

## **Introduction**

With a growing population in Mumbai, and India in general, the demand for housing is increasing every year. The growing population in Mumbai is mainly caused by the many migrants coming from the rural areas of Maharashtra to find work in the growing city. Because of the lack of affordable housing in the city, many informal settlements arise. This is also the case in Nalasopara, an area located in the north of Mumbai, well connected with Greater Mumbai, the economic and financial center, by train. Because of this huge demand and only a small available supply in affordable housing, a huge gap in the housing market is visible.

But surprisingly, reports state that many of the houses in Mumbai are lying vacant. Many of these vacant housing is housing built by the government. Those are often built far away from jobs and public transport, and in cases the houses have been of low quality and are lacking basic infrastructure. Further, the new houses often lack electricity and water. People living in India's urban slums often prefer to stay living in the slums rather than move to government built housing. But an even bigger problem is that owners of private housing would rather prefer to see their housing capital lie vacant than to rent.

Zooming in on the area of Nalasopara, we also see areas where there is a visible vacant housing stock. An example is the Sri Prastha area. This is an area located on the west side of Nalasopara. Well connected with public transport and important connecting roads.

Sri Prastha is an area with a combination of different types of apartments, varying between 25 and 65 m<sup>2</sup>. It is an area with many strengths: the location, the surrounding infrastructure, amount of open space and the mix of inhabitants. But the area has also many weaknesses which makes the area less successful than it could be, and which causes that many apartments are lying vacant. Weaknesses of the area are: poor water management, lack of maintenance, leaking roofs, the distance to job possibilities, and the overall neighborhood environment because of the many migrants that only stay for a short amount of time in the area.

My aim is to find redevelopment opportunities in the Sri Prastha area, which will keep the strengths and eliminate the weaknesses. With the main goal of the studio as guideline, creating affordable housing for an inclusive development.

## **Reflection**

The Global Housing studio focuses on integrating research and design during the studio work. With the research work produced in group and individually. The first phase of the project was focused on analyzing and collecting information about India and Mumbai, to understand the country better, with its different culture and therefor different approach on architecture.

During the first days of the trip to India, the most striking is the amount of people living in slum areas and in crammed housing, and the way commercial developers try to develop these areas. But as you see more of the different housing projects, the more you also get confronted with other problems, which have not so much to do with the redevelopment of slums. During this confrontation I started to wonder how you can avoid people to move to these crammed housing and slum areas in the first place.

During the visits of the case study projects in Mumbai, one of the projects, the Sri Prastha area, got my attention. In the first place because of the qualities of the area that were missing in other housing projects, but after understanding the area better, the many weaknesses became visible. And the many problems became even clearer after talking to many local residents of the Sri Prastha area. The area has many vacant housing for different reasons, because of this an inclusive community is not possible in this area.

To understand the Sri Prastha area better a research was done. The investigation of the research can be done in many different ways in the architectural field, from collecting literature to having interviews. The aim was to bring the most useful ways that are the most engaging and productive from the interdisciplinary discourse on methods to the architectural design context. Architectural design and research have a shared purpose, they can stimulate the production of knowledge by approaching it as research by design. The role of architectural research has gradually shifted over the past years during my studies. During the graduation project I was able to broaden the research into many different forms.

The goal for me during the graduation studio was to develop a research method wherein the role of architecture as discipline with an interest in the theory of the social role of space, the meaning of what people want and the historical context in which we live, plays an important role.

Within the Global Housing studio a research direction was already defined. During the first stage of the research we did a lot of investigation in how the research specialty is situated within the full spectrum of architectural research. In the earlier phases we all started analyzing in the way we have learned here at the TU Delft. Using mainly mapping, morphological, typological, historical and topographical research about the site. But because of the location and the unfamiliarity with the country and culture that we worked with, the research became more varied and broad. During the process I wanted to take the position focused on crucial culture and social issues that will play a significant role during the development of the project, by choosing a qualitative research method. My goal was to understand the dynamics from the point of view of the dwellers and that this insiders' perspective will eventually balance with my observations as a designer. What I value are the ideas of the social world, embracing the existing context, with different forms of interaction, and the quality of social spaces. Visiting the Sri Prastha area multiple times was the most important for me to get the information I wanted, just by simply walking down the street and talking to the people and observing the people and the buildings they live in. The research gave me a better understand of the area and also Mumbai as a city.

Overall I used different methods during my research from historical mapping and studying housing policies, case studies, rehabilitation schemes, and housing regulations to mapping, interviews with local residents and studying housing typologies and social and special practices.

In the end, the research, needed to focus on the physical outcomes of the design, from the scale of the building components, to the neighborhood and urban design. During the design phases, the reality has always played a big role. The danger was the desire to create something new and complex, thinking about new housing schemes and principles, and the eagerness to create something special for your final project. This became a struggle in the first phases of the design phase, with the huge pile of information in your mind, collected during the beginning of the research phase. But in the end, by putting the reality more in the foreground, the project became more realistic, and different aspects have been studied. The project needed to be feasible financially, and local construction methods were analyzed and discussed with the mentors.

During the projects, with the focus on affordable housing in the Global South, the studio focusses on different issues and problems that are not always in the disciplinary field of the architect. Creating affordable dwellings for the less fortunate in society is a task that asked for an approach that I was not familiar with, a different approach than I was used to. The goal to design affordable housing in Mumbai, asked for a research in a certain social group of Mumbai. And also a research into different housing policies and regulations, and different economic situations. In this given situations, the role you have as an architect feels very small. It will give the designer less opportunities, but despite this given, it is important that, especially in India and Mumbai, to focus on the social aspects of the design. Focusing on small optimizations of the social environment, in the form of by example, creating identity, landmarks an elements that will give a better sense of the whole.

The more the research and design developed over time, the more knowledge was gained about the situation at this moment in Mumbai and India. And you can say that the problems in affordable housing and vacant housing are not one to be solved by the architect. You can say that, the more you know, the deeper you sink into a pile of problems in the housing policies. The problems of affordable housing are not an issue of design, but more an issue of the government and economic situation, and also the social situation. The many housing policies and regulations make it hard as an architect to create a realistic solution for the affordable housing crisis. The general main goal of the development of housing in Mumbai, is to make profit. During this project a choice about how to balance this was an important choice to make. I choose to be as realistic as possible, but despite this, the reality still works differently.

But for all that, the possibility to work as a student in an academic setting, on an affordable housing project like this, was very interesting and informative, and I think is necessary for the overall research on this topic. With the help of the mentors and other experts, many things were possible. This graduation project not only gave me many new insights on an architectural level but also on a personal level.