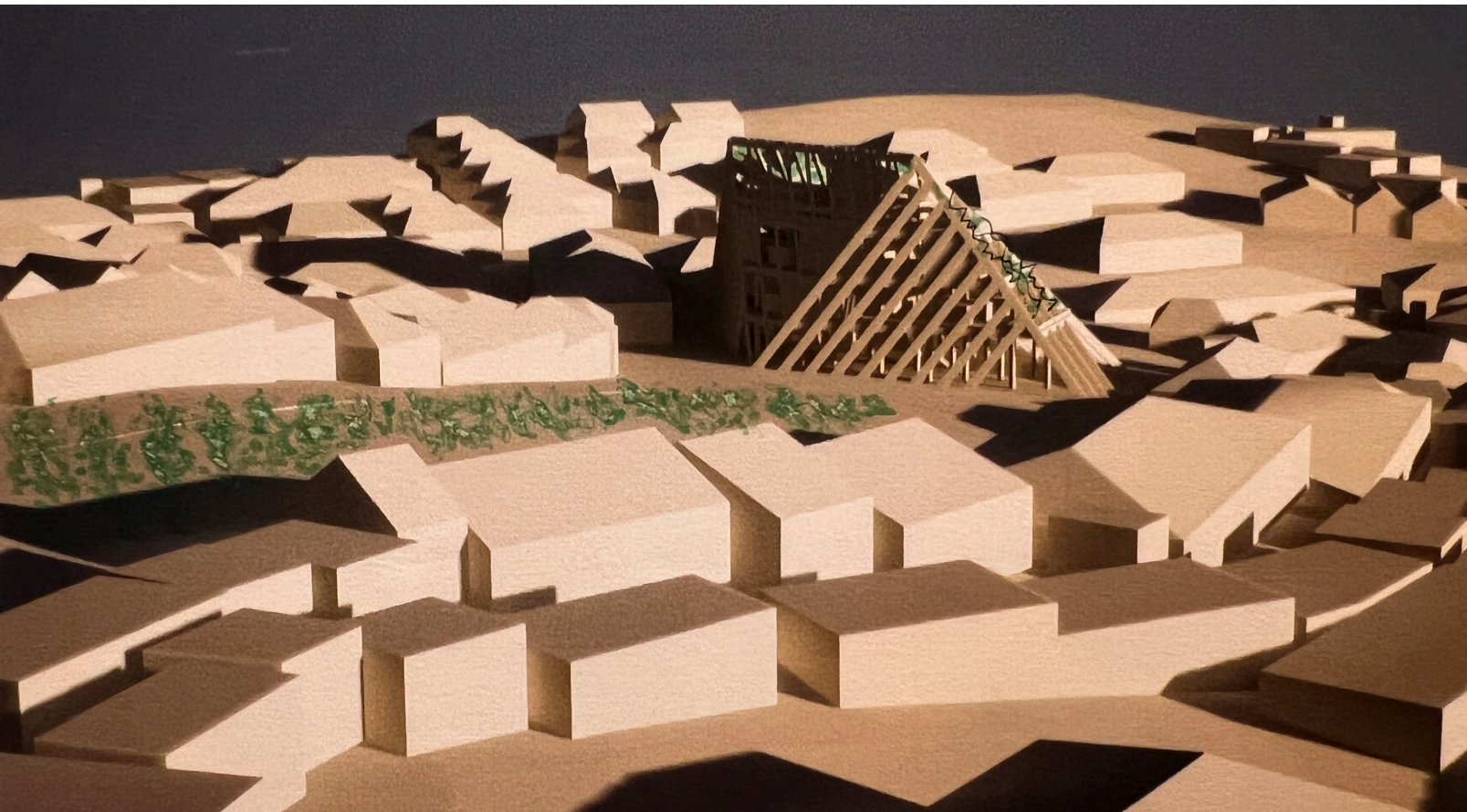


Figure. 3.22. **Structural Concept:** 1. Avoiding terraces cutting. 2. Traditional Stilted Method in fusion with Scaffolding. Overview of the building and garden [bottom left], Credit: Author.

Structural Concept: The structure resembles an Anchored Buttress Trellis, specifically designed to support climber plants and allow the unrestricted flow of landslides, mudslides, and flash floods, thereby reducing the impact on the building in this particular context.



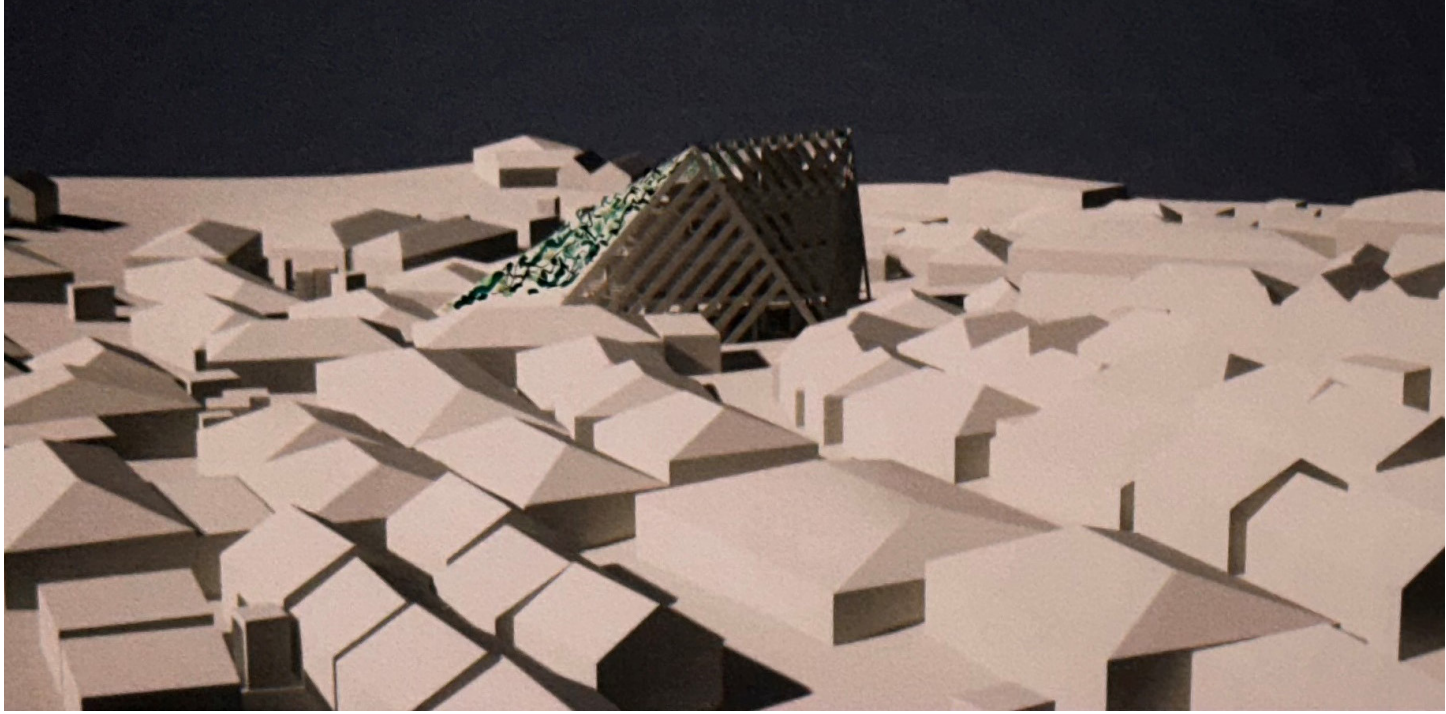
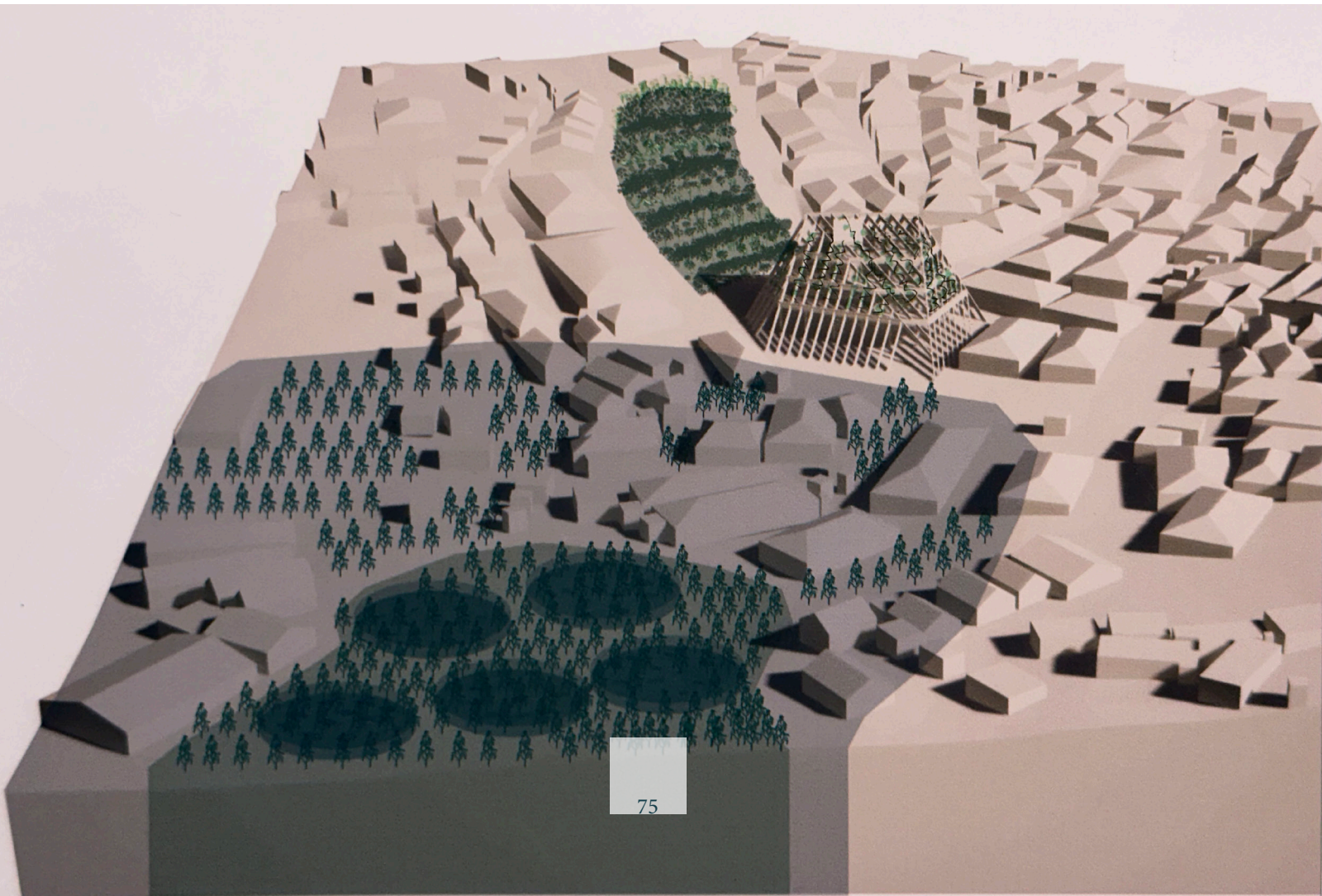
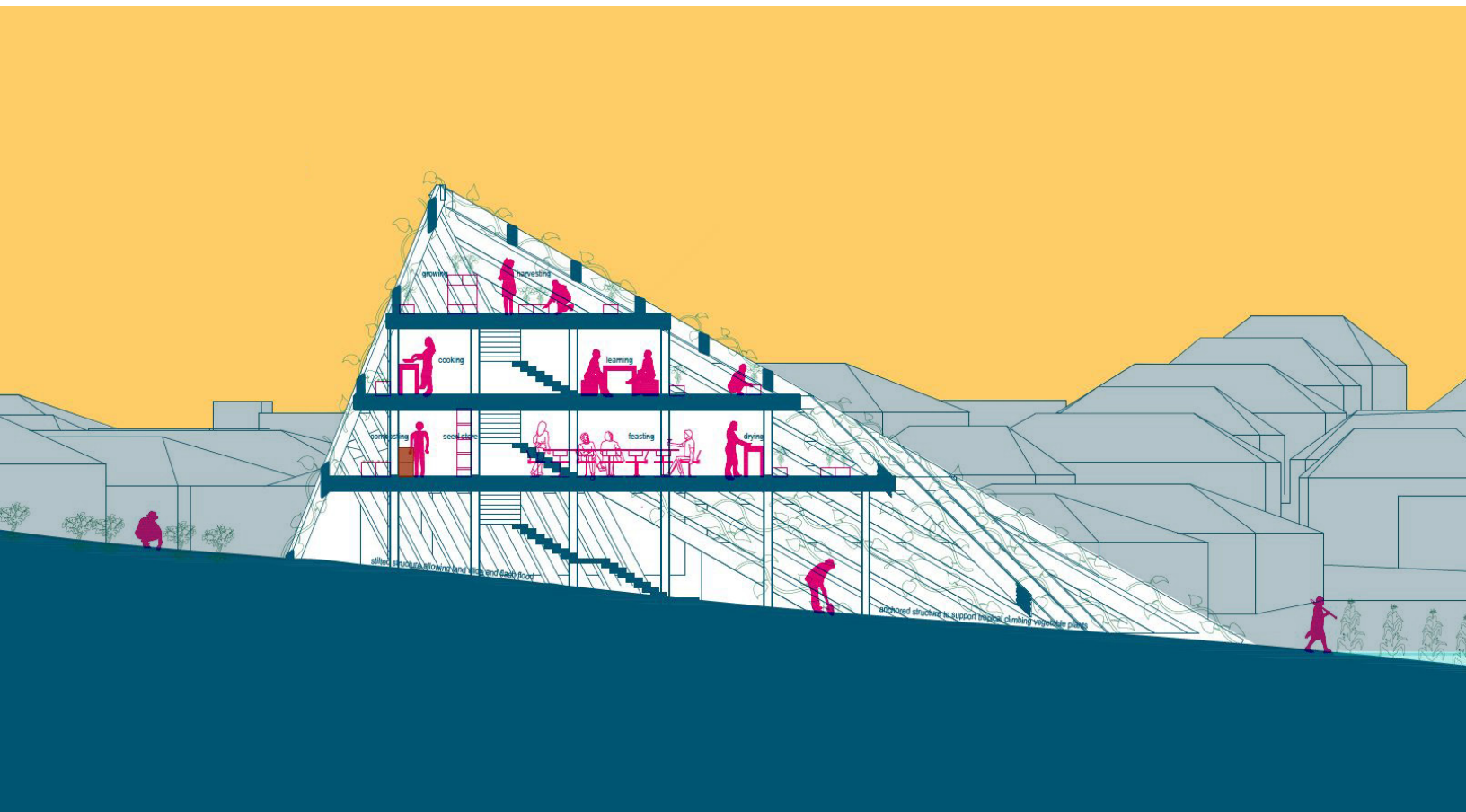


Figure. 3.23. Cultivation of food on the exterior and surface of the structure [top right], alongside permaculture-style rice and fish farming in the lowlands [bottom right], Credit: Author

This stable and supported framework, featuring a lattice-like pattern, is designed for optimal structural integrity and aesthetic appeal in this context and application. Additionally, the structure aims to reduce the carbon footprint and ensure minimal impact on the earth.





Cultivating Resilience Amidst Adversity

Nurturing Food Security, Mental Well-being, Environmental Sustainability, and Resilience through Cultivation:

Figure. 3.24. Roof Gardening [top left] and Cross-Section [bottom left] Illustrating Harvest-time Collaborative Activities within the Building, and Cultivation of food on the exterior and surface of the structure [bottom right] Credit: Author.

Embarking on a journey to cultivate crops and vegetables becomes a powerful symbol of hope, instilling self-confidence and alleviating stress while fostering economic empowerment. This practice not only uplifts moods but also provides a therapeutic outlet, addressing emotions like fear, anger, anxiety, and sadness. Beyond its psychological benefits, it minimizes environmental impact, acts as a protective shield against natural disasters, and ensures a consistent food supply through aquaculture, even amid the challenges posed by the monsoon season.

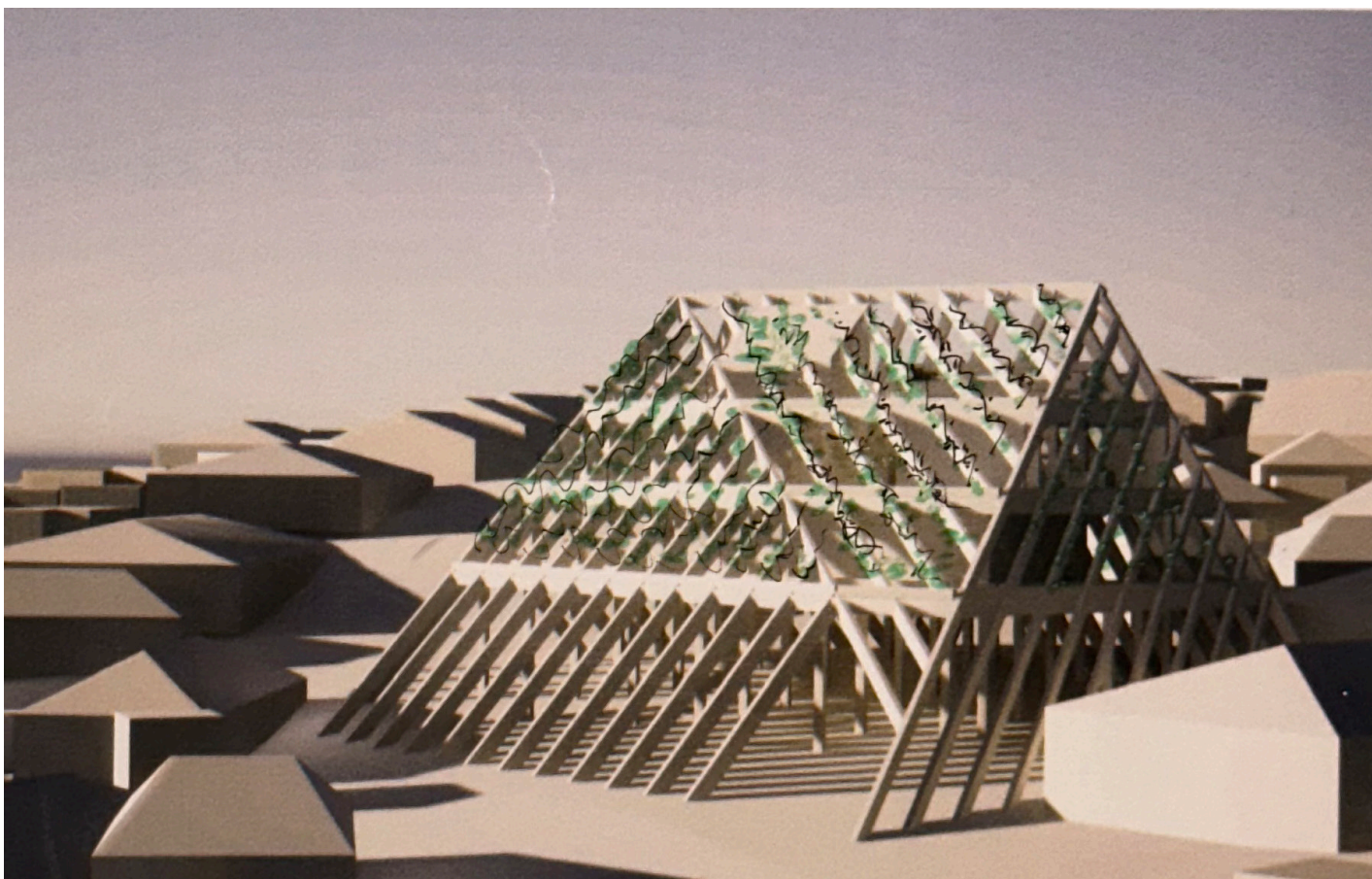
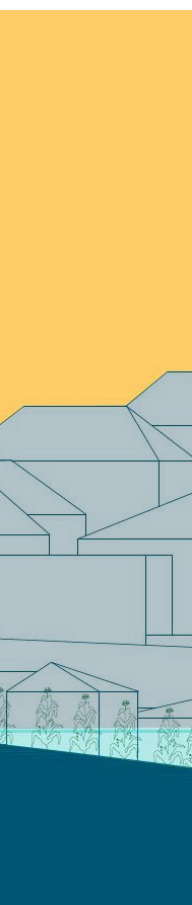
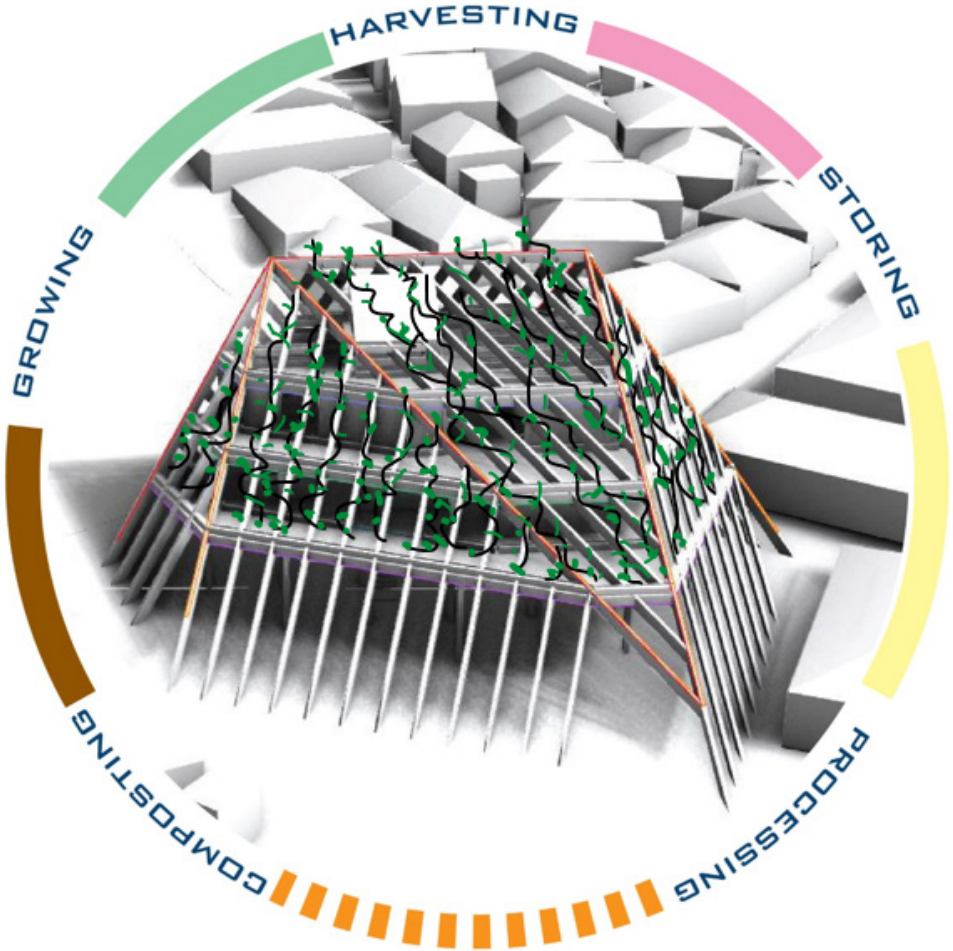


Figure. 3.25. Life Cycle of the Project: Harvesting, Storing, Processing, Composting and Repeating, Illustrated by Author.



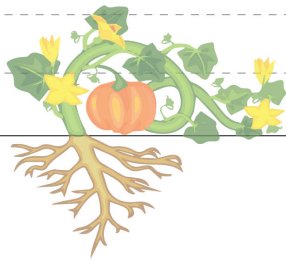
LIFE CYCLE OF THE PROJECT

Figure. 3.26. A Planting Calendar is designed to encourage self-discipline within the community, promoting structured and organized cultivation practices, Illustrated by Author.

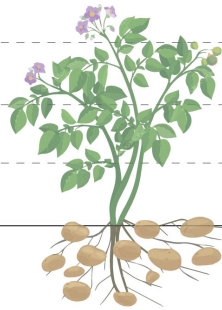


A PLANTING CALENDER TO PROMOTE SELF-DISCIPLINE

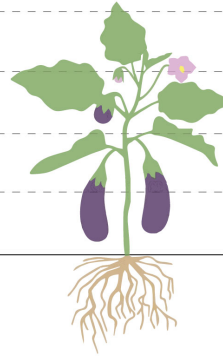
OUTSIDE GARDEN



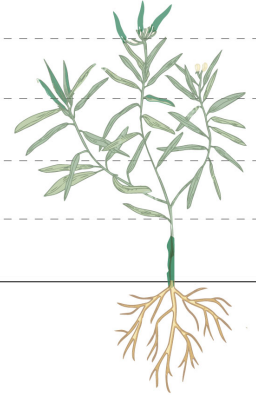
PUMPKIN



POTATO



EGGPLANTS



GREEN CHILLI
[SOUTH ASIAN ALL SPICE]

INSIDE GARDEN



CILANTRO



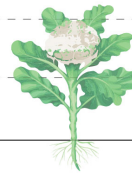
SPINACH



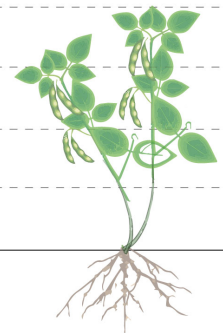
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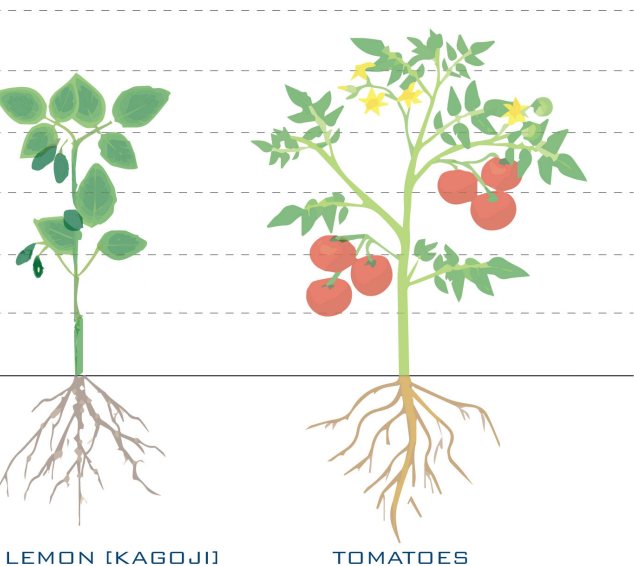
CAULIFLOWER



CLIMBER BEANS

ON THE SURFACE

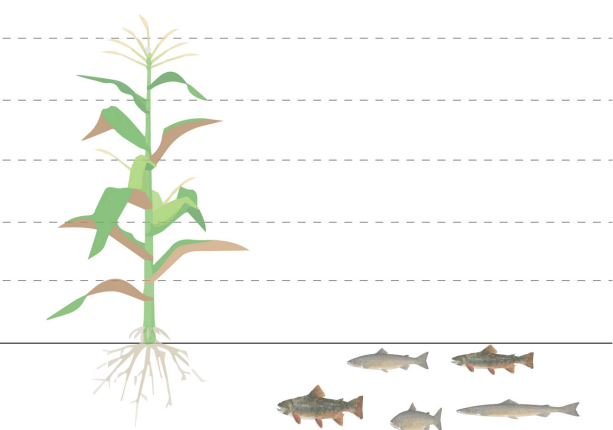
Figure. 3.27. List of Foods Loved by Both Bengalis and Rohingyas, Illustrated by Author.



LEMON (KAGOJI)

TOMATOES

IN THE LOW LAND



RICE (IN WINTER)

FISH (IN MONSOON)

Institutionalizing Self-Sufficiency

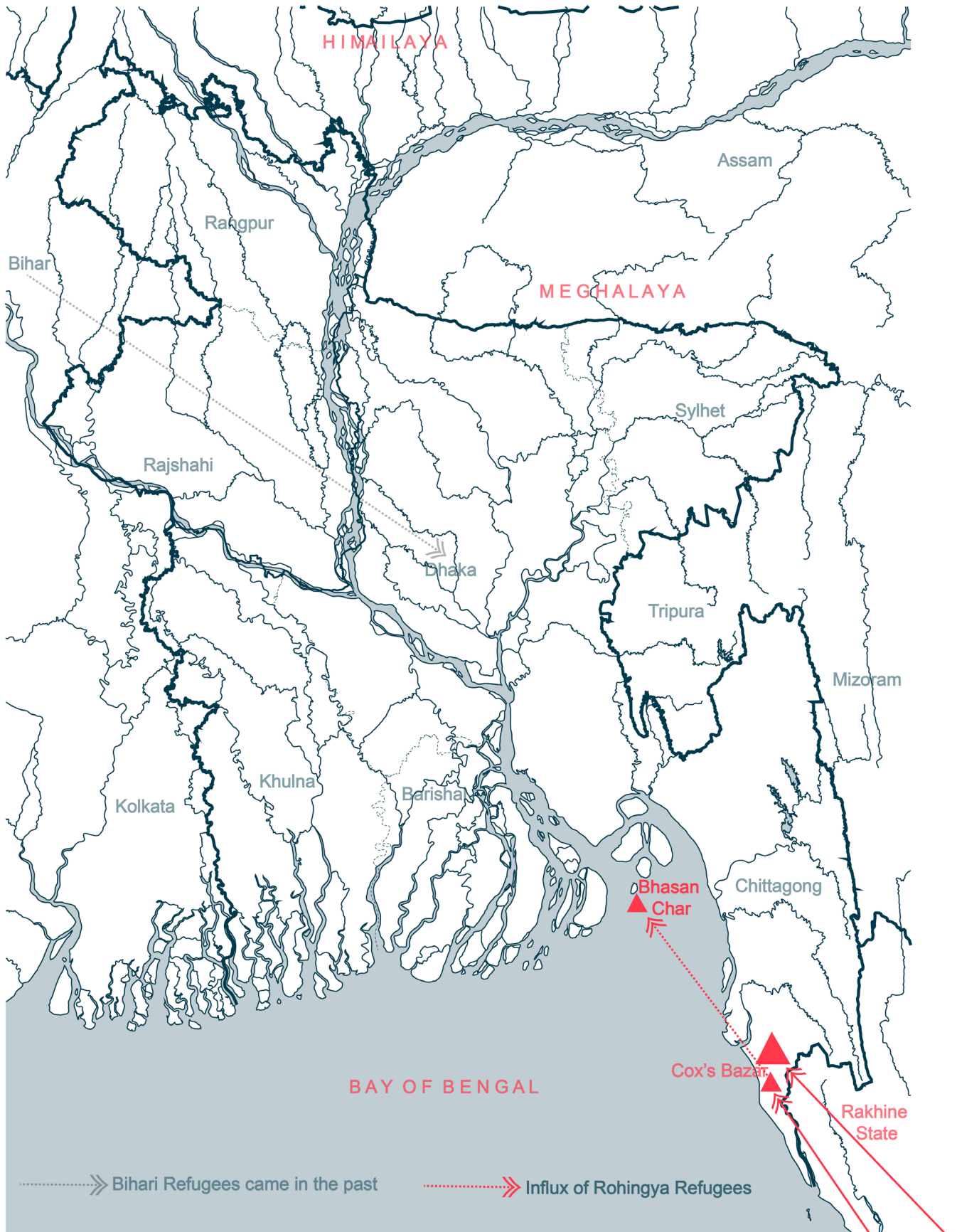
The first phase of this thesis is grounded in the existing campsite of Rohingya refugees in Cox’s Bazar, Bangladesh, drawing inspiration from the region’s ancient heritage of farming and literature to revive indigenous traditions.

The proposed grocery and shopping system envisions an economy based on the exchange of goods, echoing past practices. This model fosters community cohesion, resilience, and resourcefulness, offering a sense of self-worth and dignity to the Rohingya people.

Within the transformed settlement, sustainable practices address density and resource utilization challenges. Community gardens serve not only as a source of fresh produce but also as a learning hub for indigenous agricultural techniques, waste composting, recycling, and resource conservation.

Implementing a planting calendar encourages self-discipline, improves mental health, and connects individuals with nature, fostering a sense of belonging. This project demonstrates how judicious resource use and sustainable practices can create a more resilient and harmonious urban environment.

This project reflects the resilience and determination of displaced people by merging their rich heritage with sustainable urban survival. It envisions supporting vulnerable communities worldwide and emphasizes the importance of preserving and learning from traditional knowledge. Through this research, it aims to illuminate a path towards self-sufficiency, dignity, and empowerment for communities facing similar challenges.



Chapter 3 - Design Proposals

Part Two: Adaptive Reuse



A controversial history of Rohingya Relocation in Bhasan Char and rise in Power Dynamics

Bhasan Char, the remote island located in the Bay of Bengal, is a controversial site in the context of Rohingya refugees in Bangladesh. The history of Bhasan Char is marked by a series of developments that have generated debates and concerns regarding the treatment and living conditions of the Rohingya population.

Figure. 3.28. Bhasan Char, Bay of Bengal: Developed by the Bangladesh government to house 100,000 Rohingya refugees, the island currently accommodates 28,000 residents. Many of the constructed houses remain unoccupied, and inhabitants are prohibited from ascending the shelter buildings unless there is an impending storm. Image sources: Reddit [top left] and Google Maps Satellite Image [bottom left], 2023.

Initially, the Rohingya refugees were accommodated in overcrowded and makeshift camps near Cox's Bazar, a district bordering Myanmar. The Bangladesh government, under mounting pressure due to the immense strain on resources and the need to provide humanitarian assistance, proposed the idea of relocating a portion of the Rohingya population to Bhasan Char. The objective was to alleviate the burden on the Cox's Bazar camps and create a more sustainable and controlled environment for the refugees. Hence, the Bangladesh government initiated the establishment of Bhasan Char as a relocation site for Rohingya refugees in 2017.

Still, concerns were raised regarding the suitability and safety of Bhasan Char as a relocation site. The island, previously uninhabited and prone to flooding and cyclones, posed potential risks and challenges for human settlement. Critics argued that the remoteness and geographic isolation of Bhasan Char would hinder access to basic services, livelihood opportunities, and the provision of aid. Moreover, there were fears of forced relocation and the lack of transparency surrounding the process.³

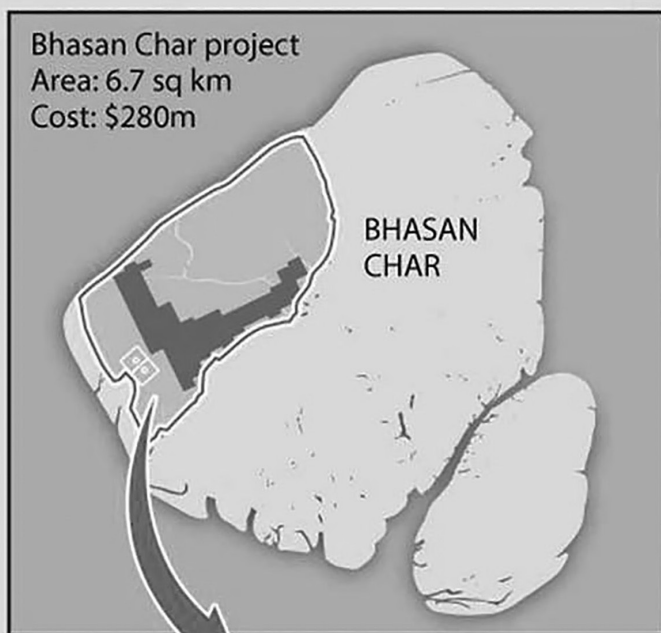
In December 2019, the Bangladesh government began the process of relocating Rohingya refugees to Bhasan Char. Reports emerged suggesting that some refugees were coerced or misled into voluntarily relocating to the island. Human rights organizations and activists expressed concerns about the lack of independent monitoring, transparency, and informed consent in the relocation process. They argued that the move to Bhasan Char appeared to be more of a show of power play by the government rather than a genuine effort to improve the lives of Rohingya refugees.

Bhasan Char, meaning "floating island", emerged from silt around 20 years ago. It regularly floods during Jun-Sep monsoon season

Bhasan Char project

Area: 6.7 sq km

Cost: \$280m

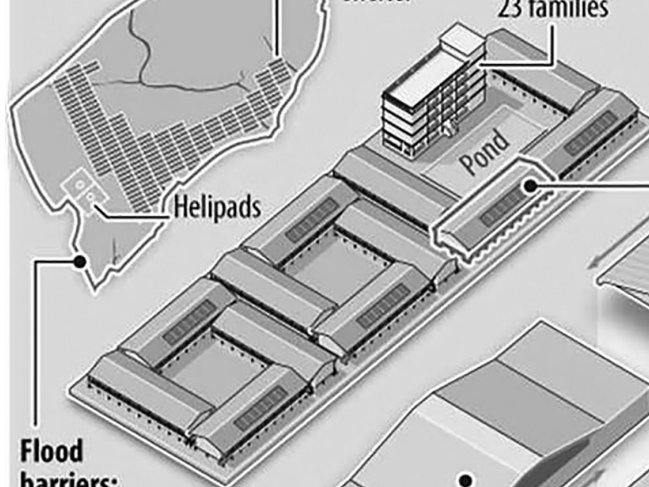


Plan: 120 plots of land

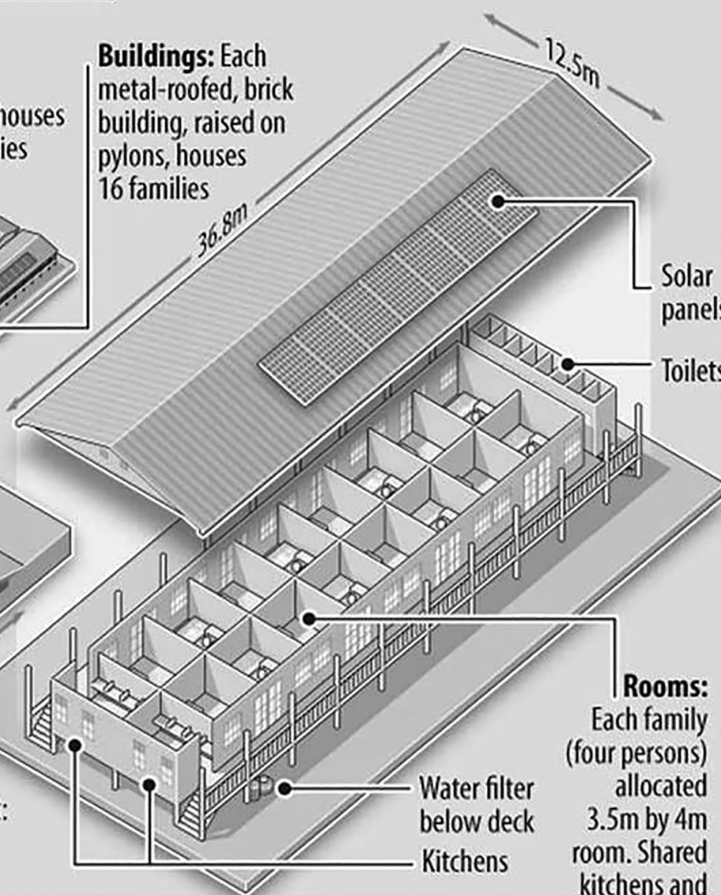


Plots: Each contains 12 buildings and one cyclone shelter

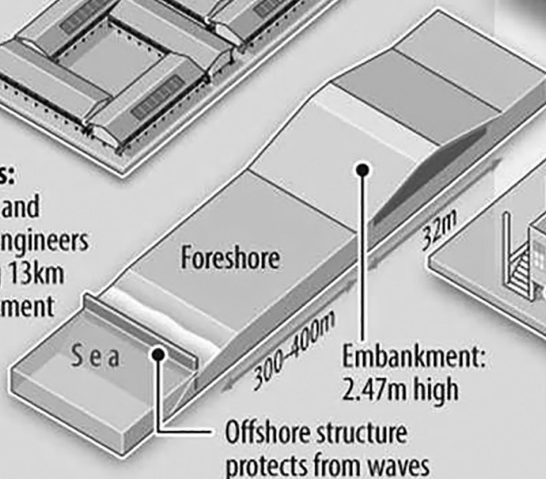
Shelter houses 23 families



Buildings: Each metal-roofed, brick building, raised on pylons, houses 16 families



Flood barriers: Chinese and British engineers building 13km embankment



Rooms: Each family (four persons) allocated 3.5m by 4m room. Shared kitchens and bathrooms

Figure. 3.29. Bhasan Char Project details: The 5-story shelter building stands against 12 shed buildings, each accommodating 16 refugee families, forming a cluster housing a total of 768 people. Sources: Mukta Dinwiddie Maclaren Architects, Atlanta Housing Ltd, UNOCHA.

Figure. 3.30. The exterior view of the houses and the interior of bunk-bed rooms. Credit: Shamsuddin Illius/The Business Standard, 2019.



Those who were relocated to Bhasan Char found themselves in an environment that starkly contrasted with their previous living conditions. The facilities provided were presented as improvements over the makeshift camps in Cox's Bazar, including housing units, schools, medical facilities, and livelihood opportunities. However, concerns persisted about the suitability and sustainability of these provisions given the island's vulnerability to natural disasters.⁴

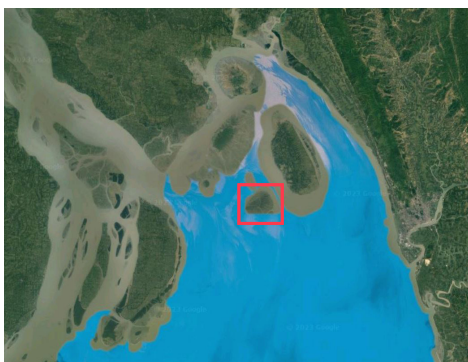
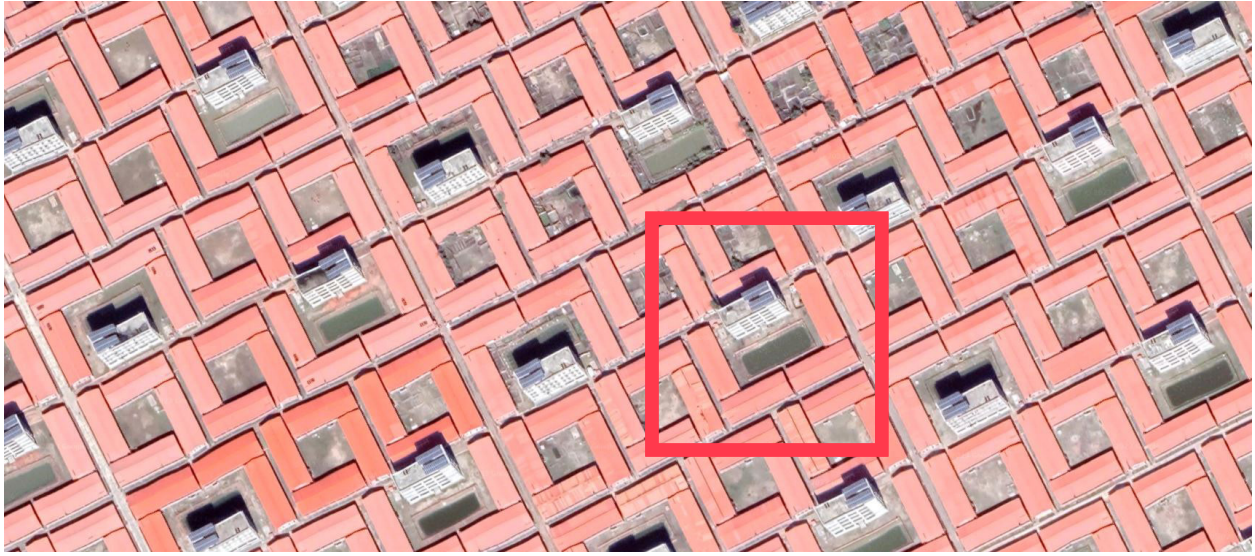
"They Were Promised a New Home. Then They Tried to Escape It."- New York Times, 2021

Reports from those who visited Bhasan Char described it as a place with a prison-like atmosphere, heavily guarded and isolated. Access to the island was strictly controlled, with limited opportunities for refugees to move freely in and out. The lack of transparency and independent scrutiny fueled suspicions and raised questions about the true nature and motives behind the relocation.

The government of Bangladesh maintains that the relocation to Bhasan Char is a voluntary and well-intentioned effort to improve the living conditions of the Rohingya refugees. They argue that the facilities and infrastructure on the island are designed to provide a safe and dignified environment for the refugees. The government also emphasizes its responsibility to manage the resources and security concerns associated with hosting a large refugee population.

However, concerns and debates surrounding Bhasan Char persist. Human rights organizations and activists continue to advocate for greater transparency, independent monitoring, and the inclusion of refugees' voices in decision-making processes. They stress the importance of ensuring the rights, safety, and well-being of the Rohingya population, including access to education, healthcare, livelihood opportunities, and freedom of movement.

In conclusion, the history of Bhasan Char is intertwined with the government of Bangladesh's initiative to relocate Rohingya refugees as a response to the humanitarian crisis. While the government presents it as a step towards improving the lives of the Rohingya, concerns about transparency, coercion, and the suitability of the island persist.



Evaluating and Analyzing the Executed Project

In the quest to comprehend the complexities of the Rohingya settlement, several key questions unfold, demanding nuanced exploration:

Navigational Challenges:

Context: Given the Muslim identity of the Rohingya community, the absence of a clear sense of direction, particularly in determining the Qibla or the direction towards Mecca for prayers, presents a profound challenge.

Exploration: How can the new vision address the fundamental need for directional guidance, ensuring that residents can practice their faith with ease and spiritual connection?

Public Spaces and Community Flourishing:

Context: The scarcity of significant public spaces in the settlement may be a deliberate measure by the government to discourage large gatherings and demonstrations.

Exploration: What implications does the absence of substantial public areas have on community life, and how can the design and planning of the settlement promote communal engagement, social cohesion, and urban vitality?

Nature of Neighborhood Communities:

Context: Understanding the character and dynamics of courtyard communities is essential for deciphering the social structure and interactions within the settlement.

Exploration: What defines the nature of these courtyard communities? How do residents engage with these spaces, and what role do these communities play in fostering a sense of belonging and collective identity?

These questions encapsulate the multidimensional challenges and opportunities embedded in the Rohingya settlement, offering a comprehensive framework for evaluating the implementation and envisioning strategic interventions that align with the community's needs and aspirations.



Figure. 3.31. An overview of the entire project highlighting the shelter buildings, adjacent ponds, and the widespread arrangement of shed buildings. Source: Google Maps Satellite Images, 2023.



Navigating Controversy and Adversity

Figure 3.32. Navigating Bhasan Char: Existing Built and Entrepreneurial Activities of refugees. Images Source: Photos shared in Google Maps by people Visiting the Island.





Adapting to Controversy and Adversity

Figure 3.33. A new perspective on Bhasan Char, the Rohingyas' new home: Collective activities showcasing adaptive resilience and adaptive reuse, Images Source: Google Maps Photos shared by people Visiting the Island.



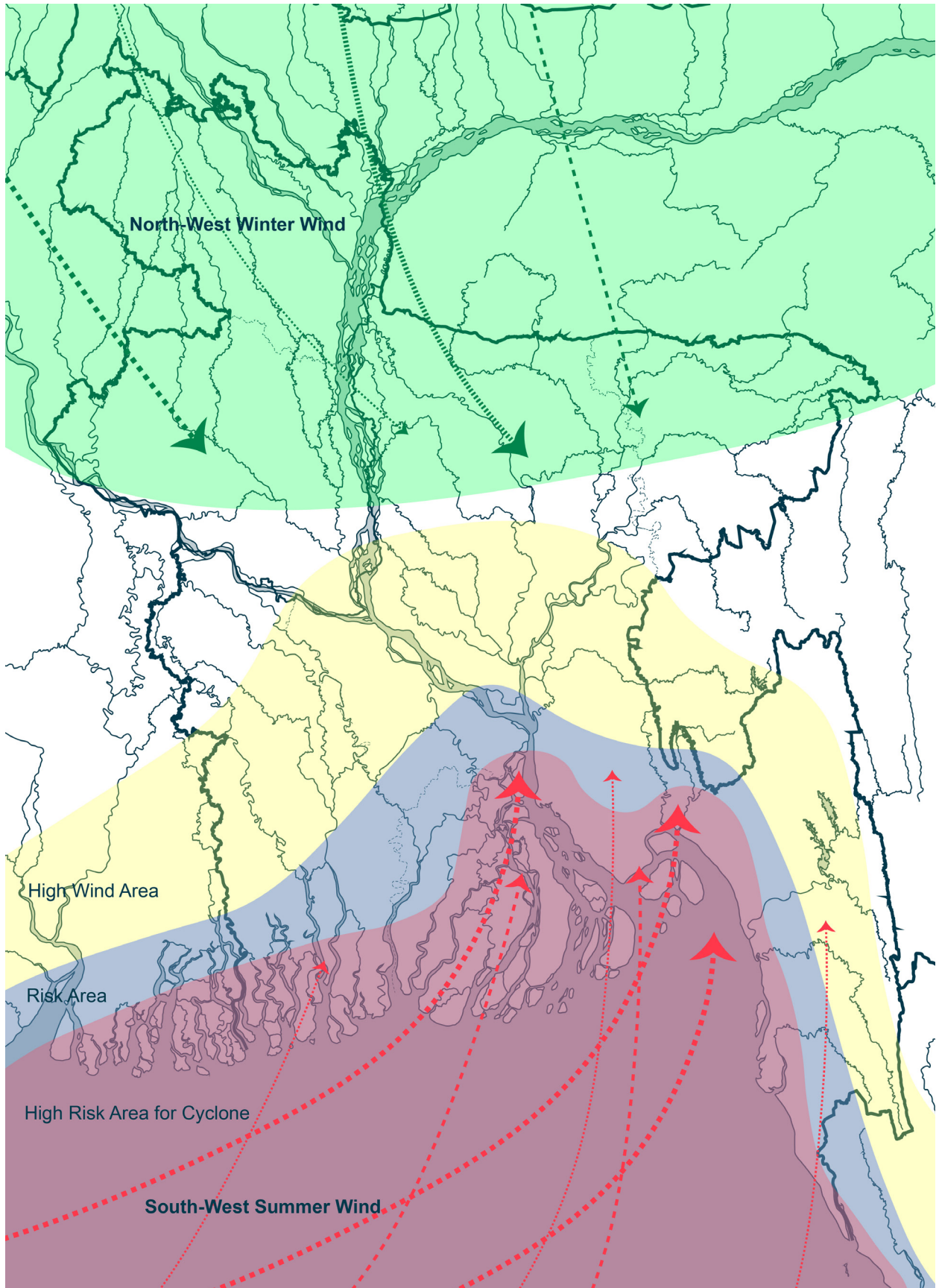


Figure 3.34. Map of Cyclone-Prone Zones [left], providing insights into the vulnerability of the region to cyclones, coupled with the summer and winter wind directions. The Neighborhood Cluster Typology [top right] illustrates the varied structures and layouts within the community, Credit: Author.

Assessing Climate Compatibility Stability, and Vulnerability of Current Building Typology

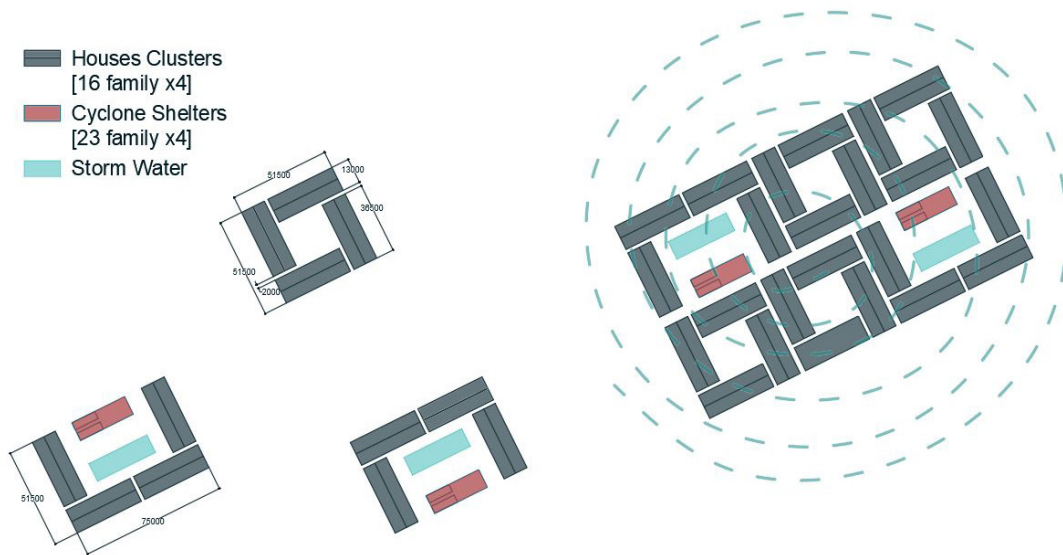
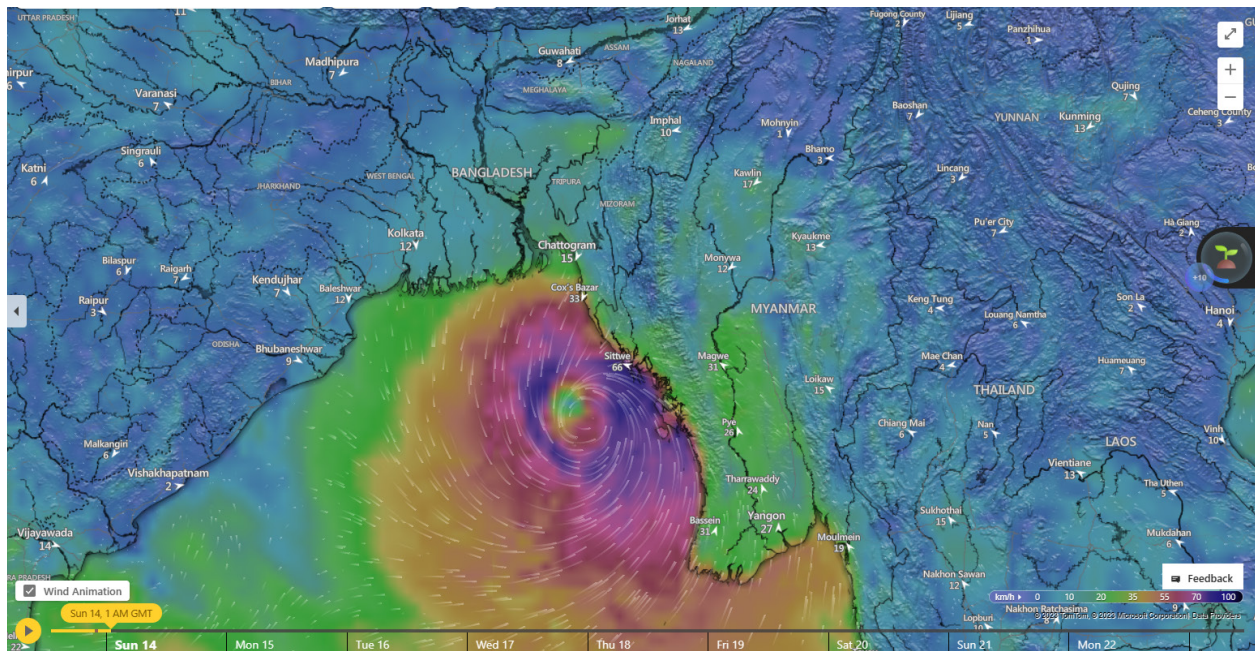


Figure 3.35. Recent Tropical Cyclone Data, Source: Microsoft Corporation.

May 13, 2023 [Formation of a typical Cyclone in this region]





Khulna

Barisal

Pirojpur

Mongla

Payra

Sundarbans

Char Montaz

Dhal

Kuakata

Andar Char

Dublar Char

Bay of Bengal

Regional key assets: International freight routes, Navy Base, Farming, Floating Gardens, Fishing livelihood, Tourism, Mangrove forests, and Root forest ecosystem.



f Bengal

Figure. 3.36. Regional Map highlighting Vital Natural and Manmade Resources along with adaptive farming and fishing livelihood methods, Credit: Author.

Evolving Ecosystem: A Visual Exploration of Bhasan Char's Interconnected Life Forms and Environments





Preserving Existing Landscape

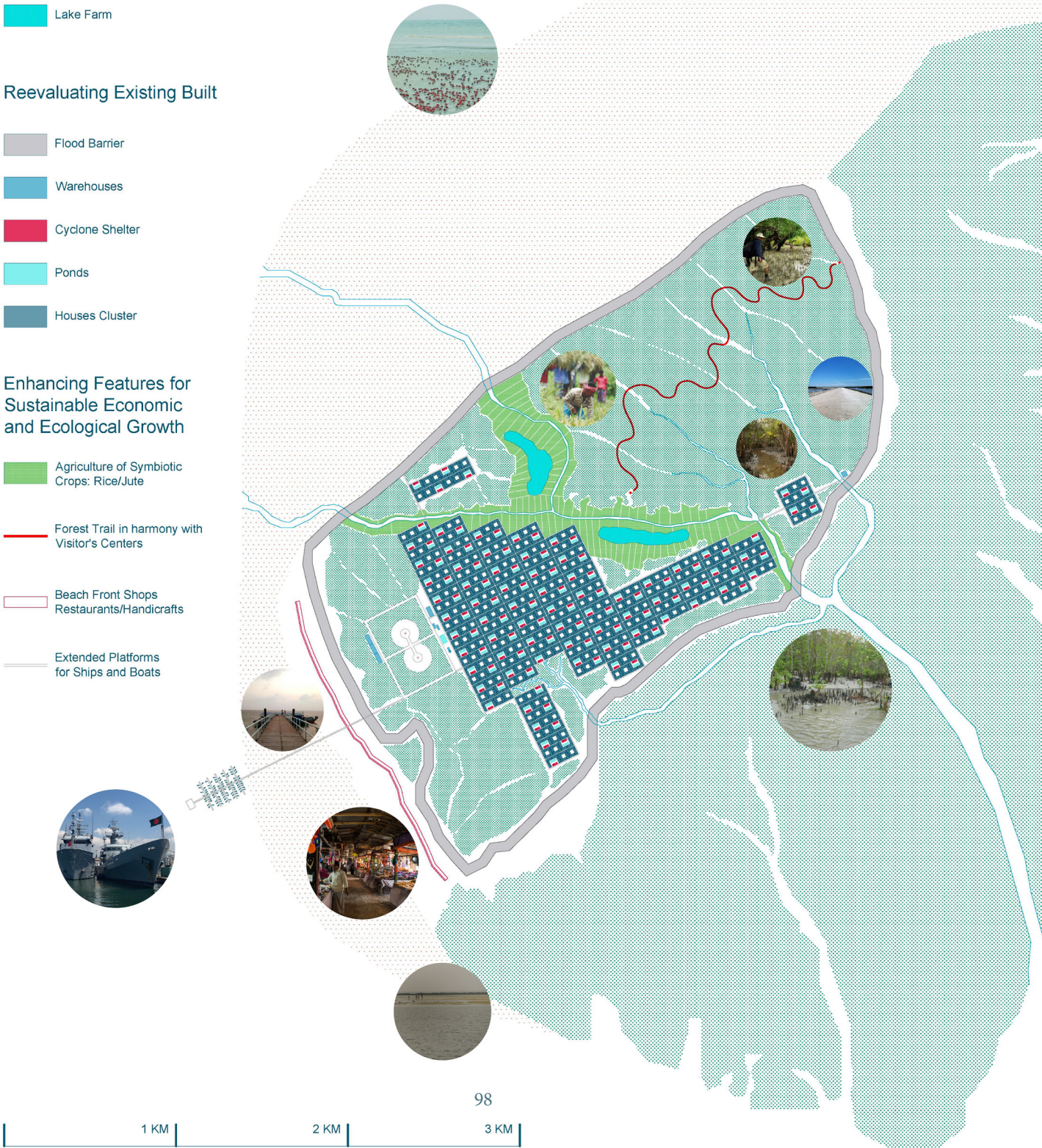
-  High Density of Mangrove Forest
-  Low Density of Mangrove Forest
-  Quick Sand [Small Red Crabs]
-  Course of Rivers
-  Lake Farm

Reevaluating Existing Built

-  Flood Barrier
-  Warehouses
-  Cyclone Shelter
-  Ponds
-  Houses Cluster

Enhancing Features for Sustainable Economic and Ecological Growth

-  Agriculture of Symbiotic Crops: Rice/Jute
-  Forest Trail in harmony with Visitor's Centers
-  Beach Front Shops Restaurants/Handicrafts
-  Extended Platforms for Ships and Boats



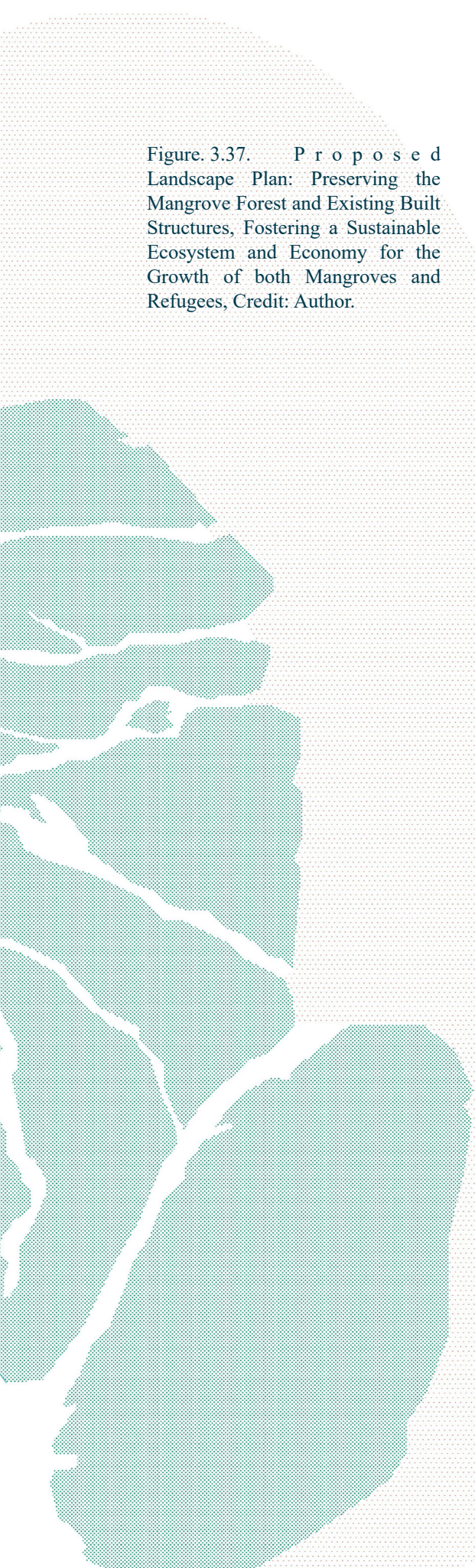


Figure. 3.37. Proposed Landscape Plan: Preserving the Mangrove Forest and Existing Built Structures, Fostering a Sustainable Ecosystem and Economy for the Growth of both Mangroves and Refugees, Credit: Author.

Mangrove Metropolis: Nurturing Growth for both People and Nature

“Bhasan Char,” meaning Floating Island,, situated as a mangrove forest, stands as a testament to nature’s remarkable resilience. The unique ecosystem showcases nature’s intricate mechanisms of survival, thriving amidst challenging conditions marked by fluctuating water levels, high salinity, and muddy substrates.






Within urban landscapes, the integration of mangrove forests offers a multifaceted alliance between nature and city life. Serving as natural defenses against coastal perils, mangroves act as guardians, fortifying shorelines and purifying water sources. Beyond protection, they foster biodiversity, creating vibrant habitats that enrich urban life. Economically, mangroves support sustainable livelihoods through fishing, aquaculture, and eco-tourism, establishing a symbiotic relationship between nature and urban industry. As carbon sinks, they combat climate change, contributing significantly to environmental conservation. Embracing mangrove ecosystems in urban planning is not just an ecological choice; it’s a blueprint for resilient and harmonious urban coexistence.

Drawing parallels between the challenges faced by displaced refugees and the coastal ecosystem of Bhasan Char, mangrove forests become a poignant metaphor. Both refugees and mangrove ecosystems seek refuge and renewal in a shared journey of adaptation. The delicate balance between human needs and ecological sustainability takes center stage. This narrative unfolds through innovative economic features designed to enhance the well-being of both communities.





Preserving Existing Landscape

-  High Density of Mangrove Forest
-  Low Density of Mangrove Forest
-  Quick Sand [Small Red Crabs]
-  Course of Rivers
-  Lake Farm









Retrofitting Existing Built

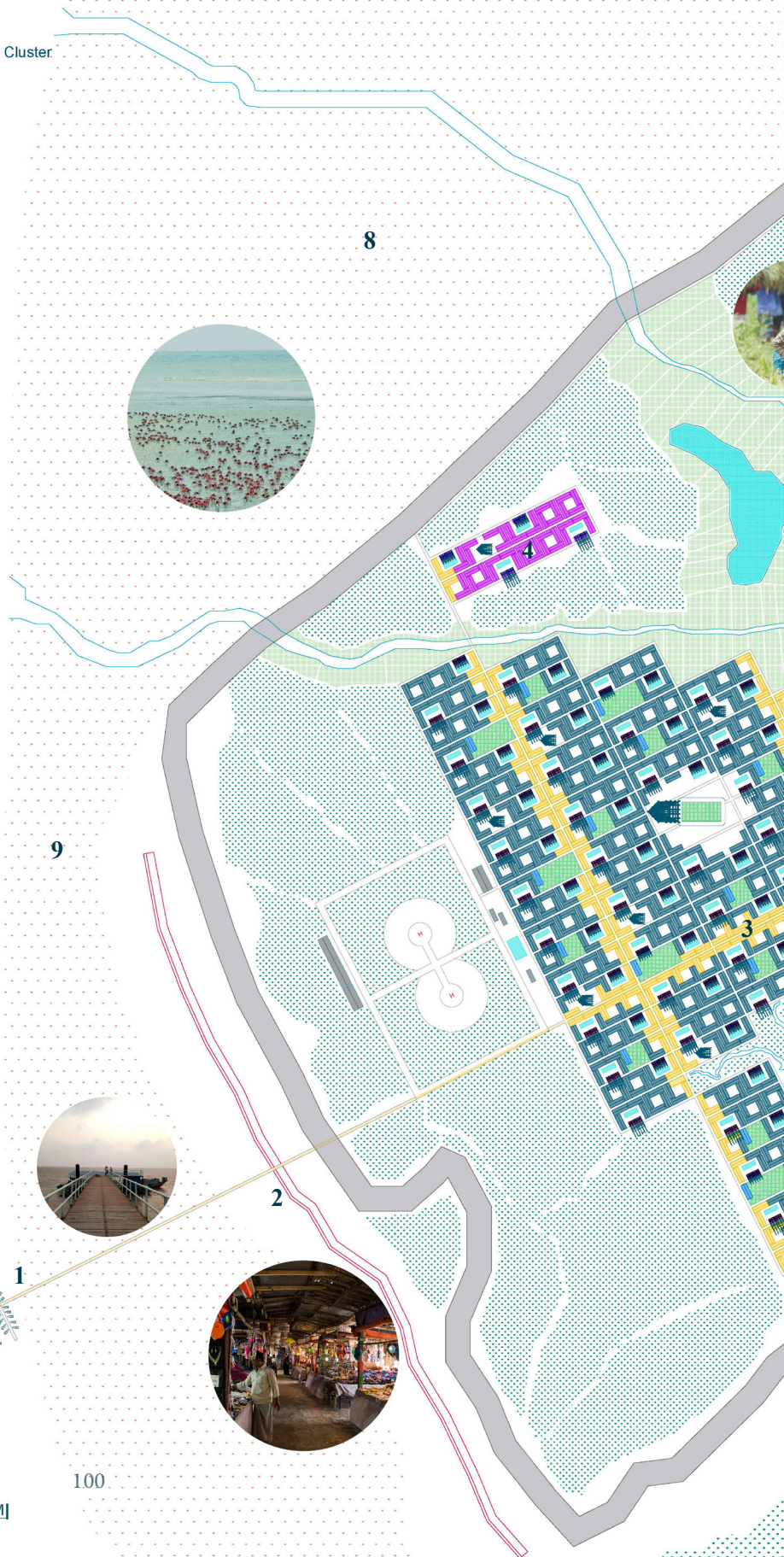
-  Flood Barrier
-  Warehouses
-  Cyclone Shelter
-  Ponds
-  Houses Cluster

Enhancing Features for Sustainable Economic and Ecological Growth

-  Agriculture of Symbiotic Crops: Rice/Jute
-  Forest Trail in harmony with Visitor's Centers
-  Beach Front Shops Restaurants/Handicrafts
-  Extended Platforms for Ships and Boats

Enhancing Features for Evolving Urbanism and Prospering Community

-  Houses Adapted to Commercial Function
-  Houses Adapted to Hospital Block
-  Houses Adapted to University Campus
-  Extended Terraces from Cyclone Shelters
-  Adapted to High Schools with Big Play fields
-  Adapted to Primary Schools with Small Play fields
-  Community Mosque with Small Court
-  City Mosque with Big Plaza



Scale of Legends | 50M | 100M | 200M

Transformative Resilience: A Symbiotic Bond between Ecology and Economy

Initiatives like creating a forest trail for exploration and education serve a dual purpose—preserving the mangrove ecosystem and providing income opportunities through tourism, contributing to the resilience of the Rohingya community. Economic enhancements involve cultivating symbiotic crops along riverbanks, featuring edible and marketable rice and jute. This integrated approach addresses economic needs while fostering ecological awareness, reinforcing the delicate balance between humanity and the natural world on Bhasan Char.








Figure 3.38. Proposed Urban Plan: Fostering Evolving Urbanism and a Thriving Economy within the Ecosystem, Embracing Adaptation and Disruption of the Existing Grid. Credit: Author.

1. Port Area : Extended Platforms for ships and boats
2. Commercial Strip: For beachfront shops and markets
3. Urban Corridors: Adapted houses for business [yellow]
4. Medical Services: Hospital Block [Purple colored]
5. Higher Education: University Block [Blue colored]
6. Symbiotic Crops: Rice/Jute around all water bodies
7. Forest Trail: Tourism trails of dense Mangrove Forest
8. Eco Tourism: Quick Sand, Home to small red crabs
9. Scenic Tourism: Sunset and night sky viewpoint


Preserving Existing Landscape

-  High Density of Mangrove Forest
-  Low Density of Mangrove Forest
-  Quick Sand [Small Red Crabs]
-  Course of Rivers
-  Lake Farm




Retrofitting Existing Built

-  Flood Barrier
-  Warehouses
-  Cyclone Shelter
-  Ponds
-  Houses Cluster

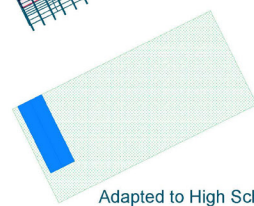
Enhancing Features for Sustainable Economic and Ecological Growth

-  Agriculture of Symbiotic Crops: Rice/Jute
-  Forest Trail in harmony with Visitor's Centers
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-  Extended Platforms for Ships and Boats

Enhancing Features for Evolving Urbanism and Prospering Community

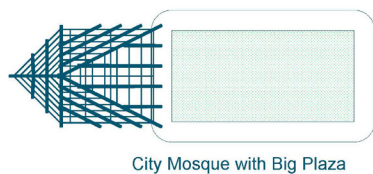
-  Houses Adapted to Commercial Function
-  Houses Adapted to Hospital Block
-  Houses Adapted to University Campus

-  Extended Terraces from Cyclone Shelters

-  Adapted to High Schools with Big Play fields

-  Adapted to Primary Schools with Small Play fields

-  Community Mosque with Small Court

-  City Mosque with Big Plaza

Scale of Legends | 50M | 100M | 200M



City's Central Components



Central Places

-  1st order City Hall with Big Mosque, Plaza and Football Field
-  2nd order High School with Big Play Field or Park
-  3rd order Community Mosque and Administrative Program
-  4th order Primary School with Small Play Field
-  5th order Neighborhood with Terraced Gardens

Figure 3.39. City's central components in correlation with the community corridor, adhering to Urban Design Theories outlined in the proposed plan, Credit: Author.



Inside the B

- Central Comp
- 1 City Hall with
- 2 High School
- 3 Community
- 4 Primary Sch
- 5 Neighborho

Urban Corrid
 Adapted hous
 Adapted hous
 Adapted hous

Natural Resou
 Symbiotic Cro
 Lake Farms: V
 Mangrove For

100M 250M 500M

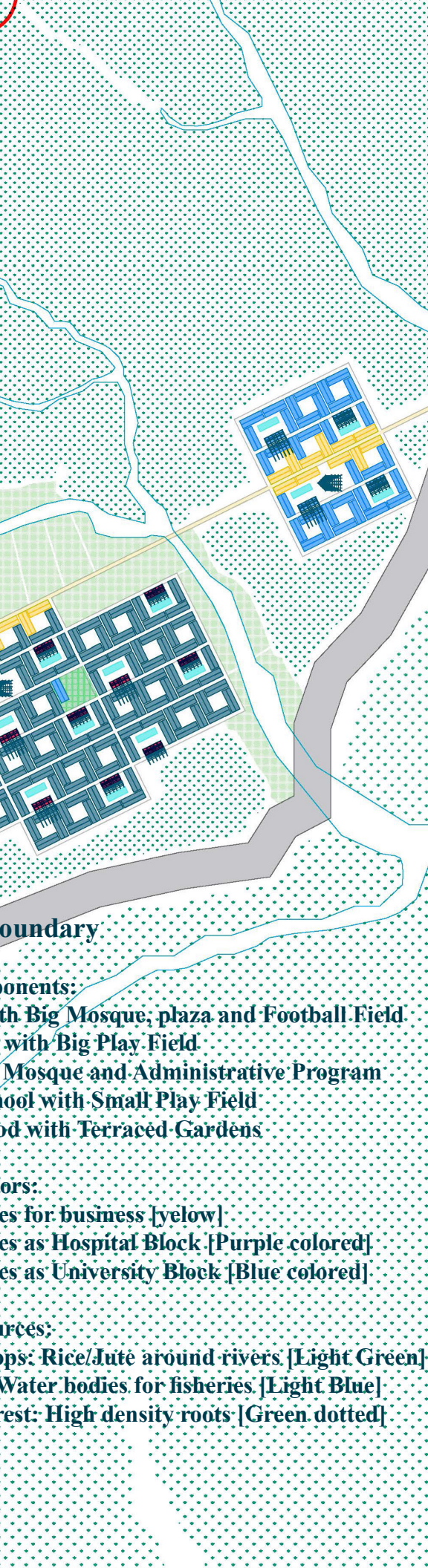
Reshaping the Island for Rohingya Autonomy

Building upon the progress of the initial phase, the second phase of the project aims to adapt the government-built settlement on this uninhabited island. The approach centers on transforming the poorly planned settlement into a self-sufficient and socially vibrant community. By utilizing the existing structures as a canvas, it aims to create de facto spaces for more community gardens, aquaculture, and vertical agriculture to promote a sense of ownership, cooperation, and cultural expression.

The colonial-era metal roofs that once adorned the cluster houses have undergone a transformative shift, now replaced with terracotta roofs. In a strategic urban reconfiguration, 14% of the cluster houses were dismantled to create space for a diverse array of open environments, ranging from private and personal courtyards to communal and public spaces. This deliberate modification aims to enhance the overall spatial experience, fostering a harmonious blend of individual privacy and collective community engagement within the settlement.

In envisioning the future of the Rohingya community, a holistic approach has been adopted through proposed programs that extend beyond mere shelter solutions. The introduction of adapted commercial streets, integrating economic activities, along with the incorporation of significant communal spaces like a grand public mosque serving dual roles as an administrative hub, signifies a move towards self-governance. Furthermore, the integration of small community mosques with vocational education, or municipality programs, the provision of educational infrastructure, from primary schools in the small play fields to high schools adjacent to football fields, ensures a comprehensive framework for empowerment.

These initiatives are strategically aligned to reduce reliance on humanitarian aid by retrofitting each shelter building with terraced agriculture, transforming the physical space into a source of sustenance and economic growth. By empowering the Rohingya people to administer their own lives, the proposed interventions aim to break the cycle of dependency, fostering self-confidence, and ultimately enhancing the overall quality of life within the community. This comprehensive strategy not only addresses immediate needs but also lays the foundation for long-term resilience and a hopeful future.



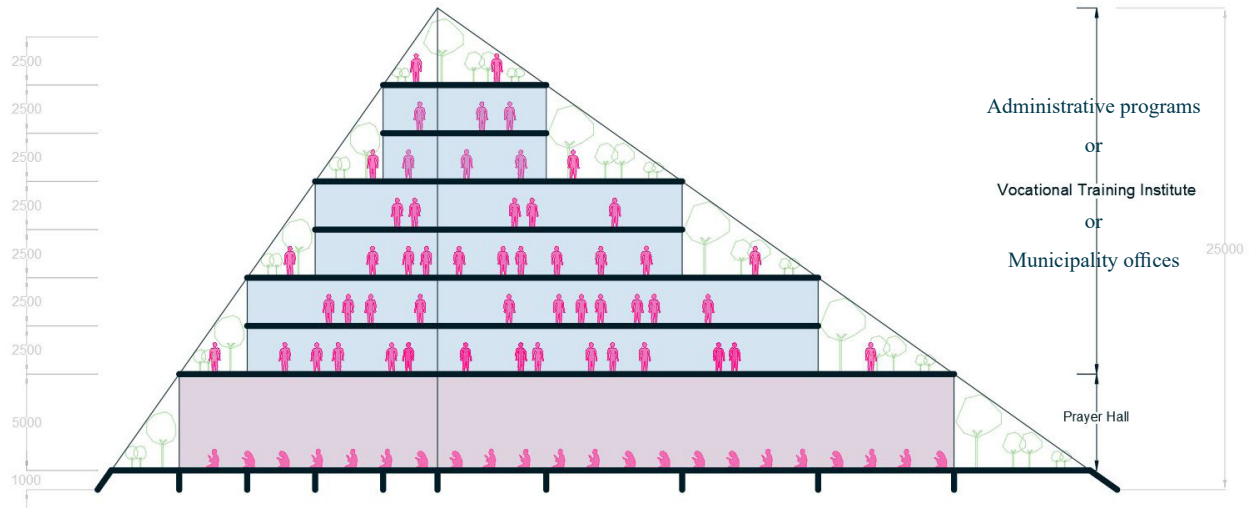
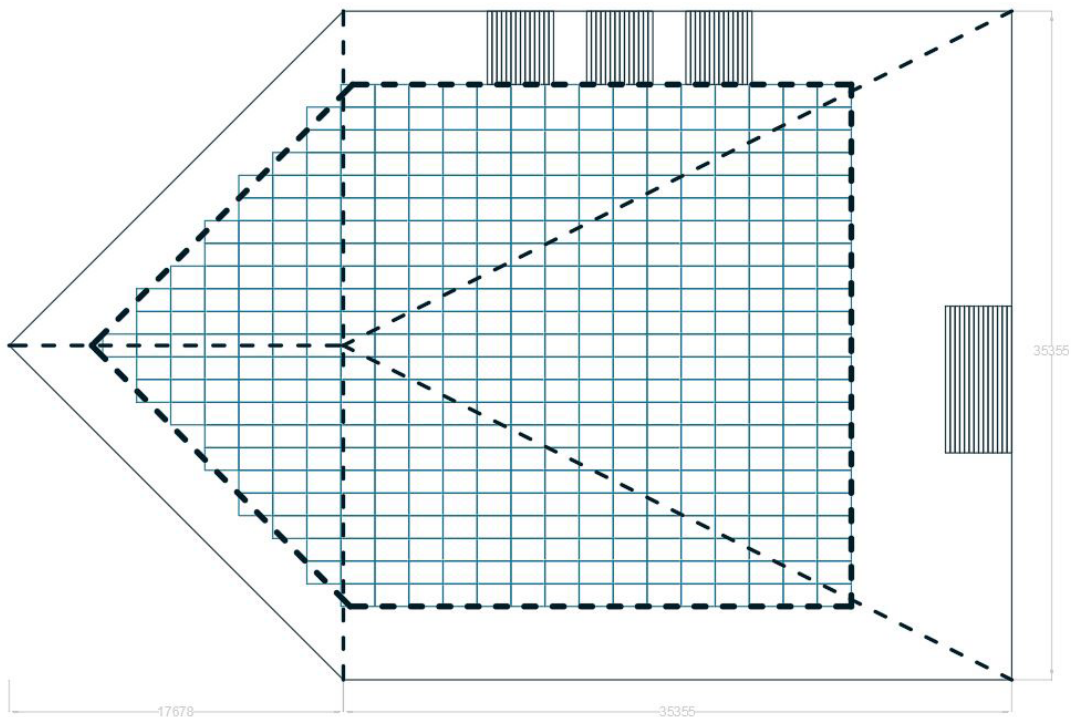


Figure. 3.40. The floor plan of the small mosques [bottom left] and a sectional diagram [top left] suggesting that the top floors are open to necessities such as vocational training institute or municipality offices, while the large mosque can accommodate all administrative programs of the city, Credit: Author.



Prayer Hall can accommodate 401 Prayer Matts

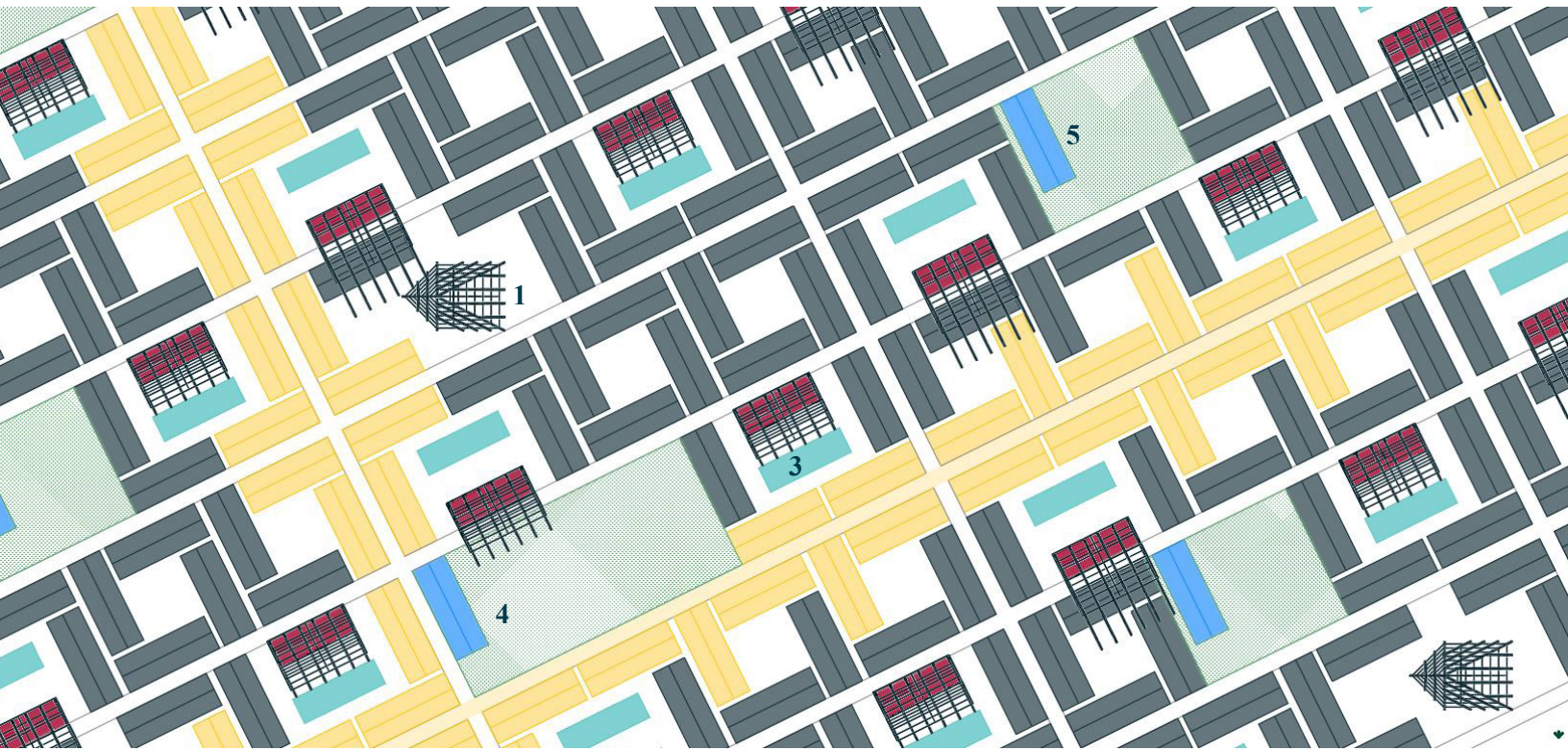
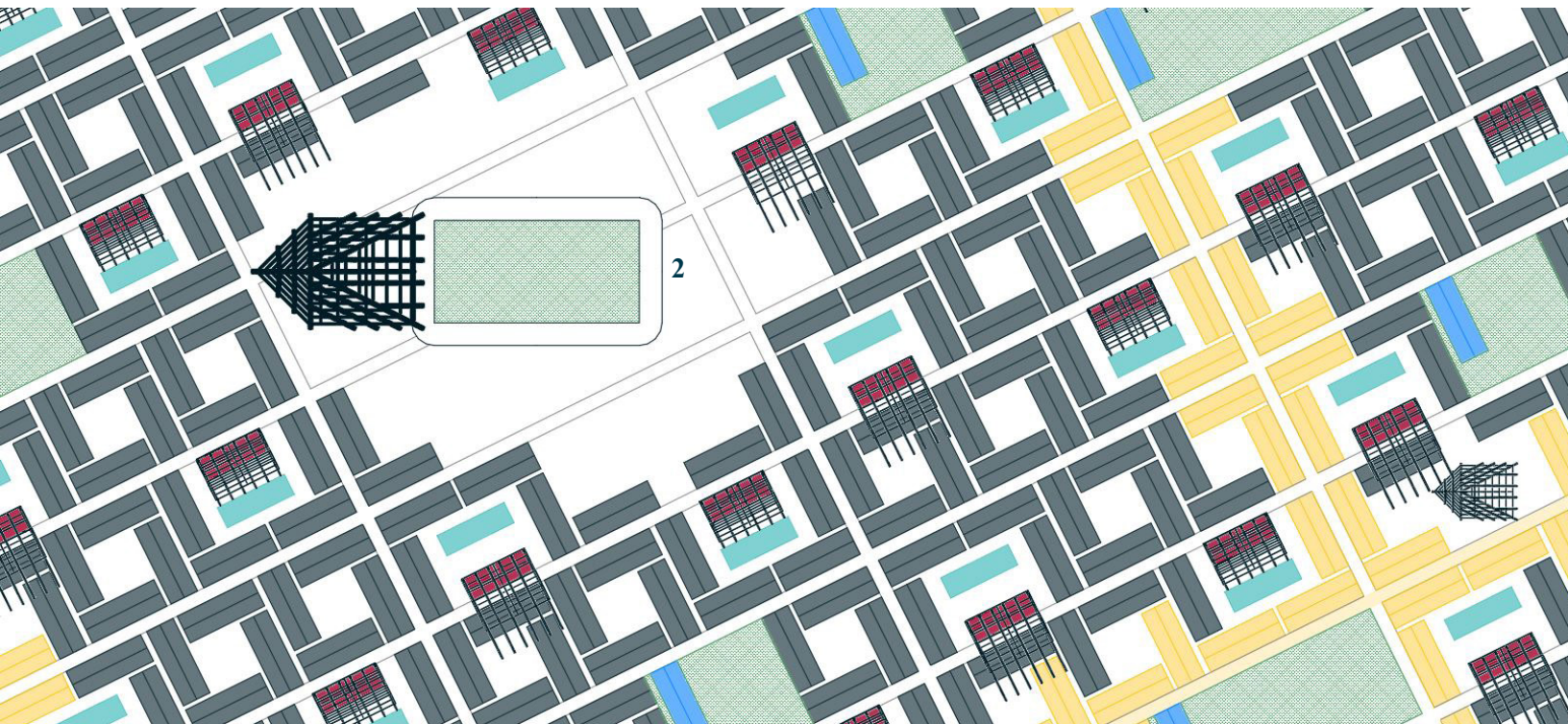
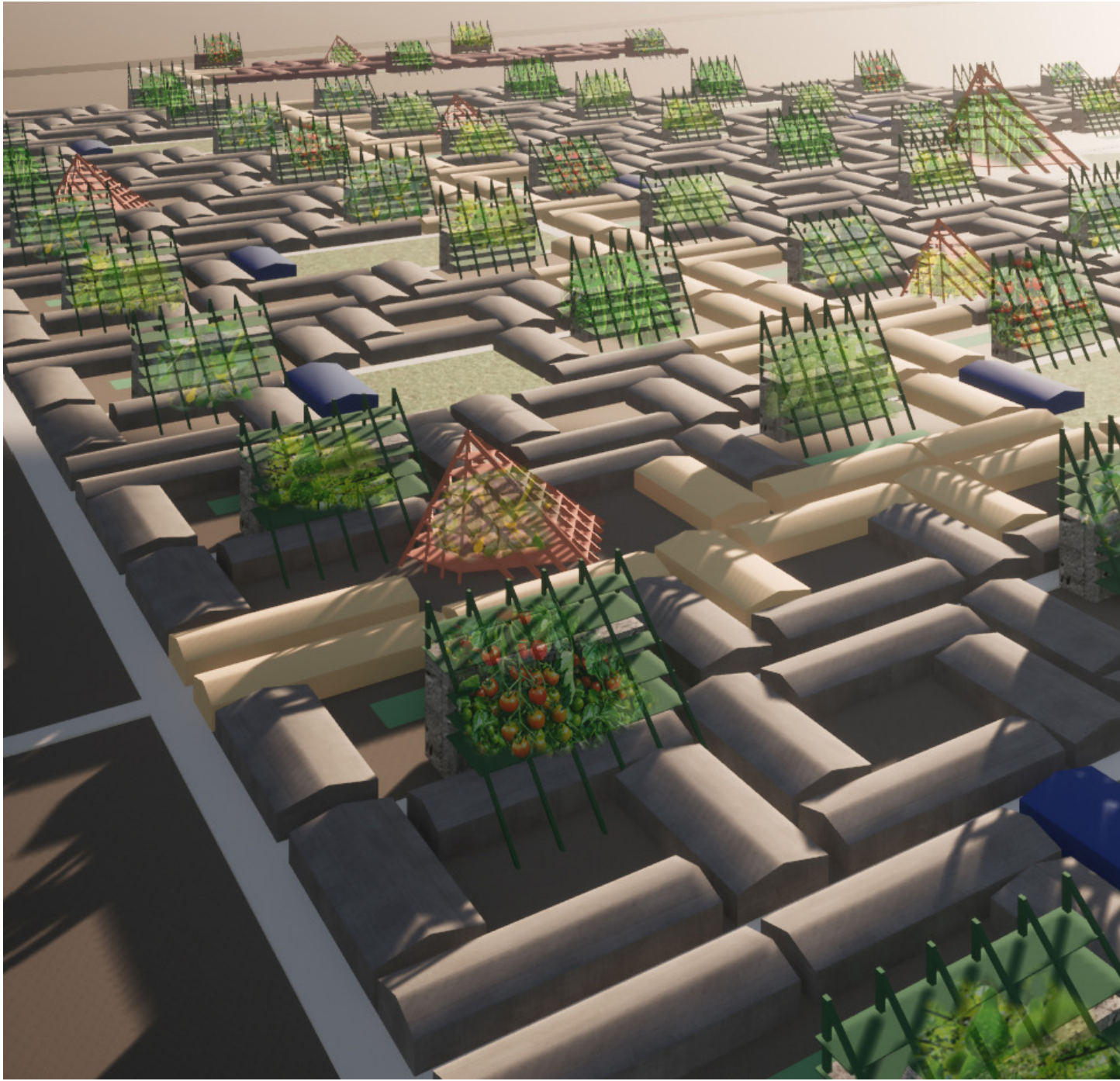


Figure. 3.41. 14% of cluster houses were removed to incorporate essential urban spaces that were lacking in the existing built environment. Credit: Author.

1. Navigational Space: Community mosques with small courts.
2. Public Space: Large mosque with a big plaza and play field.
3. Neighborhood Space: More gardens with additional collective activities.
- 4 Basic Education: High school and 5. primary school.





Integrating Agriculture into Urban Living

Building upon the pilot project, this utopian urban design envisions a cityscape where terraced buildings for agriculture are seamlessly integrated into the urban environment.

Utilizing the existing structures as a canvas, the terraced buildings extend from shelter buildings, providing a

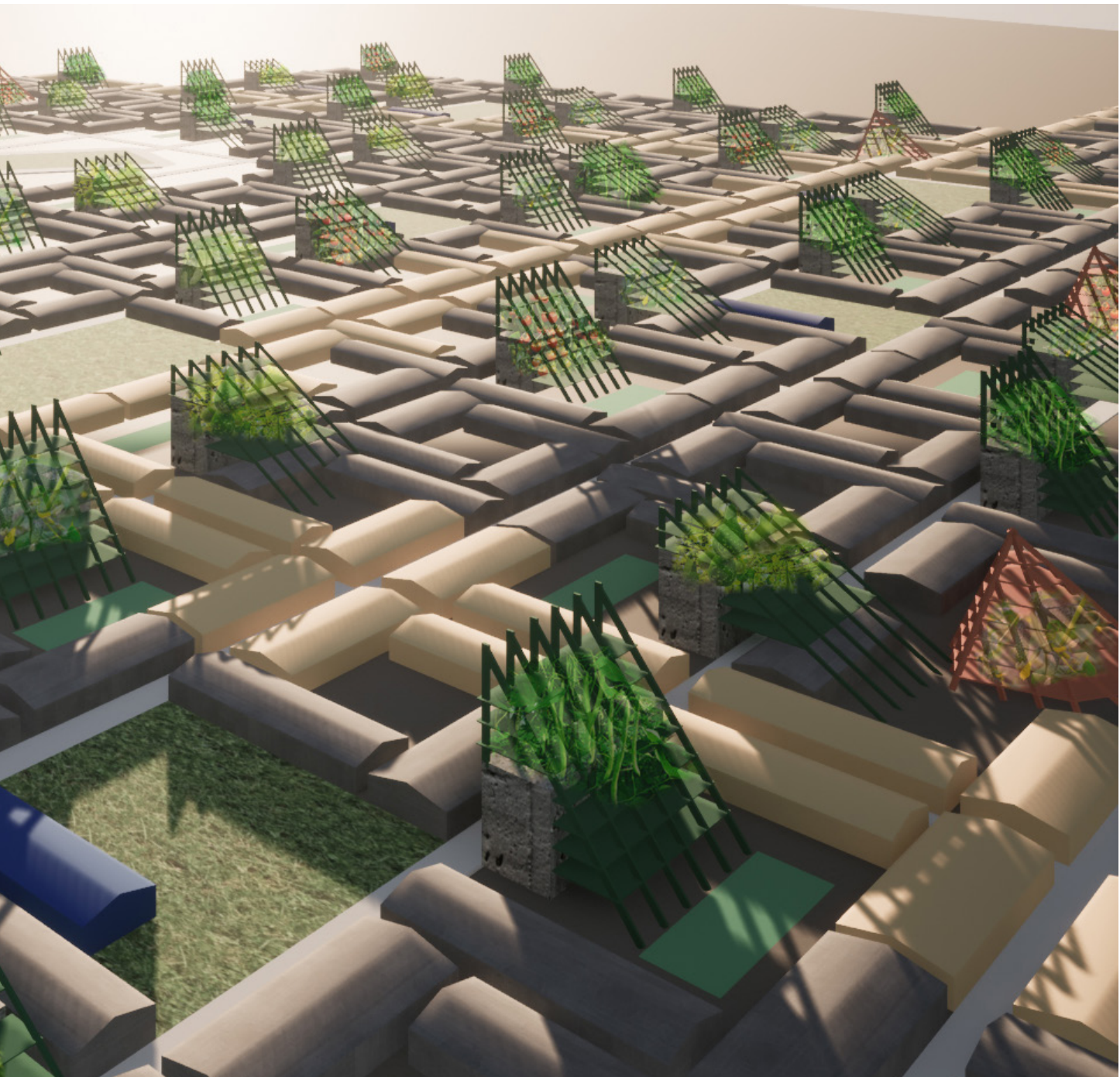


Figure. 3.42. Harvest time overview of the envisioned project through adaptive reuse and retrofitting, aiming to integrate agriculture into urban living. Credit: Author.

sustainable and visually appealing urban landscape. Previously restricted for climbing, these structures are now retrofitted to accommodate various food crops, creating a harmonious coexistence between urban living and food production.

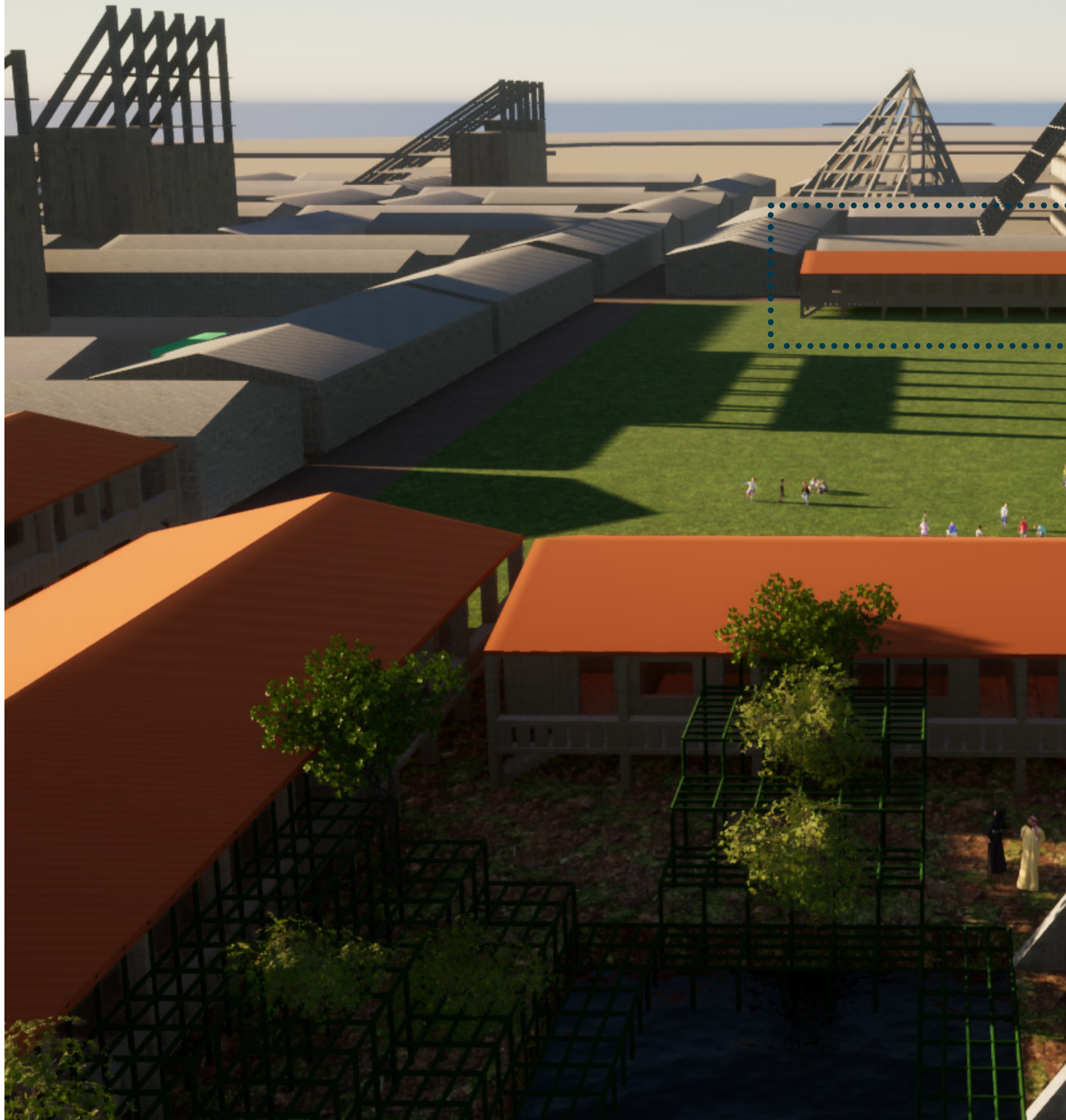
The goal is to contribute to environmental sustainability and enhance the overall quality of urban life for the residents.



Figure. 3.43. Street Community during Jumma day, a weekly ritual occurring every Friday afternoon. Individuals heading to the mosque [highlighted], while others resume business activities during prayer time. Credit: Author.



Figure. 3.44. The adapted education building features distinctive open spaces, with each high school boasting a larger playfield [highlighted building], while the primary school is equipped with a smaller playfield. Credit: Author.



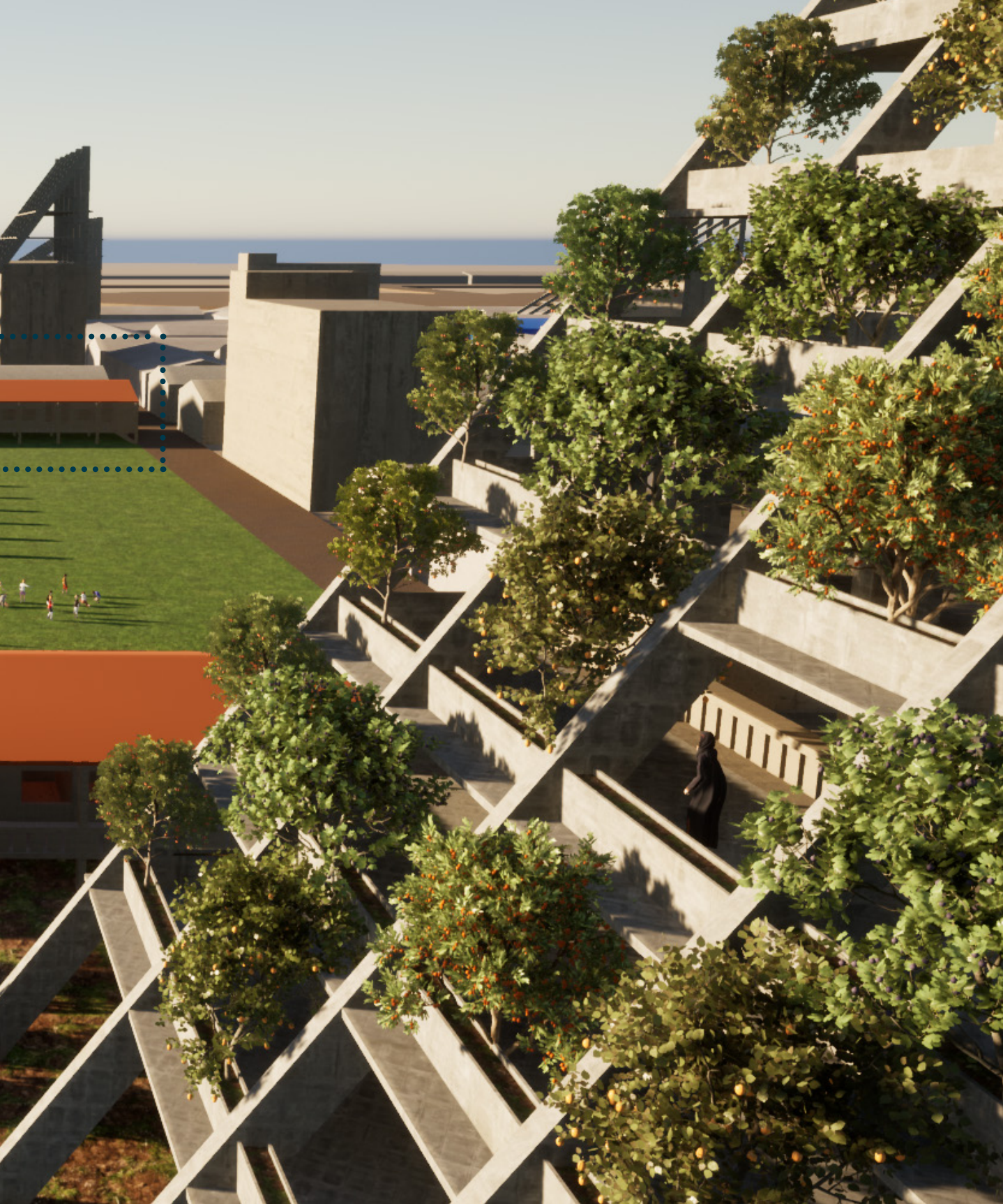




Figure. 3.45. The open spaces are versatile and can be repurposed into parks, providing recreational areas for occasional ceremonies, fairs, and fostering a welcoming environment for people to linger, socialize, and engage in community activities. Credit: Author.





Figure. 3.46. Each neighborhood courtyard features a pond, promoting increased aquaculture, and incorporates additional vegetation platforms that extend up to the roof levels of the houses around the pond. On the left side, the image shows extended terraces from the shelter buildings facing southeast, contributing to the overall functionality of gardening and the aesthetic appeal of the neighborhood. Credit: Author.

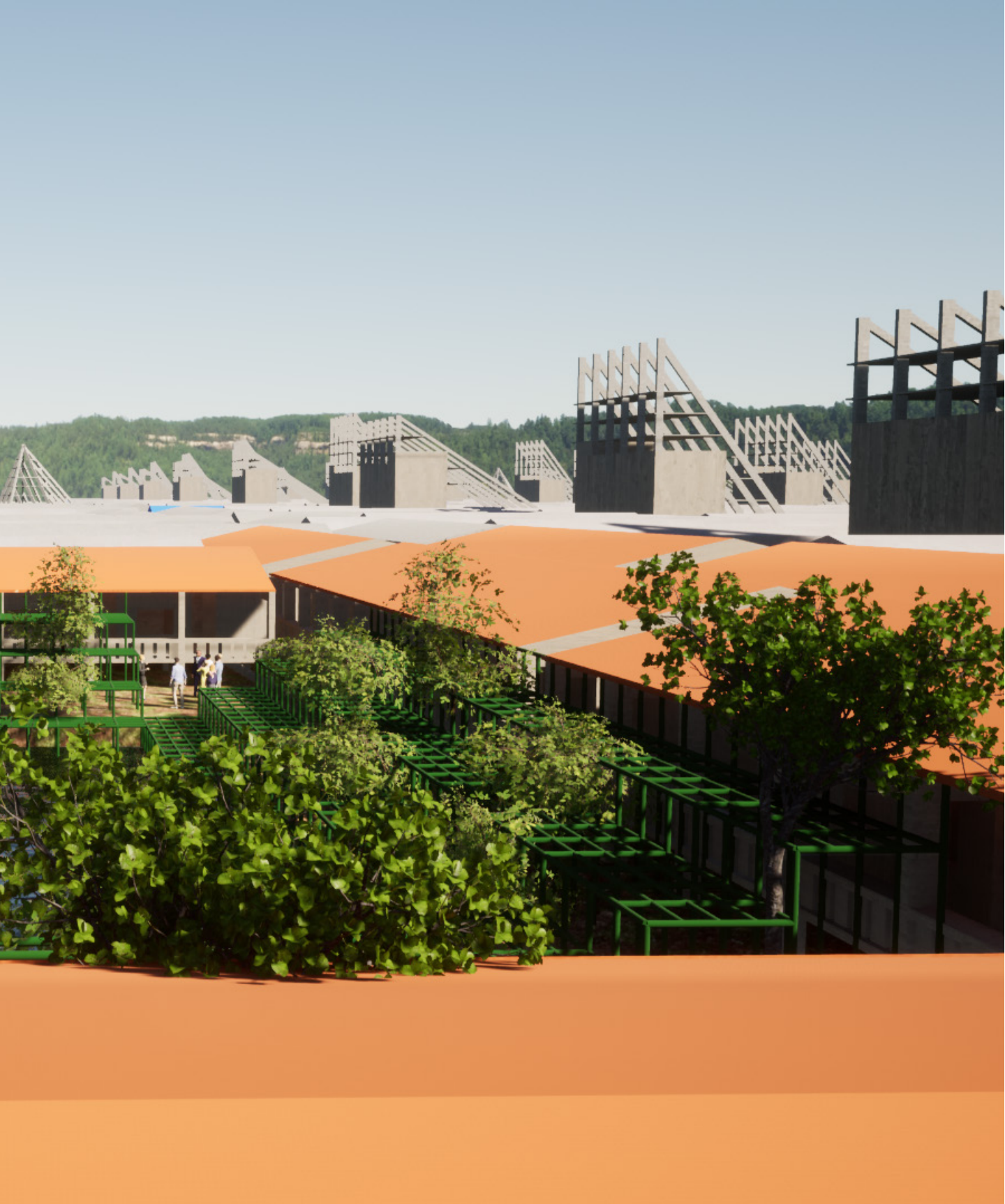




Figure. 3.47. Railings and soil pots serve a dual purpose in this design, functioning as both safety barriers and containers for soil. The concrete low-wall is filled with soil, creating space for orchard gardens. The highlighted area allows for the placement of additional pots, enhancing the greenery and agricultural potential of the space. Credit: Author.



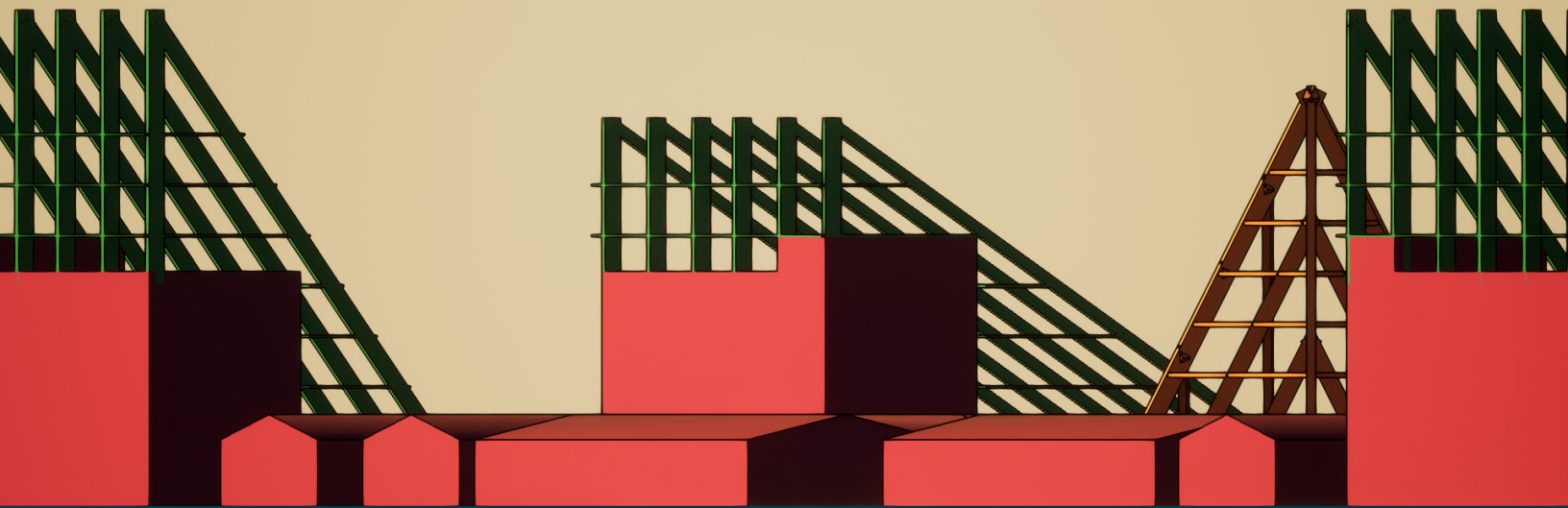
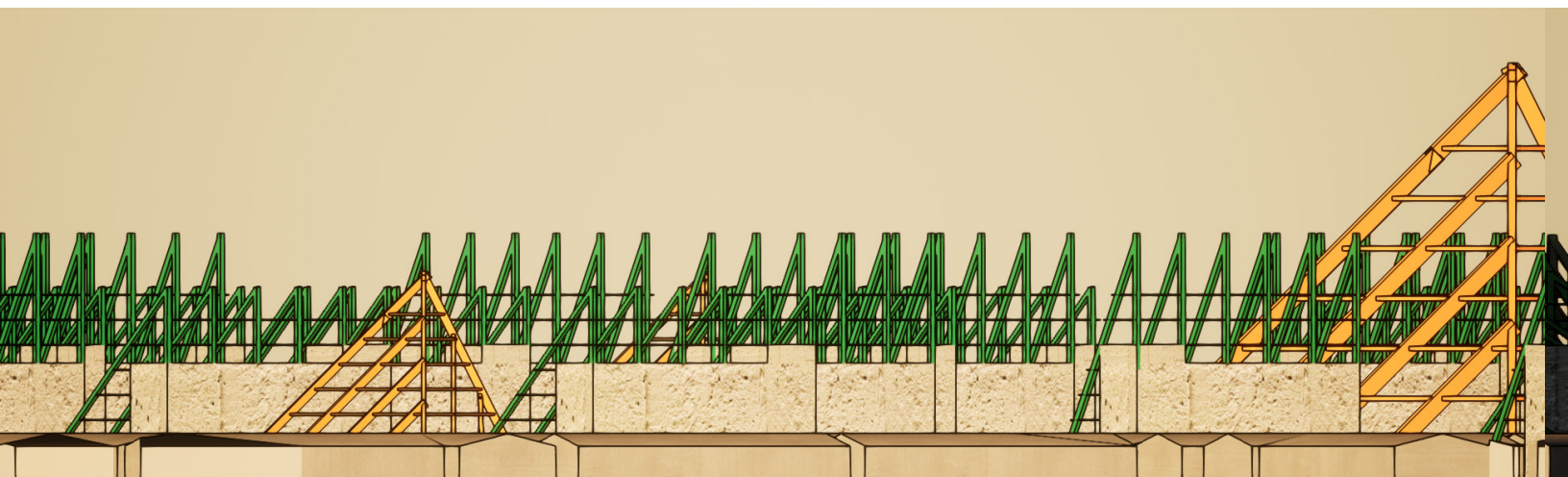


Figure. 3.48. These diagrams illustrate the achievement of an urban Hierarchy, addressing the fundamental issue the existing project has. The scale variations, including the big mosque, small mosques, terrace buildings, and houses, contribute to the improved urban design. Credit: Author.



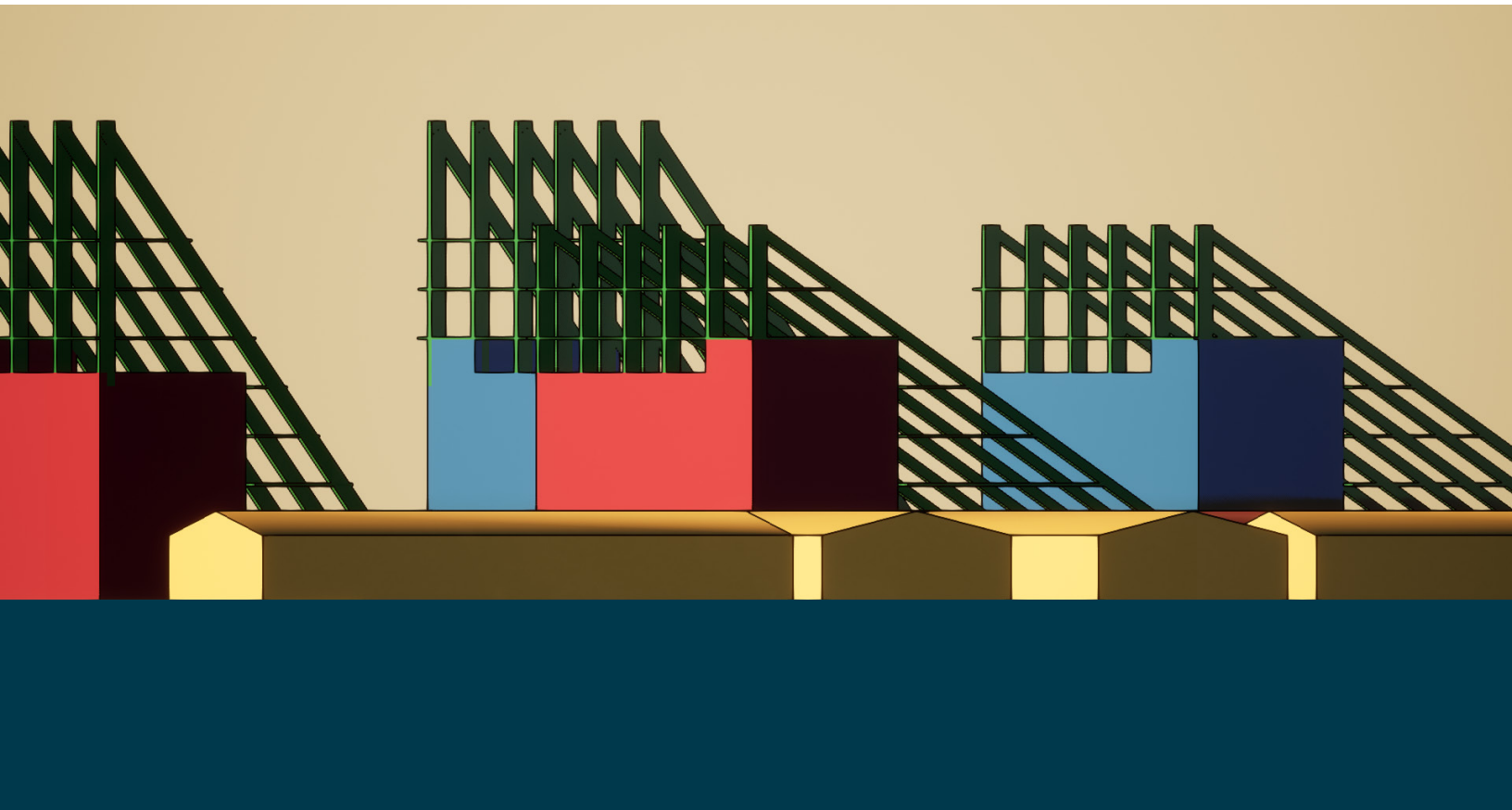


Figure. 3.49. Different buildings can be painted in a variety of colors, contributing to a diverse and visually dynamic urban landscape. Credit: Author.

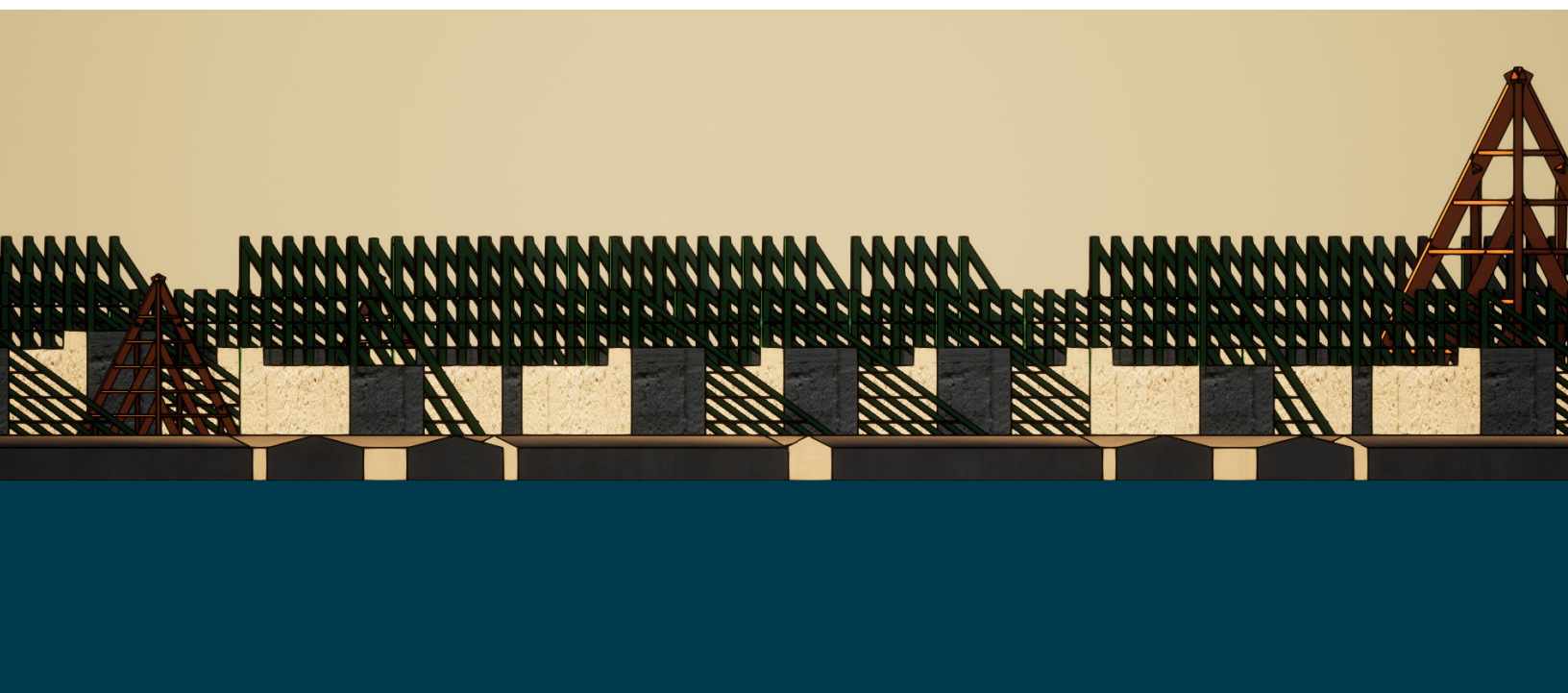
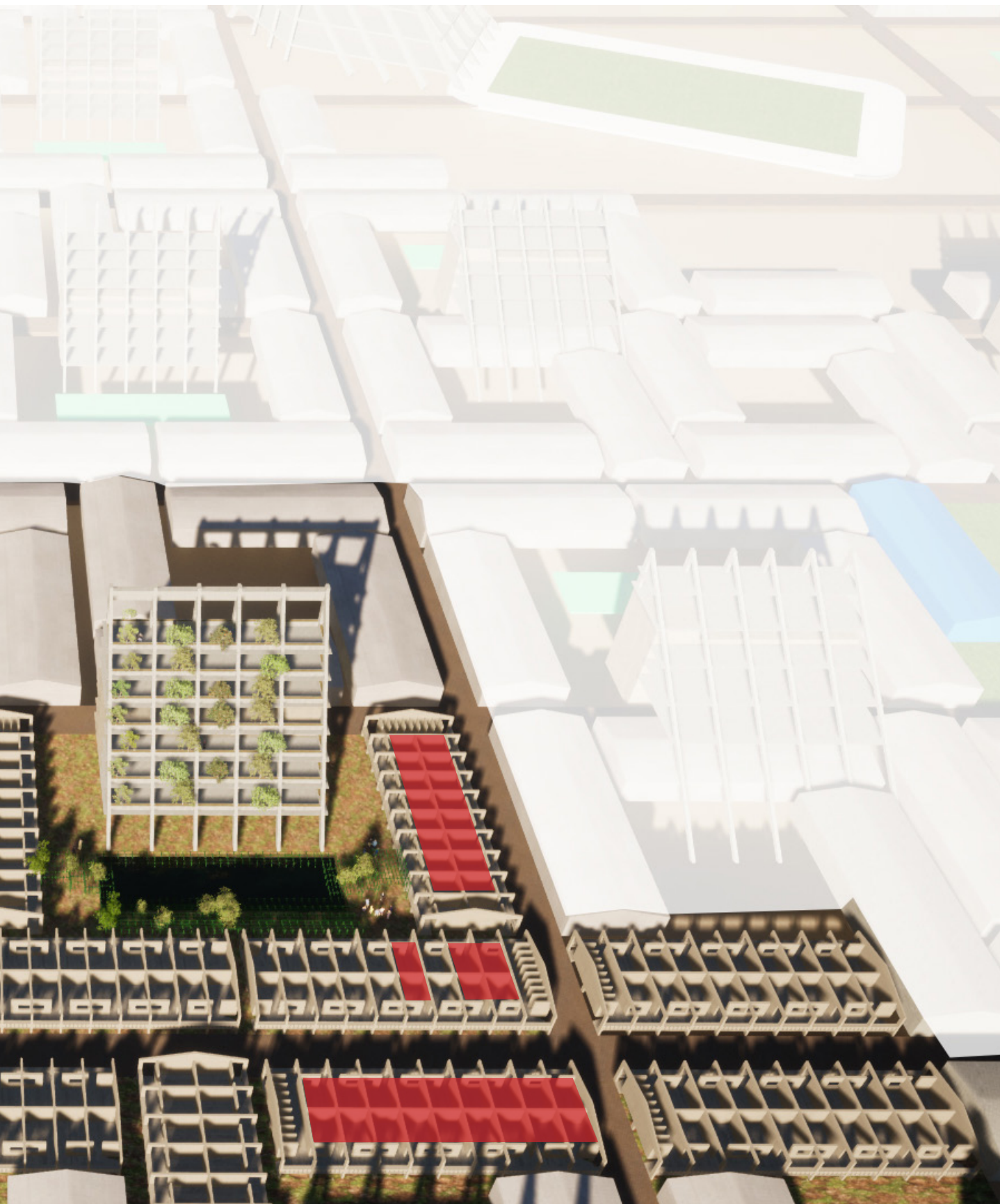


Figure. 3.50. The absence of roofs exposes the interiors of the houses, presenting a configuration of cages for refugees. However, this perception is open to interpretation. The interior of each house is adaptable, allowing for modifications such as rearranging walls to create more extensive spaces. This flexibility enables various possibilities, such as combining two rooms to form a larger classroom or apartment for a single family, utilizing four rooms for a substantial shop, or converting the entire house into a community center. The design prioritizes versatility, accommodating diverse needs and functions within the available space. Credit: Author.





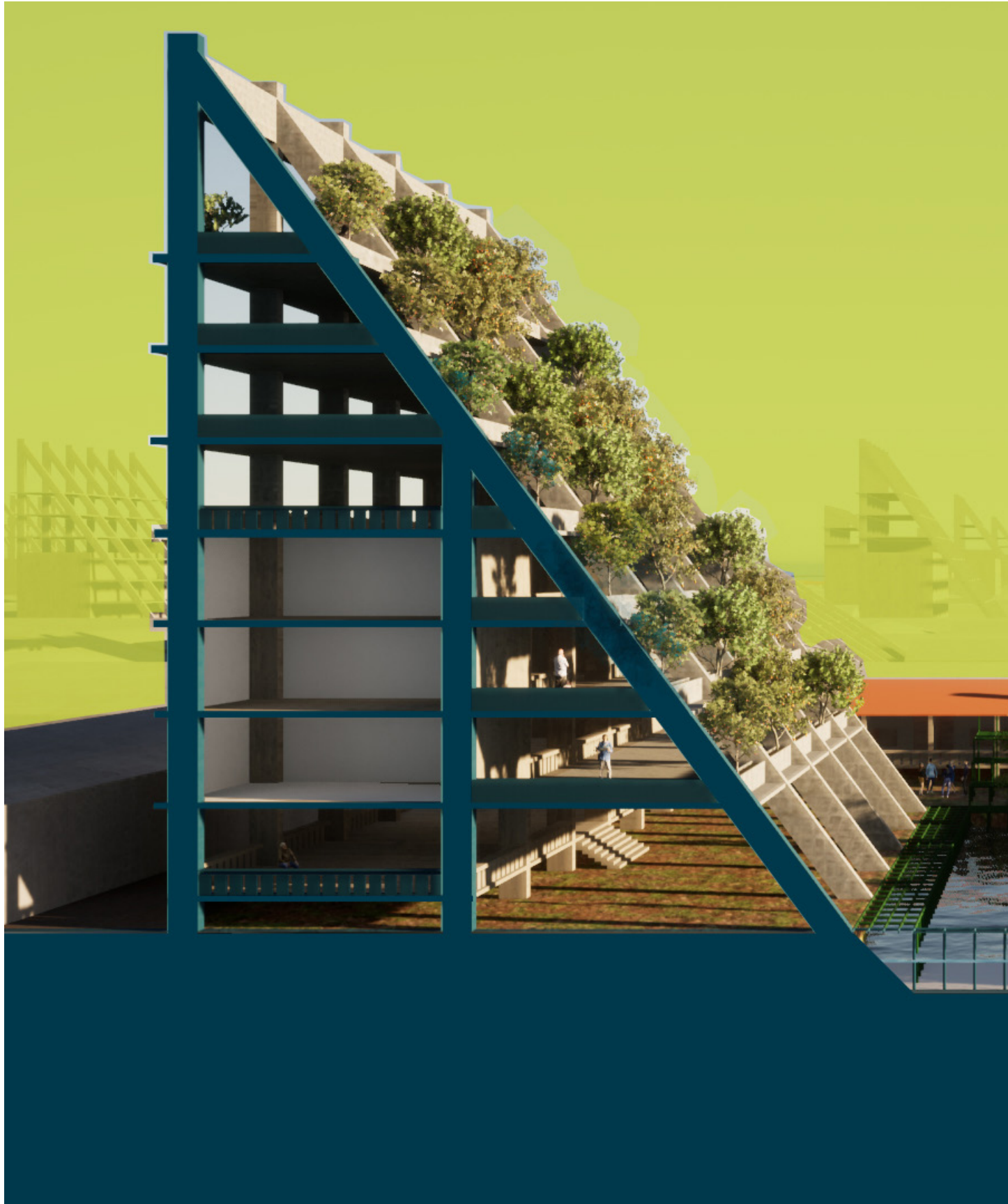


Figure. 3.51. The structures on the right side are typical shed buildings, **illustrating the current scenario** where two families reside in adjacent small rooms within a cluster house. This depiction captures the existing living conditions, emphasizing the cramped spaces that multiple families share within these accommodations. Meanwhile, the 5-story shelter buildings on the left side are currently vacant or not being used, leaving a massive footprint that has been balanced out with extended terraces for gardening. Credit: Author.





Figure. 3.52. This is **illustrated for a generational spread**, the shelters have been adapted to serve a dual purpose as living spaces and community hubs, accommodating various activities on both the ground and roof levels. The shed buildings have been repurposed to house farm animals, with cows, goats, or lambs residing on the upper levels, while a chicken coop occupies the space below. This adaptive transformation not only maximizes the functionality of the structures but also integrates communal and agricultural elements into the living environment. Credit: Author.



Conclusion

In pursuit of shaping the future of the Rohingya community, a comprehensive architectural initiative unfolds in two distinct phases. The initial phase unfolds within the makeshift camps of Cox's Bazar, addressing the immediate needs of the displaced population. The second phase extends to the permanent settlement of Bhasan Char, presenting an opportunity for enduring change. Throughout both phases, a myriad of ideas is explored, reflecting a dedicated endeavor to foster adaptability and sovereignty within the Rohingya settlements. The ultimate goal is to lay the groundwork for a resilient and self-sufficient community in which the Rohingya people can reclaim a sense of control over their lives and future.

Embracing Centuries-Old Adaptability

Analyzing the dynamic context of Bangladesh reveals that adaptability is ingrained in the livelihood culture of farming and fishing. The traditional stilted method, in fusion with scaffolding is a response to the brittle hilly terrain of Cox's Bazar, reflects the resilience of indigenous people. The agricultural focus within the building programs showcases their ability to adapt age-old traditions to the new land. Despite challenging circumstances, their tireless efforts suggest that they have already conquered their new home. The terraced stilted building serves as a pilot project, creatively reclaiming land from a dense and vulnerable environment, promoting self-sufficiency, and envisioning a sovereign future.

Navigating Towards Sovereignty

The adaptive reuse phase focuses on a contextual analysis of the delta landscape, transforming Bhasan Char into a mangrove metropolis. Nurturing both people and nature, the design dismantles the existing government project, encouraging the refugees to repurpose the overbuilt barrack into a community of shared resources. By emphasizing gardening, the approach integrates agriculture, addressing missing components in the planning, and providing a sense of orientation and spiritual solace for Muslim refugees. Retrofitting terraces on cyclone shelters balances the

carbon footprint, creating a dualistic relationship with the environment and fostering a self-sufficient, and sovereign community.

Balancing Concrete with Terraced Agriculture

The incorporation of urban agriculture in the design aims to balance the existing concrete structures with terraced agriculture, utilizing cyclone shelters that refugees are currently not allowed to use. This approach strives for net-zero impact, where the urban environment benefits as much as it takes. The design envisions transforming Bhasan Char into a self-sufficient community, promoting a shift from a non-hierarchical to a mature hierarchical city.

Utopian Visions as Transformative Tools

While the design may initially appear utopian, it serves as a powerful vision to identify and address problems, fostering continuous transformation with resilience. By implanting ideas of adaptive reuse, the landscape and urban design envision the creation of a more politically viable community.

In conclusion, these phases epitomize a comprehensive strategy aimed at nurturing resilience, sustainability, and community development amid formidable challenges. By addressing immediate needs in the makeshift camps and envisioning enduring change in the permanent settlement, the architectural interventions seek to establish a resilient and self-sufficient foundation. Embracing adaptability, fostering sovereignty, and integrating urban agriculture, the design strives to empower the Rohingya community, promoting a mature hierarchical city. This holistic approach reflects a dedicated effort to transcend the complexities of displacement, fostering enduring solutions that enhance the overall well-being and future prospects of the Rohingya settlements. The ultimate goal is successfully realized in laying the groundwork for a resilient and self-sufficient community, demonstrating transformative success within a challenging context. This achievement is marked by the attainment of self-governance within their new boundary, reclaiming and reconquering their new homeland.

Reflection on global refugee crisis

Resilience Beyond Borders: Finding Home amidst adversity

In the intricate web of geopolitics, the concept of borders has always been a defining factor in the identity of a nation. Yet, when we pause to reflect on the grand tapestry of humanity, we realize that our world is a mosaic of thousands of ethnicities, each with its unique story, culture, and history. The very existence of these diverse ethnic groups challenges the notion of a singular, exclusive national identity. If borders are the markers of nations, then shouldn't there be more countries, given the multitude of ethnicities that inhabit our planet? It is a question that lingers in the backdrop of a global issue that has persisted for decades—the refugee crisis.

As we navigate the tumultuous waters of the refugee crisis, it becomes abundantly clear that it is not confined to the plight of one ethnicity or a specific region. It is a global issue, a human issue that transcends borders and questions the very essence of our humanity. This crisis compels us to look beyond the borders and recognize the shared human experience that binds us together.

Adaptation, whether natural or manmade, is a quintessential trait of humanity. It has been our means of survival and evolution throughout history. We have traversed deserts and embraced the frigid landscapes. What we call home is not merely a geographical location but a place etched in our minds, where our families reside, and where we share a profound connection with nature. It is a testament to our adaptability that we can find 'home' in the most unexpected of places.

The very notion of borders, with their artificial divisions and boundaries, speaks of control and power. It's a construct that has allowed nations to assert their authority and safeguard their interests. However, we have the capacity to transcend these constraints, to ignore them, and to coexist harmoniously within the spaces we inhabit. It is a testament to the resilience and strength of the human spirit that we can live with complexity and face suffering head-on. We adapt to our circumstances, find solace in the communities we create, and forge new homes.

This thesis, in its exploration of the refugee crisis, delves into the profound challenge of making a home in a new place by the Rohingyas, of adapting to the ungraspable reality of displacement. It acknowledges the impossibility of fully capturing the essence of one's original home but, in doing so, it reveals the resilience and adaptability that define our human nature.

In the heart of this global refugee crisis, it is important to remember that power resides where humanity believes it resides. We hold the power to transcend borders, to adapt to new realities, and to recognize the shared human experience that binds us all. It is a power that is not bound by political boundaries or cultural differences but is fueled by our collective ability to empathize, to extend a hand to those in need, and to adapt to the ever-changing landscape of the world.

The refugee crisis, as a global issue, urges us to adapt not only to the immediate challenges but also to a new perspective on how we define and understand the concept of 'home.' It calls for a paradigm shift, a collective realization that borders, while they may be necessary for certain aspects of governance, should not hinder our innate ability to empathize and adapt. Our capacity to make a home in a new place and to embrace a shared human experience is the true source of power.

As we contemplate the refugee crisis on a global scale, it is important to recognize that this issue is not isolated or confined to a specific group of people or a region. It is a reflection of the complexities and interconnectedness of our world. It reminds us that, regardless of borders, ethnicities, or nationalities, we are all part of a shared humanity, adapting and evolving in the face of adversity.

In essence, the refugee crisis challenges us to adapt to a new reality, one in which we acknowledge our shared human experience and transcend the constraints of borders. It reminds us that home is not defined by geography alone but by the connections we forge and the resilience we exhibit. It calls upon us to recognize the power within ourselves to make a difference, to provide refuge, and to adapt to the changing landscape of our world. The refugee crisis is a global issue that necessitates a global response—one that is rooted in empathy, adaptation, and a collective understanding of our shared human experience.

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