

## REFLECTION PAPER

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*St. Maarten is one of the islands in the Caribbean, situated within the hurricane belt of the Atlantic Ocean. In september 2017, it was hit directly by a hurricane called Irma, causing widespread damage to the island. As many other Caribbean islands, St. Maarten is highly depending on tourism as an income, which with drawled in the aftermath of the hurricane. Since the 1960s, its nature, better known as 'sea, sand & sun', created a high economic value. Old plantations, salt winning, fishing and cattle slowly disappeared to maximize the tourism. Additionally, the island has become one of the most dense islands of the world. The development of the mass tourism has caused destruction of habitats, intense use of land, decreasing biodiversity and the pollution, forming huge threats for the ecosystems. We could say that St. Maarten's biggest product is in danger. However, the natural environment of the island has already shown that it's highly resilient and could solve many sustainable challenges for the mankind. But most importantly, they are the essential base of our economy and our well-being, by what they bring on a local, regional and global level.*

### I. RELATIONSHIP RESEARCH & DESIGN

*At the beginning of the research, I was deeply inspired by the use of an ethnographic method by Tsukamoto.<sup>2</sup> The Japanese architect used ethnography in order to reconstruct the lifestyle of the fishermen in a village in Japan which got completely destroyed by a tsunami. Through site visiting, interviews and studying the history he and his studio came across the as called 'commons' and thereby discovered a network of things around architecture and life in the village. The challenge of using this method lies in the time that is being spent on the island. Ethnography used in anthropology follows the model of months or even years spent living with people, engaging with their daily life. Unfortunately, we, and architects in general, are often not given this time. There is the possibility of presenting a false complete picture as the research is often subjective. One can have assumptions or judgements on a culture. Nevertheless, I concluded that not only the ecosystems of the island should be investigated but also how they are used. Which services can the ecosystem provide for a (re)generative relationship between inhabitant and the island, taking the economic dependency on tourism into account?*

*Aware of the economical dependency on tourism, I studied how this form of recreation could be used to enhance the natural environment, instead of influencing it in a destructive way. Case studies were investigated by their spatial interventions. Their processes created a strategy towards the design and what the program of the project should be.*

*The chosen site is a place where nature, development and history come together. The area of Red Pond/Gibbs bay comprise a pond with mangroves, the coastal area, ruins of a plantation and a concrete structure of an unfinished resort. All of these layers together form a complex project of several levels through time, community and nature.*

*Minimal interventions taken on the existing buildings should enhance the relationship between human activity and the ecology. It supports movement by collective and cooperative facilities planned on a strategic location - not only used by humans. These interventions consist not only of architectural elements, but certain grades of demolition as well. At some places the existing foundation walls are kept facilitating shelters for birds or bats, at other places humans take the upper hand.*

### II. RELATIONSHIP PROJECT TOPIC, AE STUDIO AND MSC ARCHITECTURE

*Every day, the impact of climate change is becoming more and more visible. My personal interest lays at first at creating awareness, where the integration of technology in architecture can create new possibilities and can develop a form of inspiration. The St Maarten studio this year was a small group and as a collective we did research into the existing circumstances in order to come up with potentials to make the inhabitants more resilient. The clear boundaries of St. Maarten benefit the context led research process, starting with the importance of the physical, social and historical setting. Then, quantitative data such as certain physical flows, for example water and waste, were investigated. Personally, I was interested in the flows of nature and how it showed its resilience. The research created an opportunity to focus on the process. How we as human beings are depending on the cycles of nature. How the artefacts are made and how they could be made by inhabitants. How the climate could be used for optimal comfort. In my view, studies in the ethnography should be a compulsory subject in the school of architecture. In that sense, projects make architect, evoke a specific awareness and facilitate human actions. In the end, I think all our projects of the St. Maarten graduation studio can be more seen as a process where research, engineering and architecture are continuously being (re)connected.*

### III. ELABORATION RESEARCH METHOD & APPROACH

*The ecosystem and the use of it is a very complex subject. The boundary of the project with ecosystems as a whole could have been tied to specific domains within the ecosystem such as water or energy. In that way it could have been easier to get a grip on the subject, the culture and the use of it by a community. On the other hand, the wide territory provided me a range of narratives dispersed over the island and various scales interventions.*

*The activity of people itself is destructive and sometimes it is desired to have no human interventions at all. This felt sometimes contradictive to the project where I needed to design an actual building. The proposal has become a search for balance between intervening and leaving. Firstly, the cycles of the different ecosystems and services was studied on a scientific way. This was followed by case studies indicating that restoring a certain flow of the ecosystem is a scientific project on its own. The proposal lies within a rather poetic domain as it is based on assumptions how nature and guest would react to it. So, there was a strategy towards nature on one hand, a strategy towards architecture on the other, becoming two different worlds during my process of designing. The feedback was therefore, that I should get the 'backbone' of the project straight and doing a little assignment: research what is best for the ecology and what is best for human being. Followed by a design solution which combines the best of these two, supported by the pillars of the research outcomes. Another feedback point was the engagement of the local people. Are they going to build it? If yes, how would this be done and where would the material come from? During the graduation I learned that for every design, the transferability must be researched in every single way – from material to use. Going back over the past months, architecture should have been more integrated in my thematic research process and several interventions should have been framed. In this way, the solutions could have been stronger by producing and testing a framework of architectural tools for a specific use. Towards the P5 I'm hoping to get a better grip on the qualities of the additions to the existing buildings and to elaborate two or three places more towards a spatial design, comfortable for human and nature.*

### IV. ELABORATION GRADUATION PROJECT AND SOCIAL/PROFESSIONAL/SCIENTIFIC FRAMEWORK

*Our era of constant crisis demands stronger social and political engagement wherein we are learned to take a critical position. Therefore, the challenge is to work across various disciplines. My proposal compasses the ecology where natural resources had to be studied as a biologist, placed in a spatial plan like a landscape designer and the local culture had to be studied as an ethnographer. Finally, the architect evokes a specific awareness and facilitate human actions – and in my case even actions of nature.*

*Interventions of the modern ruins at the choses site are a call for an experimental relationship between nature and its user. These ruins show traces of our economy, development of time and most importantly; they trigger our imagination. In our modern world the decay of these buildings makes us think of possible transformation or even more often the case – demolition. However, the drawings of Piranesi showed that decay has always been part of our cities. The classic ruins created a void without any specific use. Still, in every drawing, these are used by citizens as a place for gathering, recreation or producing. Within my strategy, some interventions are designed to be left by human actions by changing its program from resort to a ruin providing a habitat for native animal. It is a reflection on how we as architects can explore new types of spatial design and how we should be aware of the dubious modernisation.*



*View of the fountainhead and the Grotto of Egiria outside the Porta Capena. By Giovanni Battista Piranesi. (1760). Retrieved from <https://www.metmuseum.org/art/collection/search/400195>*

V. ETHICAL ISSUES & DILEMMAS (WITH RESEARCH OR DESIGN, OR POTENTIAL APPLICATION OF RESULTS IN PRACTICE)

*Tourism is the fastest growing and most polluting industry worldwide. We all contribute to this polluting industry as it has become more accessible to travel than ever before. However, there is a growing awareness towards the exhaustion of our natural resources. The term 'ecotourism' emerged quickly where one could stay in a sustainable eco-resort running off the grid. Today, tourism is transforming even more by the term 'circular economy'. Hotels are becoming part of initiating positive change within communities. The subject of my graduation is very relevant within this shifting position of the way we take part in recreation. Yet I am aware that the integration of ecosystems within the design can't be fully feasible as it is a speculation how it would react to the spatial interventions.*