

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	Carla Sophia Tietzsch
Student number	6084524

Studio		
Name / Theme	Dwelling Graduation Studio / Global Housing / Bangladesh	
Main mentor	Nelson Mota	Architecture
Second mentor	Ludovica Cassina	Building Technology
Argumentation of choice of the studio	The Global Housing graduation studio offers the chance to investigate different ways of living in another society which we can learn a lot from. Especially the location of this graduation studio in Bangladesh struck my interest, as that is an extremely dense country which struggles with many issues, like climate induces flood risks, that will impact many other regions of the world in the coming decades.	

Graduation project	
Title of the graduation project	Rural-urban farming
Goal	
Location:	Shonatola, Sylhet, Bangladesh
The posed problem,	While Sylhet is in an earlier stage of its densification, increasing flood risks and growing economic instabilities in rural communities are leading to a trend of rapid rural-urban migration. This can quickly result in decreasing living standards in the city due to overpopulation. Next to questions about adaptations of infrastructures and density within Sylhet, the city must develop strategies for an expansion of the urban fabric to accommodate the growing population. While the expansion of urban fabric offers potential for various improvements of the adjacent rural areas, like access to public

	transport and alternative income sources for farmers, villages located close to the city face various challenges caused by a rural-urban transition, like the loss of their rural living qualities. For this research the village Shonatola will serve as an example to develop a replicable strategy for rural areas that will be affected by urbanization pressures.
research questions and	<p>How can rural areas of Sylhet be transformed according to the trend of rural-urban transition while maintaining crucial living qualities of rural populations?</p> <ul style="list-style-type: none"> ➔ What are building strategies, living structures and qualities of rural life in Bangladesh that should be incorporated into the design? ➔ Which improvements that urbanization processes offer should be incorporated into the urban strategy? ➔ Which facilities/improvements can the design offer for the adjacent existing communities? ➔ How can the design react to the increasing flood risk?
design assignment in which these result.	The goal is the development of a strategy that offers low-income housing solutions for rural populations while improving their economic stability. Meanwhile the project aspires to increase the existing density as a reaction to the process of urbanization. Furthermore the design should react to the increasing flood risk.
Process	
Method description	
During the field trip to Bangladesh I could make many observations concerning present living patterns and typical spatial organisations, which offered important knowledge for this research. In addition we spoke to several residents of the	

Shonatola village, which allowed us to gain more insights into their living situation and present struggles, such as reoccurring floods.

Several case studies will be used as inspiration for the design, for instance to ensure an intriguing spatial quality within minimal spaces.

Furthermore case studies will serve as inspiration to improve the resilience against increasing flood risks.

Literature and general practical references

Case studies:

- CIDCO Housing Project by Raj Rewal in New Mubai, India
- Jintai Village Recostruction by Rural Urban Framework in Jintai, China

Literature:

- *The Barefoot Architect* by Johan van Lengen offers interesting insights into different low-cost housing strategies.
- *Climate Change Adaptation through Local Knowledge in the North Eastern Region of Bangladesh* by Sawon Istiak Anik and Mohammed Abu Sayed Arfin Khan
- *Flood-Tolerant Rice Improves Climate Resilience, Profitability, and Household Consumption in Bangladesh* by Subir Bairagi, Humnath Bhandari, Subrata Kumar Das, and Samarendu Mohanty
- *Overcoming Barriers to Adapt Rice Farming to Recurring Flash Floods in Haor Wetlands of Bangladesh* by Smita Dash Baishakhy, Mohammad Ashraful Islam, and Md Kamruzzaman
- *Indigenous Housing and Settlement Pattern of Patro (Laleng) Community in Sylhet* by Chowdhury, Shubhajit, and Kawshik Saha
- *Segregation of Women in Islamic Cultures and Its Reflection in Housing: A Study of Spaces for Women in a Bangladesh Village* by Tasneem Chowdhury
- *The New Landscape - Urbanisation in the Third World* by Charles Correa
- *Strategies of Family Farms to Strengthen Their Resilience* by Ika Darnhofer
- *Yasmeen Lari on Track to Build a Million Flood-Resilient Pakistan Homes by 2024* by Amy Frearson
- *Climate Change and Migration Impacts on Cities: Lessons from Bangladesh* by Md Rana, Masud Parves, and Irina N. Iliina
- *The Politics of Self-Help: Women Owner-Builders of Grameen Houses in Rural Bangladesh* by Adnan Morshed
- *Flood Resistant Housing Low-Cost Disaster-Resistant Housing in Bangladesh* by Neil Noble
- *Morphology of a Sacred Urban Landscape: The Case Study of Sylhet City, Bangladesh* by Kawshik Saha, Rezwan Sobhan, and Mohammad Nahyan

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 topic (affordable housing for populations in semi-rural areas) is in line with the topic of my graduation studio (global housing; housing design in Bangladesh). Both topics are important parts of the education for an inspiring architect, therefore these topics conform with my master track Architecture within the master program MSc AUBS.

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

Issues such as climate induced migration, overcrowded cities and trends of rapid urbanization already affect many countries and will increase globally. Therefore, the development of a replicable strategy that reacts to these pressing challenges is very relevant for the residents of any country that will be affected by the results of climate change in the future. In addition, this approach aligns with global efforts to create sustainable, climate-resilient models for rural areas affected by climate-induced migration.