

Graduation Plan

Master of Science Architecture, Urbanism & Building Sciences



Graduation Plan: All tracks

Submit your Graduation Plan to the Board of Examiners (Examencommissie-BK@tudelft.nl), Mentors and Delegate of the Board of Examiners one week before P2 at the latest.

The graduation plan consists of at least the following data/segments:

Personal information	
Name	Marion Rosine Esther Achach
Student number	5633478

Studio	
Name / Theme	AR3AD105 Dwelling Graduation Studio: Global Housing
Main mentor	Dick van Gameren Architecture
Second mentor	Rocio Conesa Sánchez Architecture
Argumentation of choice of the studio	<p>As part of the Master's program in Architecture, Urbanism and Building Sciences at Delft University of Technology, I am striving to deepen my understanding of housing challenges in rapidly expanding regions, particularly in the Global South. I firmly believe that architects play an essential role in addressing the basic human need for shelter.</p> <p>My interest in this field began during my bachelor's degree in Paris, where I explored the role of the architect in the self-built settlements of the Rocinha favela in Rio de Janeiro, Brazil. Driven by the ambition to contribute to the universal right to housing, I have always sought to broaden my knowledge by conducting fieldworks in Latin America and the Caribbean.</p> <p>I wanted to conclude my academic journey by learning from other perspectives. I therefore, choose this graduation studio to learn from the East-Asian context and focus on the significant global displacement crisis that has been arisen due to factors such as forced migration stemming from conflicts, environmental crises driven by climate change, and other extreme conditions in the 21st century. This crisis has led to millions of people becoming refugees and internally displaced persons. For my graduation project, my focus is on comprehending the various forms of displacement, the challenges faced by these affected populations, and exploring innovative housing design approaches to support urban growth. I aim to create an architecture of transition capable of mitigating the consequences of mass displacement.</p>

Graduation project	
Title of the graduation project	Beyond Housing: Core, Veranda & Versatility
Goal	
Location:	Sylhet, Bangladesh
The posed problem,	In an increasingly urbanized world, the global challenge is to ensure that cities provide safe and healthy living

environments, thriving economies and social benefits for diverse groups for generations to come. Today, more than half the world's population lives in urban areas, with almost 90% concentrated in Asia and Africa. The trend towards urbanization is set to continue, with city dwellers expected to account for 68% of the world's population by 2050. When examining the drivers of urban growth, one of the main factors to consider is urban migration. Today, in Bangladesh as in global migration trends, economic factors such as employment opportunities and social considerations such as marriage and education are the main drivers of migration. However, the influence of climate change and the resulting alterations will amplify the emergence of an ongoing trend, characterized by environmental migration. Meanwhile Bangladesh is already highly vulnerable to climate change, with 171 devastating natural disasters between 1970 and 2005 (WEDO, 2008), the consequences of climate change are unprecedented and will have socio-economic repercussions such as loss of livelihoods, effect on food security, damage to human settlements and infrastructure, access to job opportunities, education, resources as well as access to adequate and affordable housing. As a result, these impacts underline the urgent need to address the consequences of natural and man-made disasters on human settlements and access to housing.

Because everyone is different in terms of knowledge, skills, power relations, gender roles, health, wealth, race/ethnicity, age, physical abilities and disabilities, migration and its impacts have disproportionate consequences (GSC, 2008). Thus, the ability to anticipate, cope with, resist and recover from the impact of a natural hazard or an economic-induced migration depends on one's vulnerability. As such, women and girls are disproportionately affected by urbanization challenges due to their economic, social, and health vulnerabilities. Urbanization has exacerbated gender disparities in urban contexts, limiting women's and girls' access to resources, education, employment, and services. In Bangladesh, gender disparities and related problems persist in various aspects of life, from education and healthcare to violence against women and early marriage. These problems are deeply rooted in cultural practices and societal norms. Men have a stranglehold on land ownership, decision-making roles, production, leadership and trade, while women face constraints linked to restrictions on their mobility known as Purdah, cultural norms, legal constraints and the dominant influence of the Islamic faith.

Therefore, providing adequate and affordable housing for urban populations is a pressing challenge in Bangladesh,

	<p>where the current system relies mainly on private land ownership, while government-provided social housing remains limited and inaccessible for many. This lack of government-provided housing has stimulated the growth of private housing structures, contributing to middle-class income generation but at the expense of the poorest communities, leading to the emergence of informal settlements in the urban landscape and on the outskirts of the city, where people face inadequate living conditions with limited access to resources and services.</p>
<p>research questions and</p>	<p>As urban environments evolve, it is essential to explore the positive effects of a gender-based approach to urban design on social integration, economic growth, and sustainability for all. This research seeks to investigate the potential benefits and challenges of such an approach, its impact on gender disparities, and its overall effect on urban well-being. As such, following Charles Correa’s statement to promote land redistribution and social reform in villages, in order to increase their retention capacity (Correa, 1989), this research focuses on the dynamics and impacts of migration from rural areas to the urban settlements of Sylhet City and</p> <p>how can gender-responsive urban and housing design contribute to habitat improvement of urban poor migrants in growing second-tier cities like Sylhet, Bangladesh?</p>
<p>design assignment in which these result.</p>	<p>Gender-Responsive Urban and Housing Design.</p> <p>The project fits into the urban fabric of Sylhet, particularly in the densely populated historic north-eastern part of the city, where a wide variety of income groups currently reside on the city's flood-prone heights. This site illustrates the lack of government provided housing effect on vulnerable groups and particularly for economic and climatic migrants. When moving to the city in search of better living conditions, migrants often find homes in substandard rental housing built by private owners using low-tech methods. This results in pockets of overcrowded settlements called “colony” where residents face inadequate living conditions, access to resources and difficulties in adaptation.</p> <p>The aim of the design is to propose a housing solution embedded in cooperative development, bringing together different income groups to encourage cross-subsidization and establish a more inclusive living environment. In addition, the design aims to go beyond housing simply considering the living space, by considering the living environment as a whole to create opportunities for economic and social development for all. The housing units</p>

	become then more than a living space and are linked to income-generating spaces, access to local amenities, shared spaces and green areas. Finally, following the analysis of the living patterns, the veranda is reinterpreted as a social, economic and climatic solution linked to a core house where versatility of spaces is promoted.
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Process

Method description

The framework for this research was provided by an analysis of the literature, which offers a wealth of information on the health problems of women and adolescents, as well as on general living conditions in the informal settlements of the city of Sylhet. However, data on women who have migrated to Sylhet are still very incomplete. Moreover, articles dealing with the influence of women’s empowerment on poverty reduction in Bangladesh serve as a solid basis for the development of the design.

One of the main research methods involves on-site observations and data collection, carried out during a field visit to Sylhet and Dhaka in October 2023. Sylhet’s existing environment was documented through a series of videos, photos, sketches and interviews with local stakeholders and residents. Different ecosystems were explored during the fieldwork, each with distinct conditions and consequences for residents’ lifestyles.

Furthermore, the fieldwork provided on-site case studies analysis with the opportunity to meet the architect Mahmuda Alam, who works with slum dwellers in Dhaka and Jhenaidah through the POCAA collective. By visiting two settlements on the outskirts of Dhaka and talking to women community leaders and residents, it was possible to gain first-hand sources and a deeper understanding of research methods and design solutions for improving urban settlements. Additionally, the analysis of case studies of different but similar contexts where women’s empowerment strategies have proven beneficial for poverty reduction is adding a valuable layer of analysis to this research to understand design possibilities.

In addition, another research method is to analyze existing site patterns and features through mapping. Inspired by the work carried out by Jan Rothuizen in his book “Refugee Republic”, the chosen site will be fully mapped, incorporating all the ideas and background data gathered on site and during online interviews with landowners, residents, students and professors from Sylhet’s Shahjalal University of Science and Technology.

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Reflection

1. What is the relation between your graduation (project) topic, the studio topic (if applicable), your master track (A,U,BT,LA,MBE), and your master programme (MSc AUBS)?

My graduation project aligns with the thematic focus of the Global Housing Studio as well as with the Architecture master track of the MSc Architecture, Architecture, Urbanism and Building Sciences addressing innovative housing design solutions to pressing challenges related to mass displacement and urbanization. The project aims to make a significant contribution to the progress of society, promoting sustainable and inclusive living environments. Furthermore, while most graduation projects of the Global Housing Studio have focused on the impact of migration on metropolises, the project aims here to explore solutions that could contribute to the collective knowledge base on global housing design in mid-sized cities such as Sylhet in Bangladesh, in an attempt to enhance the regional redistribution of urban strategies towards mid-sized cities with high attractiveness potential, in response to ongoing urban growth.

2. What is the relevance of your graduation work in the larger social, professional and scientific framework.

This topic holds significant relevance in today's context, given the escalating crises, ranging from economic and climatic to political and social. Although strategically positioned within a specific context, the work adopts a global perspective, aspiring to understand the vulnerabilities and capacities of individuals to cope with migration and adapt to new environments. While focusing on the development of housing for the urban poor, I seek to examine the role of the architect in such contexts. From its mediator side to its engineer skills, the architect is closely involved in bringing together diverse components to provide and ensure the most sustainable living environment possible, without discrimination. Going beyond the conventional boundaries of housing design, this graduation project seeks to interrogate gender related issues and aims to integrate economic, social and environmental opportunities. The aim is to empower local communities in a holistic way, promoting benefits that extend beyond the immediate project and positively impact the community. In addition, the project opens the discourse on the question of the positionality particularly as regards a European student designing a project in a foreign context with limited time and experience on site. This aspect invites a critical examination of the cultural, social and ethical considerations inherent in the design process, exploring the implications and responsibilities associated with designing in a cultural context distinct from one's own.