

Technical University Delft | Architectural Engineering Graduation Studio

Degrees of Privacy in a Place of Togetherness: Community Centre in Bali, Indonesia

Ivana Kafedjian (4647033)

The motivation for this project stems from my personal fascination with sustainable traveling as a way of both personal development and stimulation/ enrichment of local communities. I chose Bali as a site for my project, as it has been one of the most overtouristic, inauthentic and disappointing (for me) places I have visited. Being an avid globe-trotter, I have so far been to 44 countries and have a sense of what "good" tourism is about, so I felt it natural to address this main passion of mine in my graduation project.

Meanwhile, I was becoming more aware of the global challenge of (plastic) waste pollution, which is an ever increasing concern on the island of Bali too. I could see the value being lost by economies and the damage being done to the environment. I wondered how we, as architects, could address this growing supply of plastic waste to achieve something positive for the locations which are currently suffering from it the most, using what we do- architecture.

Due to the technical aspect of the Architectural Engineering studio, my project started off with the idea of recycling plastic waste into building materials in Bali. The research process had to be narrowed down and made specific both to the location and to the field of study. This meant understanding the scale of the issue- how much plastic was available, where it came from, where it ended up (most often into the ocean) and where an intervention could be made. This resulted in a MFA diagram, presenting the flow of plastic waste materials. To understand what plastic could be used for in architecture, I researched what the available recycling technologies and their products are and aimed to grasp their potential, based on their physical and aesthetic properties. This later allowed me to apply them to the chosen location and to create context- appropriate and respectful architectural solutions. The study of plastics and their potential applications has continued throughout the design process, allowing me to make iterations to both structure and programme and achieve some results that would be less likely had more conventional building materials been used.

One of the main strengths of the project lies in proving that what is currently considered waste, can create beautiful and valuable results and lower the demand for virgin materials in the construction sector in Bali and in Indonesia in general (especially with its 10 New Bali initiative).

Besides the extensive desktop research, communication turned out to be an integral part of the project. To make a meaningful impact to the location and base the project into reality (almost turning it into a business case), I chose to work with an existing local community. During my visit to the island, I took part in the community's activities for a day, through which I got to understand their dynamics and make friends with them. I also discussed their wishes for the future and their programmatic needs, which provided me with a clear client, brief and site. I also organised meetings with a couple of architectural firms, which educated me about the cultural and environmental specifics of designing for the Balinese context. Communicating with local organisations and individuals has immensely contributed to my project and is an approach I will aim to incorporate in my future work.

In terms of the architectural design itself, I chose to work with all scales. The design choices started from the scale of the Regency (administrative area in Bali), as the local community proposed two possible sites for me to work on- one in a rural setting and one in an overgrown roadside location. I evaluated the potential of both for being successful hubs for the community and its future visitors and selected the village one, as it has more factors to comply with in the design and it provides more opportunities for locals. Then, I aimed to examine my personal experience on the site, to understand my thoughts, feelings and needs while wandering through the 1-hectare

piece of land, and imagine myself as a guest there. This experience, as well as my personal understanding of spiritual healing, which this community is based on, have formed the basis of my architectural concept: creating different degrees of privacy in a place of togetherness. This idea shaped the master plan, creating a diversity of possible routes and experiences through the site, depending on one's personal mood, feelings and goals. Finally, the building that I chose to focus on is the pavilion where all user groups come together in an informal setting. It is the space for free interaction, a communal living room and kitchen. Its small scale has allowed me to delve into its very details, to decide on its materiality, to consider how all elements come together, to experiment with combining bamboo and recycled plastic elements in the construction, and ultimately to design a unique roof tile, suitable for the set of conditions and the experimental material it is made of. The principles developed while designing the details and construction created a vocabulary for the spaces and their programme, which then fed back into the larger scale of the site and influenced the design of the rest of the pavilions. Bridging the gap between urbanism and building technology through developing the project at different scales has been one of the most interesting challenges for me and has allowed me to make sure that my proposal is truly viable. This gives me confidence to stand behind my work and makes me believe in the value it carries. In addition, it has given me an idea about where I stand as an architect- that I am passionate about staying on top of the full process, coordinating tasks, communicating with stakeholders and making sure that all components work symbiotically.

A leading goal of the project ever since I understood the scale of the challenge with plastic pollution globally, was to propose a solution that, through adaptation, could be applied universally. Often waste mismanagement is worst in countries with weaker economies, which coincidentally, are usually in regions that share similar warm climatic conditions. Case studies can be found throughout Southeast Asia, the Caribbean and beyond. The project proposal could be adapted to fit the requirements of a location with a different vernacular through changing the proportion of the structures, potentially altering the bamboo construction with a locally-sourced material (like wood or a reused materials), or adding stronger walls. Yet, that can be done while still following the basic principles of the construction of this project. I consider that a success and am looking forward to potentially further exploring the adaptive capabilities of the design. The roof tile is the most transcendental element, as it could easily be a substitute for conventional tiles that use raw materials.

I am happy that my tutors supported me in my endeavour, which is unique and quite different from my peers'. One of the most valuable lessons that I have learned thus far is that when being overwhelmed by unknowns, the best way forward is to formulate precise questions, as that is where the answers and decisions would come from. This has appeared a successful strategy both in terms of architecture and of building technology, and I believe it could be applied to nearly any field. It has been precisely through guiding me in understanding what might be missing in the narrative, or a drawing, or a detail, that my tutors have taught me ways to deal with professional challenges. Lastly, the encouragement and support I felt in their teaching method has proved to me that I work best and most efficiently through positive reinforcement.

In conclusion, I consider the project a success, as it has managed to answer the design questions asked in the beginning and live up to the goals that the users and I had set for it. Currently, the questions I ask myself are related to the real-world execution potential of the project. I wonder what it would take to improve the waste collection habits on the island in order to ease recycling and increase the amount of resource available. That would dictate at what speed and with how much energy projects like this one could be built. Also, I am curious about how the design would change, if I involve the community in it. Yet, I purposefully avoided this during the design for ethical reasons: as not to get the locals attached to the idea of such a big expansion of their activities. Lastly, during this year I aimed to enjoy the work process and challenge myself as much as I could- goals which I fulfilled, and I hope that my love for this project shows in the final result.