國立政治大學國際傳播英語碩士學位學程

International Master's Program in International Communication Studies

College of Communication

National Chengchi University

碩士論文

Master's Thesis

台灣消失中的秘境

Taiwan's Vanishing Paradise: A story told by a foreign student

Student: Marcell Varga 韋明韶

Advisor: 湯京平

中華民國 104 年 7 月

July 2015

National Chengchi University
International Master's Program in International Communication Studies

國立政治大學
國際傳播英語碩士學位學程
Master's Thesis
碩士論文

Thesis Title （論文名稱）：

Taiwan's Vanishing Paradise

台灣消失中的秘境

Name（姓名）：Marcell Varga 韋明韶

This is hereby certified that this Master's Thesis has successfully passed the final defense

茲證明本碩士論文業經口試委員審查通過

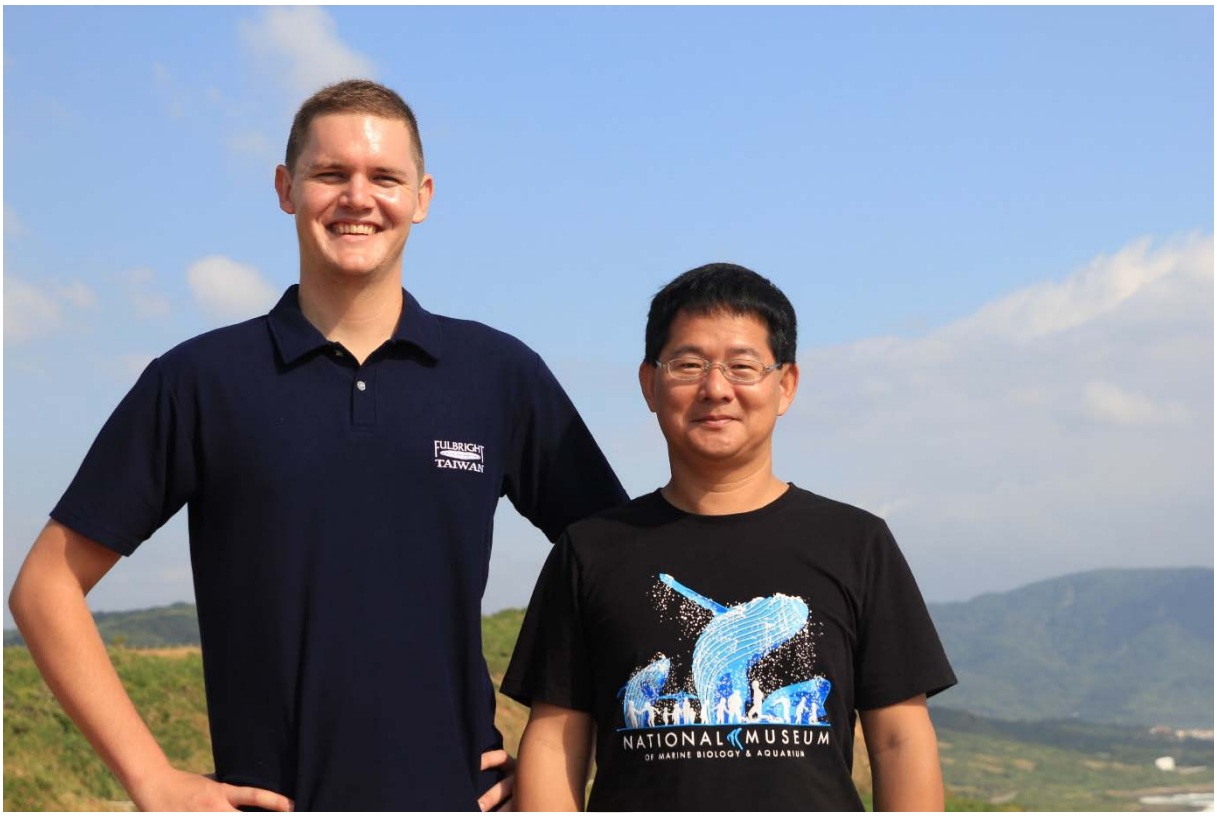
Advisor (指導教授)	National Chengchi University (國立政治大學)	
Committee (口試委員)	National Chengchi University (國立政治大學)	
Committee (口試委員)	Chinese Culture University (私立中國文化大學)	
Director of IMICS (系所主任)		

Date（日期）：7/22/2015

Acknowledgements

Foremost, I would like to express my deepest thanks to my two main contributors to this paper and film, Nathaniel Maynard and Dr. Tung-Yung Fan. Their patience, encouragement, and immense knowledge were key motivations throughout my Masters Thesis.

Without their firm support, this film wouldn't be able to get done.



Furthermore, I would like to thank my supervisor Professor Ching-Ping Tang and and my other advisor Fabia Lin, for their massive amount of support and help in the making of this.

Abstract

Taiwan's Vanishing Paradise is a short documentary film about the ecological, social and financial situation in the Hengchun Peninsula, South Taiwan. It revolves around the fact, that the area is a natural paradise, yet the local communities are relatively poor hence, the ideal location, climate and natural habitat. The coastal zone is populated by the world's most unique hard corals, which could only be found in this area. The film delivers its message through the camera lense of a foreigner, giving it a little twist. It's purpose is to raise awareness about the possibilities of financial and infrastructural development. Corals are valuable and the community doesn't take advantage. How could this scenario emerge without anyone noticing or doing anything about it? It well may have been noticed, but a viable solution has not yet been implemented until this day. This film also provides a solid plan for changing the situation, to give this beautiful area a chance to be an ideal paradise for both men and nature.

The film is watchable on the following link:

https://www.youtube.com/watch?v=0UCWVpOgu84

TABLE OF CONTENTS

Introduction

Taiwan is a beautiful tropical island located in the South China Sea with unmeasurable amount of natural treasures and huge biodiversity. This is the island where insects and reptiles are huge and scary, but its inhabitants are probably the most hospitable on this planet. An island with convoluted history and continuous political debates about its existence. This is a place where I learned the most about myself, where I learned the most about the world and as a token of my gratitude, I will try to give something back that hopefully brings less conflict and a little more understanding to this island of peace and safety.

Taiwan has many wonderful areas with distinct look and vibe, but for me nothing really performs out the Hengchun Peninsula(恆春半島) in things to see and experience. This region can be found at the Southern tip of the island forming a cone shaped narrow bridge into the Pacific Ocean. This area is part of Pingtung County(屏東縣) and also gives home to the country's number 1 national park the Kenting National Park(墾丁國家公園).

Here you can see the approximate area of the Hengchun Peninsula on this map, marked with the red bracket.

Being a peninsula and surrounded with water from either sides, the human population has a very long and deep connection to the ocean itself. It influences their life on a day to day basis, through various activities, jobs and events which is rooted into their culture and traditions. I was fortunate enough to visit this area about a handful of times, which made me realize a number of things, that seems to be peaking recently, but did exist for a long time. This phenomenon is partly connected to something, that we call the act of travelling for pleasure: tourism. Tourism here in the Hengchun peninsula is what brings the daily bread to the table for many people out there. Most of these tourist activities are vastly connected in some ways to the ocean itself. It can have various forms such as beaching, surfing, diving, snorkeling, sailing, rafting, fishing etc. . Aside from ocean-lovers, outside communities benefit from this area by a great amount. Government, academic institutions and “inland tourists”(tourists in hotels, exhibitions, museums, night markets) seemingly have the most advantage from the beauties, that this place can provide.

On the other side, there is everything else that is given less and less attention to preserve and keep intact. Things that demand more attention and are part of this eco-system for

hundreds of years such as the corals, fish, crabs and turtles, which are also reasons why many tourist come here. Aside from the inhabitants of the sea, land-dwellers such as the local human population suffers the greatest losses during the current state of action. This is their story, and hopefully a story of better understanding and more opportunities.

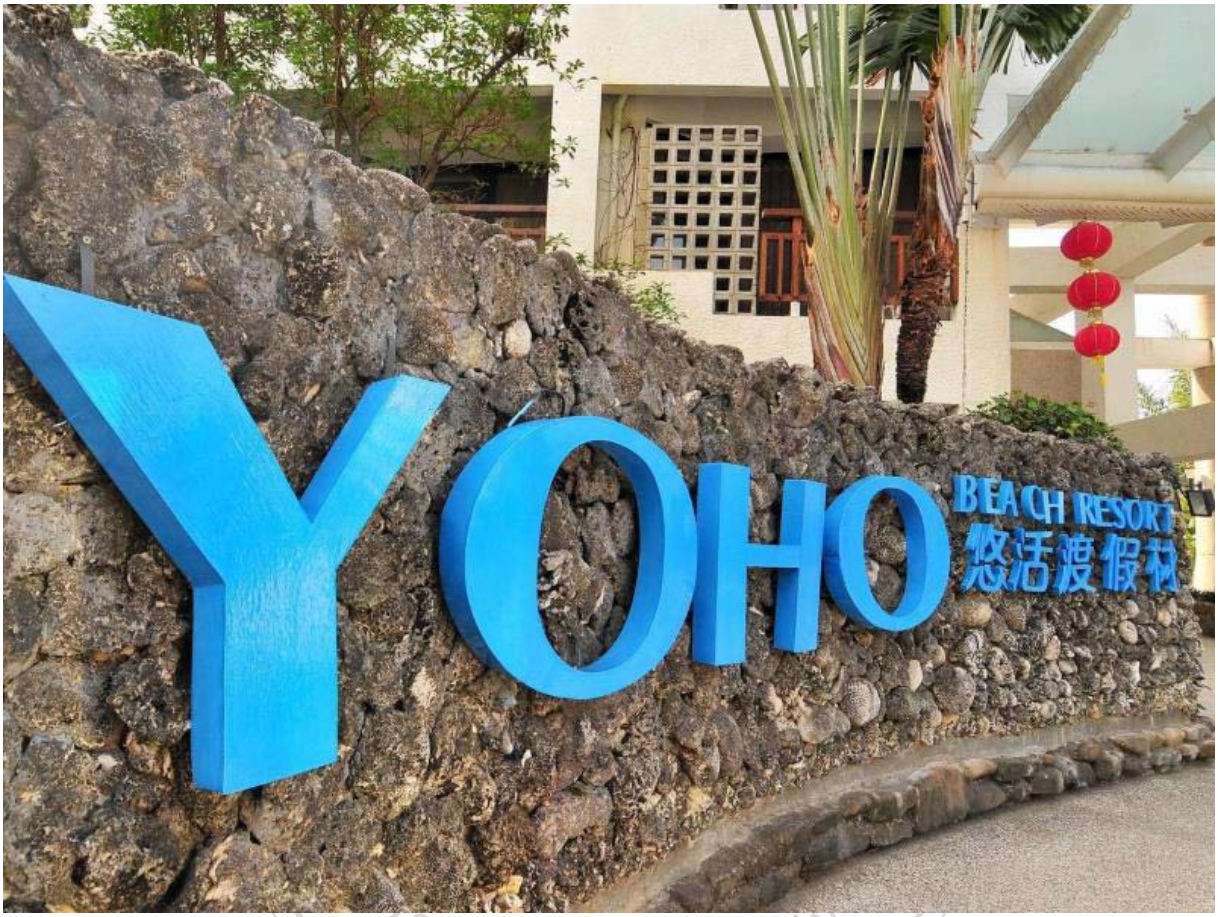
This film is dedicated to show, that the local dwellers and the flora and fauna is not benefitting from the current situation, despite the amount of money distributed in the area. I will explore and show the current events in action, highlighting the main conflicting factors. The adventure I embarked on was not easy by any means, but made me realize hundreds of new and surprising things, that will hopefully help me to explain the real case. I am compiling these pieces of video recordings to benefit the area and its people. I want the audience to feel, what I've felt, when I travelled to these locations and in order to give that feeling, I wish to voice this entire set of display in a style of a documentary film.

Focus

The main focus of my film is to investigate, analyze and provoke ideas about the development of the Hengchun Peninsula. The very Southern tip of the island with amazing wildlife, natural environment and opportunities to provide tourists with entertainment and activities. The area is located in Pingtung County with the Pacific Ocean embracing the entire territory from the sides. The biggest city here is Hengchun which has a land area of 136.7630 square kilometers and has a population of 30,859 as of December 2014. Built over 130 years ago, Hengchun carries with it a very interesting history of Taiwan. This township is the entrance to the Kenting National Park, the country's number one national park with really good climate throughout the whole year. This area is also reffered as the „tropics of Taiwan"

with beaches and palm trees scattered all around. The representatives of the aboriginal culture here are the Paiwan group(排灣; pinyin: Páiwān) an indigenous tribe of Taiwan. They speak the Paiwan language. In the year 2000 the Paiwan numbered 70,331. This was approximately 17.7% of Taiwan's total indigenous population, making them the third-largest tribal group. Aside with the local people, many lived from traditional forms of fishing and agriculture. During the 70's and 80's the area was heavily overfished until the government banned any forms of commercial fishing, but many say that it was already too late. The main reason to be worried is the status of the local coral reefs, which had a greater biodiversity and number before human interaction. Overfishing, nutrient enrichment, and other human activities may reduce the resilience of coral reefs and their capacity to recover from short-term disturbances, such as typhoons and bleaching. Scuba diving and snorkeling are one of the main activities one can do around the whole peninsula, which usually unfortunately results in seeing only a small fraction of the original habitat. Tourists come here in groups to enjoy the seashore of Nanwan, the only big designated beach area with activities like jetskying and banana-boat riding. Nanwan beach is about 500meters long, placed right next to giant nuclear power plant reactors, giving a very distinct look to the location.

Coming to this place during the main season results in seeing quite a few people on the beach. At least this is what Taiwanese people think. In reality, this is different. Most of the tourists stay in hotels like Yoho, where I was lucky to conduct an interview with the staff.



All the local villages feel empty and abandoned. Walking through them feels unsettling, like if young people would've left decades ago. No sign of bars, restaurants or shops in many villages in the area, which is very suprising for a tourist like me visiting this absolute paradise for the first time. I wanted to know how did things end up like this... how did the situation change in such an extreme fashion. In order to understand the phenomenon I set up my mind to make a documentary film to find answers and solution. My observations, talks and interviews will be the guidelines in this movie narrated by my very own voice using similar face-to-face segments like in David Attenborough's nature shows.

My very first findings left me with a big unanswered questions, that I am trying to decypher with the help of this documentary. Hengchun's tourism is basicly coastal, which simply means corals. The forest areas are also implemented in every suggested tour plan on the official website of Kenting National Park, but the coastal areas are the main reasosn why tourists visit the area. The biggest problem is that corals, a natural resource is not integrated well in the system. These super valuable and amazing creatures are not utilized well, which limits tourism and discourages the protection of corals.

Research Question and Hypothesis

„Why are the local communities leaving money on the table for short term gains instead of sustainably planning for a better future?"

Corals are valuable and the community doesn't take advantage. How could this scenario emerge without anyone noticing or doing anything about it? It well may have been noticed, but a viable solution has not yet been implemented until this day.

My hypothesis is the following: *„Ineffective utilization of marine resources holds back natural and social capital development on the Hengchun peninsula."*

The main reason behind me choosing this topic is my love and passion towards nature and my lack of understanding over this whole situation. I fell in love with nature films back in the day, when I was a little kid. Every weekend I asked my grandfather to go to the VHS rental store and get one of David Attenborough's amazing works, such as Life on Earth(1979) or The Living Planet(1984), which had a hypnotizing power on me. Since then, I was always dreaming about making something similar. To open eyes of many others to the wonders of our beautiful planet. Now this is my first attempt to pay respect and show my gratitude to

the legendary man and also to Taiwan, the country that has given me more than I would've ever thought.

In life I believe, that there are many wonderful things we are unaware of, but still enjoy their benefits. Hengchun Peninsula has everything to be Taiwan's most advanced and prosperous tourist locations, so let us see what is exactly going down the drain to understand and relate to the situation. Natural life such as corals are especially prescious living ogranisms on our planet and with this film I will also show, their wonderful abilities, current status, people living around them, industries built upon them and dangers they have to face each and every day in Southern Taiwan.

Methodology

My methodology includes three different techniques to fulfill this project.

The first part is a literature review, where I examined the history and status of the area I am researching. Furthermore I made a thorough study abou coral reefs in general and specifily around the Hengchun Peninsula. This section also involves a study about ecotourism and nature tourism as well. I had to examine these fields to have a broader understanding of the situation.

Secondly, I made interviews in a form of a qualitative research. I used the help of Mandarin speakers to conduct these interviews and after the talk I was told about the majority of the conversation. This helped me to analyze different perspectives such as a Hotel, Academic Institution or a Government institutions.

Thirdly, which is the fundamental of my project, I used film making as the most important way to show my research. I recorded and edited every piece together with my own DSLR

camera. I was hugely inspired by David Attenborough, a nation film producer from the United Kingdom. I tried to implement face to face, background roll and analitic sections throughout the whole film.

I believe a film is a lot more visual and gives a briefer but easier understanding about the story I wanted to tell. I believe it can be used as a way of teaching people about the area in a more efficient way.

Working Title: Taiwan's Vanishing Paradise

Producer: Marcell Varga

Director: Marcell Varga

Camera operator: Marcell Varga

Sound recordist: Marcell Varga

Editor: Marcell Varga

Other collaborators: Nathanial Maynard

History & Context

Hengchun Township

The township of Hengchun was built over 130 years ago, carrying some of the most important histories of Taiwan. Hengchun Old Town was built in 1873 during the late Qing Dynasty. The town was occupied by the Han Chinese during the Dutch occupation in the 16th century. After the fail of Lin Shuang-Wen uprising against the Qing Dynasty in 1786, the Qing Government banned Han Chinese settlement in Hengchun (Langchiao) for many years.

It was not until the Mudan Incident of 1874, when the Japanese army invaded Taiwan making a difference in the population of the local aboriginals, bringing the Qing Dynasty realized the significance of protecting the southern coast of Taiwan. The developments during that time period brought prosperities and developments to the city, such as the city wall, an official district, as well as reaching a peace accord between the Han Chinese settlers and the local aborigines.

Hengchun Old Town was built in accordance with the traditional Chinese geomancy (fengshui), in which the town's location occupies a basin surrounded by Guanshan (Mt. Guan) to the west, the Central Mountain Range to the east, and Dajianshan (Mt. Dajian) to the south. With a carefully selected location great in terms of both geography and its Chinese geomancy qualities, Hengchun Old Town offers spectacular sceneries in all 4 directions for one's Kenting travel.

The city wall of Hengchun Old Town is one of the best-preserved ruins of its kind in Taiwan. The walls are 13-meter high and 2,500 meter-long standing complete with its original gates. The walls were developed by the Qing Government to allocate resources to bolster the city's defenses and developments after the tensions with Japan subsided. As one of the best-preserved city walls in the country, these walls have been classified as a Tier-Two national historical site.

With abundant cultural and historical assets, Hengchun Old Town is favored by many contemporary writers and historians. The old town of Hengchun also regained its fame as it was the filming location of Taiwan's hit movie "Cape No. 7", the top-money-making Taiwan film in 2008. (travelking.com.tw)

Hengchun Township is located at north latitude 21.4525 and east longitude 125.9. The area is 136.7 630 square kilometers, with a population of 30835(at the end of January, 2012).

(http://www.hengchuen.gov.tw/)

On January 16th, 1946, Hengchun Township was officially promoted to a “township” within the jurisdiction of Pingtung County. The 17 villages under the jurisdiction of Hengchun Township include Chengnan, Chengbei, Chengxi, Shanjiau, Wangsha, Renshou, Jiahu, Tougou, Sigou, Dehe, Longshui, Shanhai, Daguang, Shuiquan, Nanwan, Kending and Eluan. To its east is Manzhou Township, and to the north is Chcheng Township. Being surrounded by the sea at three sides. Hengchun’s west side is the Taiwan Strait with mainland China on the other side of the Strait; to the east of Hengchun is Pacific Ocean, and to the south is the Bashi Chann.

Kenting National Park

The history of the Kenting area is as old as the history of Taiwan itself, although its days as a national park are far fewer. Long before Taiwan established the Kenting National Park

Project, the area was perhaps most famously known for its fortified lighthouse, the Eluanbi(鵝鑾鼻燈塔).

In the 1860s, the Chinese government received requests from both the Japanese and the American governments to build a lighthouse at this location, as a number of American and Japanese ships had shipwrecked in the nearby tidal waters. It took almost two decades to build, during which time the Chinese military had to keep watch over the lighthouse to protect it from raiding tribesmen, who did not want the lighthouse on their land.

Elaunbi was completed in 1883. Over 70 feet high with a light that projects 185 feet above the water for more than 27 nautical miles, the Elaunbi lighthouse still performs its duty.

The National Park Law

There were no Taiwanese national parks before Kenting. The first Taiwanese National Park Law was decreed in 1972, claiming that spots with ecological, historical and recreational value to the country would be eligible to become national parks.

In 1977, the Taiwanese premier at the time, Chiang Jing-Guo(蔣經國), reacted to studies of ecological damage done in the Kenting area as the result of overzealous farming and construction, by determining that the government had to take steps to preserve the natural resources of the area. In 1979, the Ministry of the Interior then asked National Taiwan University to conduct an in-depth ecological and topological survey on the Kenting area, in order for the Taiwan Housing and Urban Development Bureau to draw up a plan for the Kenting National Park Project.

Officially Becoming a National Park

Kenting was chosen for its fertile land and tropical climate, which have resulted in a variety of unique plantlife and wildlife species. The aim of making Kenting a national park was to preserve the land for educational, scientific and recreational purposes for generations to come. Kenting became a national park in 1982. In 1984, Kenting's National Park Headquarters was established and continues to be administered by the Executive Yuan's Ministry of the Interior.

To facilitate the development of the area, the goverment set out a plan to build the country's third nuclear power plant. The Maanshan Nuclear Power Plant (馬鞍山核能發電廠) is the second largest power plant in the country in terms of capacity. It was comissioned in 1984 and it's expected life span was 60 years. However this year, in April one of the reactors had to be shut down after it's auxiliary step-down transformer caught on fire.

Fishing History

Tuna fishing became crucial Taiwan's economy and society during the 20's and 30's as the government encouraged investment in boats and equipment and the migration of skilled Japanese fishers to the island. The depletion of tuna resources in Southeast Asian waters in the 1970s did not devastate Taiwan's tuna fishery. Instead, it stimulated the industry to explore tuna resources in the waters of remote oceans. To cope with the ecological changes in the marine environment of Southeast Asian waters, the fishing authorities in Taiwan provided loans and encouraged fishing companies to build large distant-water longliners. To solve the problem of logistical support and open up overseas tuna markets, Taiwanese fishing enterprises cooperated with American and Japanese fish dealers. By the mid- 1970s, the annual volume of Taiwan's distant water tuna landing was only behind those of Japan and the United States. (Chen, Ta-Yuan, 2009)

Taiwan’s tuna fishery had developed into a global scale fishing industry. The wild marine harvest is widely believed to have peaked in the late 80’s, when it has basicly shrinked the coastal fish population to it’s bear minimum. The fish population hasn’t recovered since also harming the local coral reefs. Furthermore based on a research made by Taiwan’s Fishery Agency made in 2011, which indicates that the annual catch from coastal fisheries last year(2010) decreased 42.69 percent compared to 2001's catch.

"The dwindling number of edible fish and exhaustion of marine stocks has created a vicious circle in which fishermen spent more time and energy on the job with no proportionate increase in catches," TEIA Secretary-General Chen Juei-pin said in a Taiwan Today report. "This development has grave implication(s) for the country's ecology, fisheries and tourism. We urge the government to designate protected marine areas and improve enforcement of protection laws." (ww.upi.com)

National Museum of Marine Biology & Aquarium

„In 1991, the preparatory office of the National Museum of Marine Biology and Aquarium(NMMBA) was formally established, the hard and tough scheming and construction work were then begun, the opening of the Waters of Taiwan was finally finished on February 25th, 2000 after numerous efforts and frustrations, we formally stepped toward the infinite field of international marine education and research since then.”

„Under the multiple functional thinking of the museum affairs, the NMMBA also approaches the overall promotion of community, entertainment, international and so forth other than the upgrading of the educational, academic and conservational aspects. In July, 2000, the Aquarium Department of the museum was consigned to Hi-Scene World Enterprise for professional operation and management after screening. This not only initiated the first case of consigning the national social educational agency to outside operation, but also implemented thoroughly the cooperation concept for professional division of labor. The building allocation can be divided into: the museum (the three theme exhibit halls of Waters of Taiwan, Coral Kingdom Pavilion and Waters of the World and administration and teaching centers), several major building divisions like the husbandry center, public facilities, research building, maintenance facilities, international conference center and academic research center. The Coral Laboratory could be found just right next to the museum aside with other buildings such as the researchers dormitory, stables and a church.

The NMMBA introduced the Waters of the World covering the global waters and ancient ocean with the method of combining the aquarium and all digital images following the openings of the Waters of Taiwan and the Coral Kingdom Pavilion. All progresses were finished at the end of 2007, which made the NMMBA the best museum worldwide."

(www.nmba.gov.tw)

Organs with benefits

The items listed above including the Museum, Coral Laboratory, Local authorities, Kenting National Park Headquarters and the Power Plant are all well founded institutions providing valuable job opportunities to the locals. I am not exaggerating when I say, that these are the only units that show development in the region. Nonetheless, they all suffer from less and less support from the government.

Kenting National Park's management costs and charges increase every year, yet their budget remains the same. More visitors equals more costs but that doesn't mean more budget. The Visitor's Center looks nice, but it didn't really provide us any information about the local businesses. They don't seem to have a close relationship with the local communities.

The National Museum of Marine Biology and Aquarium was opened in 2000, which was the government's biggest investment in marine research and education and conservation in the country. This became the center of the economic infrastructure for environmental protection and marine affairs. School trips and Guided tours also started to rally between the museum and the rest of the country, yet not bringing a lot to the local communities.

The Coral Laboratory was established a bit before the opening of the museum, since they had to gather a lot of corals for the museum's live coral exhibit. They wanted to make the

entire exhibition out of the local coral species, which was managed by Tung-Yung Fan, the director of the coral lab. He also explained, that the power plant also funds the coral lab, which is a valuable help due to the increase of costs.

(inside the coral lab at Wanlitong /萬里桐)

In the year 2014, an ocean economist masters graduate Nathaniel Maynard won a Fulbright grant to help and do research at the coral lab. Nathaniel Maynard is a Fulbright Fellow working with the National Museum of Marine Biology and Aquarium. He is researching biological coral surveys and economic modelling in order to determine the total economic value of the Kenting National Park. He received his Master's degree in International Environmental Policy the Middlebury Institute of International Studies. After a whole year of research he could analyze the economic value of the marine area around the Hengchun Peninsula. He used a method called WTP(willingness to pay) and benefits transfer to come up with very intriguing numbers. "Each time you buy something, you would always pay a little more if needed. Economists call this extra amount you didn't pay "consumer surplus."

The same thought process applies for visiting a coral reef. Consumer surplus, or simply, additional recreational value, is well studied, and we can use this estimate to gauge the additional value people would be willing to pay to see coral reefs. We multiply the WTP value by the 5.2 million coral area tourists to find NT$ 15.7 billion per year in recreational consumer surplus. Keep in mind this is an initial benefits transfer value and not the market price."(Maynard, 2015)

It is a fact that at least 80% of Taiwanese people have been to Kenting at some point in their life. As the first national park in the country, it is a piece of Taiwanese identity and a source of pride. Everybody knows about Kenting and will ask you to visit, because it supposed to be amazing. All in all, he measures the marine area to be worth about 40 billion NT$, which is a total economic and not financial value. This basicly translates to the fact that, Hengchun has a massive amount of valuable resources, that are underutilized and kept in the corner. It really feels like, the local communities are just sitting on this golden egg, that is never gonna benefit them.

A vanishing paradise

According to research by the Kenting National Park (KNP), more than 80% of Taiwanese people will visit the park at some point in their life, and of those, 70% will go to one of the park's coral areas. Over 400,000 international and domestic tourists visit the area each month. These tourists bring critical revenue to the Hengchun Peninsula supporting livelihoods and infrastructure. At the same time, rising tourism increases overfishing, water pollution, and coastal development, all of which damage marine biodiversity. Locals need both economic development and natural integrity, but how?

„In the past, policy makers tended to focus on either growth or conservation to the detriment of both. Natural resource economics helps us understand ecosystems in monetary terms using social science--bringing our relationship with nature into the realm of financial planning. Once we know an ecosystem's value, we can find appropriate legal settlements, reprioritize development goals, and help raise public awareness for better conservation. No ecosystem needs more protection right now than coral reefs, the beating heart of Kenting."(Maynard, 2015)

So, what can one actually see if travels there? Devastation. Empty villages. Polluted coastal waters and dirty beaches.

(A huge pile of trash I photographed at Kenting's beach)

(Extremely polluted water at Houbihu's beach)

(Ruins of a local estate on the main street of Houbihu)

This is what is visible from the outside. A look of a paradise, that once shined, but now it is just a shade of its former past. Going through some of these places like Houwan(後灣) feels earthcrushingly suprising.

(Houwan / Back Bay /後灣)

This village is located right next to the National Museum of Marine Biology and Aquarium, yet looks like one of the most abandoned places I've visited in Hengchun. It has a few "rooms to let" signs and a café, that wasn't open when we visited (Saturday afternoon). The main street was totally empty except for a pack of sickly dogs lying on the concrete. It felt completely wrong, since the village is so close to one of the most highly rated touristical resorts. Later that day we saw a few tourists walking around, but yet no shops, restaurants or entertainment is nearby. This is one of the most coral rich areas with a beautiful scenery and a nice hike nearby(Mt. Guishan / Turtle mountain / 龜山).

(A view on the main street of Houwan)

(A dog left alone on the seashore at Houwan)

Why is this happening- I asked my guide (Nathaniel Maynard) while we were there. He couldn't reply. This phenomenon to me as a foreigner feels utterly strangle, since this beautiful area seems to be abandoned without any organized effort to change things right.

What are the things that could turn things back to normal? At this point it is clear, that tourism can't benefit the locals if they are not aware of how to grasp them. How can tourism change the picture? To understand the possible solutions, first with the help of the coral laboratory assistance, I wanted to understand why corals are so important for the eco-system and what can they do to accelerate the touristic demands of the area.

This is a spreadsheet that shows the distribution of benefits in the entire Hengchun Peninsula. It is easy to see the uneven distribution of values, which means that the top benefitters are the government, the tourists and the academic institutions. This is something that only an entire organized attempt could change.

Total Benefits Distribution by Group	
Group	Value (NT$)
Surf Tourism	284,457,192
Snorkel/Dive Tourism	1,865,824,067
Hotel/ Restaurants	1,269,187,018
Fishermen	1,015,289,868
Local Residents	1,284,467,039
Government	2,906,580,637
Tourists	1,647,486,072
Academic Institutes	2,647,590,147

Total Benefits Distribution by Group	
Group	Value (NT$)
Surf Tourism	284,457,192
Snorkel/Dive Tourism	1,865,824,067
Hotel/ Restaurants	1,269,187,018
Fishermen	1,015,289,868
Local Residents	1,284,467,039
Government	2,906,580,637
Tourists	1,647,486,072

(Slide from Nathaniel Maynard Final presentation at FSE, Taipei, 2015.)

What hold the highest value? What could be the fortune of the local people? What do they have to do, in order to step ahead from the past? They need to develop a way to utilize "their" corals for themselves. In the following section I am indicating the importance of these creatures and also dangers and hazards that they are facing.

Quick Coral Guide

What is a coral?

So what is a coral exactly? They are made up of millions of small polyps, that could be split into two categories: hard and soft. Hard corals form a solid calcium skeleton and with time, these grow into reefs: some are small and some are very large such as Australia's Great Barrier Reef. Soft corals have at least eight feathery tentacles and typically a flexible skeleton(unlike the hard coral's). „Similar to plants, both types use photosynthesis to generate sugar, and they also collect nutrients from the water. The coral polyps do not photosynthesize themselves, but instead, zooxanthellae, a symbiotic bacterium residing in their tissue, do this solar conversion. When the corals become stressed, the zooxanthellae leave, which deprives the coral of energy. This causes bleaching; the coral loses its color and eventually dies. High temperatures, excessive pollution, invasive species, and acidic waters all cause coral bleaching. These factors also synergize with other threats accelerating coral loss. **(Maynard, 2015)**

Coral reefs

Coral reefs are formed over a long period of time. Most coral reefs form in warm, shallow sea waters and rise to or near the surface, generally in the form of a barrier reef, fringing reef, or atoll. Coral reefs grow upward from the sea floor as the polyps of new corals cement themselves to the skeletons of those below and in turn provide support for algae and other organisms whose secretions serve to bind the skeletons together. The resulting structure provides a critical habitat for a wide variety of fish and marine invertebrates. Coral reefs also protect shores against erosion by causing large waves to break and lose some of their force

before reaching land. The Great Barrier Reef off the northeastern coast of Australia extends for some 2,000 km (1,240 mi), making it the world's largest coral reef. **(Houghton Mifflin, 2002)**

Types of Coral Reefs

„Coral reefs everywhere grow by the same processes, but their geomorphology is shaped by the foundation on which they grow and sea level history. Most coral reefs of today were established less than 10,000 years ago, after sea level rise associated with the melting of glaciers caused widespread flooding of the continental shelves. Once the coral reef communities were established, they began building reefs that grew upward in concert with continued sea level rise. Reefs that grew too slowly became covered by deeper and deeper water until they received too little light to support reef growth altogether. These reefs are sometimes referred to as drowned reefs" **(Kleypas, J., 2012).**

Reefs are commonly classified according to three main reef types: fringing reefs, barrier reefs, and atolls.

Fringing reefs are simply reefs that grow attached to the shoreline (of either continents or islands). Fringing reefs begin growth in shallow water close to shore and tend to accumulate

outward. South Taiwan's reefs are all fringing including my investigation area the Wanlitong Reef. *You can see the referred area on the pictures below.*

Barrier reefs typically grow along the outer edges of continental shelves, separated from the mainland by open water, and are actually discontinuous composites of many smaller reefs separated by channels. These often grow on top of one or more ancient reef structures that had grown during the previous "interglacial" but then dried out during the following glacial periods (the Great Barrier Reef is an example of this type of reef).

Atolls are circular reefs enclosing lagoons. Atolls begin by colonizing a seamount or volcano, and then grow upward as the seamount sinks and/or as sea level rises. Eventually, the seamount sinks below the sea surface, while the coral reef continues to grow upward resulting in the characteristic donut-shaped reef enclosing a central lagoon" **(Kleypas, J., 2012).**

Importance

To have a better idea of the value of the corals, in this section I ellaborate on all the benefits we gain from corals. Coral reefs are often considered as the marine counterpart to rainforests, because of their rich biodiversity. Many of the species living around corals are not just simply dwellers, but active workers of this aquatic forest. They take care of the algae, that grows on the top of the corals. If these algae overpopulates, basicly suffocates corals, making them bleached out shells of their former self. More about this in an upcoming segment of this paper. The exact number of reef species is unknown, although estimates range from 600,000 to several millions. The most biodiverse reefs occur in the Indo-Pacific region and the least biodiverse (with a tenth of that in the Indo-Pacific) occur in the eastern Pacific. Probably one of the most dilligent workers of the reefs are the parrotfish. Although they are considered to be herbivores, parrotfish eat a wide variety of reef organisms, and they are not necessarily vegetarian. Species such as the green humphead parrotfish include coral (polyps) in their diets **(Choat, J.H. and Bellwood, D.R., 1998).** Their feeding activity is important for the production and distribution of coral sands in the reef biome, and can prevent algae from choking coral.

So why is this marine jungle so important to us humans? Coral reefs are unlike anything else on the planet. In addition to providing valuable habitat for fish and other animals, they are incredibly beautiful, with seemingly infinite structures and growth forms. Their intricate shapes and three-dimensional structures shelter many species of fish, marine worms, crustaceans, clams, and many other animals and plants, all of which play a unique and vital role in the coral reef ecosystem.

„Coral reefs are an important food source for the people who live near reefs, and, as nurseries, are vital to the world's fisheries. Many of the compounds now being used in human medicines, including some that treat cancer, are found on coral reefs, with probably many more yet to be discovered" **(coral.org, 2014 – citation request was sent to the source)**. Coral reefs help humans in many other ways too: generating tourist dollars for communities, and—especially important in our changing climate—acting as natural barriers against storm events like hurricanes, typhoons, and even tsunamis. The annual value of the ecosystem services provided by coral reefs to millions of people is estimated to be over $375 billion. Due to a very recent research, conducted by Nathaniel Maynard -a great contributor to this film- the coral reefs off Pingtung County's Kenting Township (墾丁) put the figure at an average value of NT$40 billion (US$1 billion), providing an incentive for Kenting National Park to boost its efforts to protect the ecosystem and maintain the quality of the water.

Reef fish and other critters are a significant source of protein for up to a billion people, especially those who live near reefs. Some commercial fishing enterprises also depend on coral reefs and the fish they produce. Small traditional fishing grounds that are effectively managed by local communities can help re-stock both themselves and surrounding marine areas.

Healthy reefs act as natural barriers, protecting coastal cities, communities, and beaches from pounding ocean waves. Without coral reefs, many beaches and buildings would become vulnerable to the destruction of the waves and storm damage.

Based on my research, the 5 main areas of coral utilization are the following:

- huge ocean biodiversity
- very effective coastal or beach protection

- extremely rich food source
- vital medicine ingredient and treatment for various health problems
- great tourist attraction, fascinating first person experience through diving

These factors pinpoint the main focus of my investigation.

Threats

The other goal of this film is to investigate the dangers, that coral reefs have to face in Taiwan and generally on Earth. To talk about the threats, I also mention the possbile outcomes of each and every case. Coral reefs are facing many threats, both at the global scale and at smaller, regional and local scales. Most of these problems are caused by—and therefore can be solved by—humans. Corals are resilient to change, but if subjected to ongoing stress, they may lose their resilience and be less able to survive or thrive in the long term.

„As of 2001, over 57% of the world's coral reefs were either dead (10%), dying (17%), or threatened (30%). Rapid population growth is driving up energy requirements, as well as production of industrial and agricultural waste. Marine environments are coming under increasing pressure from the consequence of these human activities.

The largest single threat, however, now appears to be climate change. Each species of coral exists within a narrow environmental range. Even slight changes in any of these parameters can therefore have a serious impact upon certain coral species. Additionally, the increasing intensity and frequency of storms such as those associated with El Niño Southern Oscillation events has resulted in the devastation of very large areas of coral. In fact, 16% of the world's

corals were affected by the 1997-1998 “El-Nino” event.” **(globalreefproject.com – citation request sent)**

„Climate change combined with other factors threatens to destroy 50% of the world’s coral by 2050.” **(Maynard, 2015)** The Caribbean has already lost 80% of its original coral cover. These threats happen simultaneously and tend to exaggerate each other. Excess nitrogen waste (usually animal waste or fertilizer) in the water causes algae growth, and fish usually eat those algae. Overfishing collapses fish stocks letting the algae grow over and out-compete the coral. These threats combine with pollutants from runoff (oil, pesticides, etc.) weakening coral communities. Stressed coral can easily succumb to bleaching and disease, and typhoons cause longer lasting damage.

Reef threats could be classified into two groups, which are Local and Global dangers.

Local Dangers

Overfishing is a huge factor in the disappearance of the corals. Overharvesting of the reef fish easily leads to the decline of the entire habitat, because the fish, who eat the algae from the coral are a vital part of the whole ecosystem. „If too many herbivorous fish are taken, seaweed can overgrow and suffocate reefs. Taking too many large fish with the best reproduction potential can result in a much less healthy and robust fishery over time. Overharvesting of sharks, a top level predator on the reef, can start a cascade of effects in which populations of other fish collapse” **(coral.org).**

The second, very dissapointing theme is water pollution. This is a general problem around the world, but corals are just happen to be even more sensitive to any kind of pollution, than anything else in the ocean. Coral reefs thrive in clean, clear water. Too many nutrients

(usually from agricultural runoff or discharges of treated wastewater), excess sediment (from activities like agriculture, deforestation, and development), or stormwater runoff can stress reefs, impeding their growth and reproduction, or even kill them. Pollution can also harm or kill sensitive species and alter the ecological functioning of the reef.

The third one is a seemingly the easiest to regulate by authority. Unsustainable tourism is also a major problem source for reefs. „Resorts sometimes discharge treated wastewater near coral reefs or inject it into groundwater wells. The wastewater can seep from the wells into the ocean. This water contains high levels of nutrients, which allow seaweed to flourish and suffocate the reef. Tour boats dropping anchor on coral or interfering with marine mammals and other wildlife can affect reef ecosystems as well. Tourists who grab, kick, or walk on coral can destroy coral habitat; stirring up sediment on the bottom affects water quality. And by purchasing jewelry or other souvenirs made from coral or other once-living marine life, consumers are contributing to the destruction of reefs" **(coral.org).**

The fourth factor is coastal construction and sedimentation. Development to accomodate human growth is many times inevitable, but way how we achieve things could be altered. The building of roads, buildings, harbours(and in Taiwan – Nuclear Power Plant), can greatly affect the susceptible nature of coral reefs. As a result of human construction, sediment particles end up in the ocean and cover coral reefs, suffocating the coral by depriving it of sunlight. Some recent studies have found that sediment from deforestation is a bigger threat to coral reefs than impacts from climate change.

Global Threats

I already mentioned the impact of climate change, which is a worldwide phenomenon affecting the life of every land and sea creatures including us, humans. Corals in this matter

are extremely fragile, because even a slight change in water temperature can cause their decline. Just like the temperature change, solar radiation can also have an impact on the corals. Although these fascinating creatures have a natural sunscreen to protect themselves from the tropical sun, most scientists believe that increased levels of ultraviolet radiation damage coral in shallow areas.

So, the first thing I would like to talk about is the warming and rising of seas/oceans. ral bleaching occurs when corals become stressed, most often when water gets too warm. Corals will "eject" their algae tenants (*zooxanthellae*), causing the corals' tissues to turn white—they are then left without nutrition from the photosynthesizing algae. Although corals can survive a bleaching event, this added stress can lead to mortality.

In addition, when the ocean warms, glaciers melt, causing sea level to rise. A predicted impact from sea level rise would cause slower coral growth, but in some cases could also mean their death. Climate change and global warming are some of my main focus points in the film, because of their severe big scale impact.

Ocean acidification is another very common symptom of the bleaching of the coral. As the ocean absorbs carbon dioxide, a greenhouse gas, from the atmosphere, it becomes more acidic and makes it difficult for corals to create their skeletons. „The calcification rates of corals and other reef organisms has already begun to decrease, leading to fears that reef building will not keep pace with climate change. With increased CO2 in the water, coral may form weaker skeletons, making them more vulnerable to storm damage, careless tourists, and destructive fishing practices" **(coral.org).**

Storm damage is another very big problem, especially if the reefs are already weekened by acidification or any other troubles, they are facing. As reefs become less robust or die, their

ability to buffer and protect coastlines from severe storms is diminished. More frequent and intense storms may also damage reef structure more significantly, and the corals' regrowth is slowened down too.

Based on my findings these are the 5 main phenomenon, that are affecting Hengchun Peninsula's coral population. In this film I give a thorough introduction and showcase all of the following problems:

- Overfishing
- Water pollution
- Tourism
- Climate change
- Ocean acidification

In the film I investigate all these five areas through on-site-shoots and video interviews, raising questions to experts or people related to the specific issue.

The balancing process

How can local communities benefit from the corals and other marine life forms? There has been thousands of researches going on all around the world to understand, what type of tourism is the most beneficial for local communities. What I observed there, was a basic "nature-based tourism" without an organized attempt to earn more. Some academic authors tend to use nature-based and eco-tourism synonymously, but they are very distinct concepts. Nature based tourism basicly means travelling for the purpose of enjoying undeveloped natural areas or wildlife. During my research, I was looking into Taiwan's main online touristic by-monthly magazine "Travel in Taiwan" and realized, there is always very

little coverage of Southern Taiwan. This was also really surprising to me seeing the amount of possibilities this area has.

This is also another evidence for the lack of an organized effort for uplifting the area's tourism. The case is very clear, something has to happen.

Hotels like Yoho are working together with some local dive-groups, basically sending their very-own guests directly to them, but I couldn't find a place online where they would promote such an opportunity. Well, any form of tourism that takes place in relatively undisturbed areas is nature-based tourism, but eco-tourism is more restrictive, since it has to satisfy the following principles:

- minimizing impact
- build environmental and cultural awareness and respect

- provide positive experiences for both visitors and hosts
- provide direct financial benefits for conversation
- provide financial benefits and empowerment for local people
- rare sensitivity to host countries/political/environmental/social climate

(GYAN P. NYAUPANE, 2007)

It is really clear to me that Hengchun Peninsula needs some sort of balancing, considering it's current touristic system and in addition, going beyond the basic principles and try to involve local businesses and academic institutions into the process.

Eco-tourism also prioritizes learning, which would be a lot more important in the areas(since the massive amount of school groups escorted yearly), than recreation and entertainment. Ecou-tourism also encourages "giving back" meaning local hotels and tour agencies should donate some of their room, service fees for resource conservation. The biggest and most important deed would be to incorporate the local community's involvement to this process. In that way, it would highly accelerate the development progress of the region. Furthermore I was also looking into online lists of must see ecotourism destinations of Asia and Taiwan happens to be on none of these lists, but the problem is, that it easily could be. Asia has some of the most beautiful, remote, and exotic, ecotourism spots in the world. Millions of tourists venture to Asian destinations each year from all over the world, foregoing brand-name hotels for eco-friendly accommodations and volunteerism. And all over the continent, ecotourism is boosting local economies and helping families thrive and become self-sufficient. I decided to develop a more complex idea to find a long-term solution to the problem.

As a foreign visitor

The main outcome of my observations and research could be well implemented into one round system that can embrace the local communities with the government and academics. I've spent about 2 weeks all together in the Hengchun Peninsula throughout the year seeing it in off and on season. Also wanted to point out that living there and visiting for a day are whole different issues. Staying in the area outside of Hengchun Town can result in the biggest of inconveniences. On one occasion, we stayed for a night in Checheng (車城) in a 4 star hotel, with all the luxuries one can think of. Yet after 10pm on a Saturday night, we couldn't find a place to buy a drink inside the hotel, so the very hospitable staff members explained us how can we get to a convenient store (which happened to be a half an hour walk in the rain on the main road - luckily they gave us umbrellas). Going through the town during that night, we could only see two groups of people staying outside and having a chat on their porch. They both greeting us warmly, which made the whole experience even more depressing. Seeing these people living in poor conditions, made me really feel worried about the future of this place.

Another observation that stands out from the rest is seeing the parking lot of the National Aquarium on a busy day. Full of big tour buses and cars, the Aquarium seems to be only destination many know about. Yet, the technology they use in the Museum was built in 2004. It was the time when 3D technology and computer graphics looked very modest to today's standards. When I first went through the whole exhibition with hundreds of other people even on a single weekday, I realized that the glasses we've got (I went along with 4 other

people) were all broken or clunky. They all seemed to be very old and used for a long time. Not really minding this too much, it tried to balance that broken piece of 3D glasses on my nose, then started watching the animations on the screen.

Since 2004, the displays were never renewed or altered, so the whole experience feels like watching a Windows XP screensaver from the early 2000's. It is not disturbing, just disappointing. I couldn't see guests having amazed reactions when walking by any these 3D displays. It must've been amazing at its time, but today it feels just old and dated, being a non-memorable experience to me.

Hengchun Serenity Association

To resolve the current situation, I could imagine setting up an integrated coastal management committee with local intellectuals working together with the research committee of the National Aquarium, who know more about the marine area than anyone. Joining forces with the local businesses and hotels, figuring out a way for balanced share of

interests, eco-tourism could highly accelerate the development of the Hengchun Peninsula. This would also serve as a good example for other parts of the country and would provide a lot of opportunities for both locals and visitors. Furthermore it would turn back the process of coral and coastal destruction, making the natural environment flourish once again. This idea would also incorporate local schools and community centers to help understanding the values and responsibilities they have for this wonderful area. Government and the National Park Headquarters are the major overseers of the region, making their assistance remarkably powerful in order to kick-start the development.

Integrated Coastal Zone Management

A very strong and viable long-term method would be the introduction of the ICZM (Integrated Coastal Zone Management). “Wide adoption and implementation of integrated marine and coastal area management are necessary for effective conservation and sustainable use of marine and coastal biological diversity.”(www.cbd.int)

This is the missing link I strongly believe. The European Commission defines the ICZM as follows:

ICZM is a dynamic, multidisciplinary and iterative process to promote sustainable management of coastal zones. It covers the full cycle of information collection, planning (in its broadest sense), decision making, management and monitoring of implementation. ICZM uses the informed participation and cooperation of all stakeholders to assess the societal goals in a given coastal area, and to take actions towards meeting these objectives. ICZM seeks, over the long-term, to balance environmental, economic, social, cultural and recreational objectives, all within the limits set by natural dynamics. 'Integrated' in ICZM refers to the integration of objectives and also to the integration of the many instruments

needed to meet these objectives. It means integration of all relevant policy areas, sectors, and levels of administration. It means integration of the terrestrial and marine components of the target territory, in both time and space.

Community-based management approaches have proven particularly important. Integrated management programmes have already demonstrated their potential as an effective tool in developed and developing countries around the world. New Zealand has a working example and a proof for sustainable development because of this system.

New Zealand is quite unique as it uses sustainable management within legislation, with a high level of importance placed on to the coastal environment. The Resource Management Act (RMA) (1991) promoted sustainable development and mandated the preparation of a New Zealand Coastal Policy Statement (NZCPS), a national framework for coastal planning. It is the only national policy statement that was mandatory. It's been working since the early 90's.

Hengchun Serenity Association is a name I came up with, which I think really summarizes the whole idea. I really hope, that my film will help provoke some ideas and will maybe reach the required people to begin the process.

Film Production

This paper is entirely backed up with a documentary film, forming the full package of the „Taiwan's Vanishing Paradise" project. In the methodology section I explain all the details about the pre-production, on-site-shooting and post production processes. I also include a paragraph about the equipment and the structure of my recordings.

Pre-production

I scheduled to do all recordings in a relatively short time span. I wanted to visit the location in South Taiwan at least 4 times to have enough content for the project. This plan worked out perfectly and with the help and guidance of some people I found way more, than I expected. The directing and cinematography is entirely done by me, although sometimes I asked Nathaniel to help me out with a few things(such as bringing equipment and riding motorcycle).

Here is a list of the equipment I use for the recordings:

- Video: Canon 550D DSLR, 18-55mm Tamron Kit Lense
- Video: Canon 700D DSLR, 18-135mm SM Canon Kit Lense
- SJCAM SJ4000 Wi-Fi Action Camera
- Tripod: Vanguard - Espod CX 203AGH
- Steady Cam: SEVENOAK SK-W04 Video Smooth Handheld Stabilizer
- Sound: Tascam DR-100 Digital Audio Recorder + Zoom H1 Handy Recorder

This entire set of equipment is my property with the exception of the SJ4000 action camera, which I am borrowing from a friend. For some of the recordings I used the Canon 550D, which I borrowed from Fulbright Taiwan for a few shots. The film is recorded in 24p - Full High Definition.

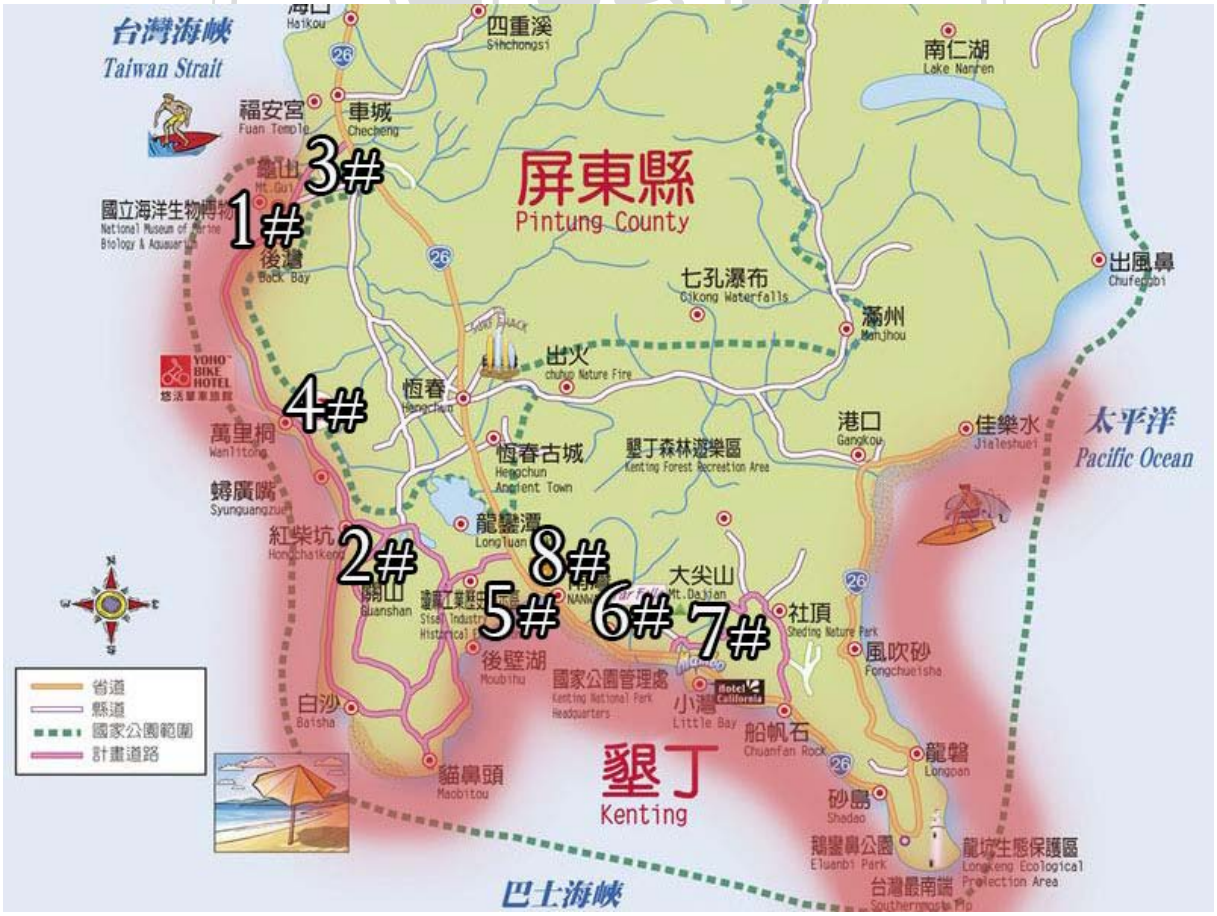
Movie Recording at the Hengchun Peninsula

My biggest area of focus is basicly the entire Hengchun Peninsula, but moslty the coastline.

It is inside the borders of the Kenting National Park.

Areas where I did the initial shooting:

1. National Museum of Marine Biology and Aquarium
2. Mt. Gui / Guishan
3. Back Bay / Houwan
4. Wanlitong
5. Houbihou
6. Kenting National Park Headquarters + Visitor's Center
7. Little Bay
8. Nanwan Beach



At these locations I did the following things:

Outdoor:

- Making background rolls of the landscape, people, pollution, buildings and basicly every small detail, that I can use in the film to fill them with voiceovers, when I am talking about an issue.
- Steady cam runs from A to B, when I am moving to one location to another without using transportation, so I can record walking at locations.
- Few shots of me interacting with the environment, or standing or looking at things.
- B-rolls of human habitat, people interacting with environemnt(fishing, diving, eating, beaching)

On Camera Interviews(Outdoors)

- I shot an outdoor full interview with Nathaniel Maynard on the beach.
- I shot a snorkeling experience from a katamaran boat, out in the open sea.
- Planned on to do some random interviews with fishermen and tourists, but it wasn't really succesful since they refused to talk.

On Camera shoots and Interviews (Indoors):

- ❖ Full investigation of the coral lab(steady cam + tripod + handheld)

- ❖ Full investigation of the interior and exterior of the National Museum of Marine Biology and Aquarium(steady cam + tripod)
- Coral Economist - Natihaniel Maynard. About threats, local issues and economic values.
- Coral Lab Director – Dr. Fan inside the coral lab. About the lab, the area, national park and the sustainability of coral preservation(in English)
- Yoho Hotel PR Specialist – Winnie Wu inside Yoho Hotel lounge. About tourism in general, number of tourists in the resort and other useful data. (in Chinese)
- Kenting National Park Director – Shieh-Chun Ma inside his office. About the current status of the park, recreational fishing&diving and authority. (in Chinese)
- Kenting National Park Visitor Center's Director – „name label missing" inside the Visitor Center's lobby. About the yearly numbers and tourist ratios. Things concerning the park. (in Chinese)

All the Chinese language interviews where held with the presence of Dr. Fan from the Coral Lab. He was asking the questions for me and also added some extra questions. These will be checked in post production, so I can decide what parts are useful for my project. I hire help for translation and subtitles.

In May, I did some snorkeling shots, to show footage of the coral reefs around the Hengchun Peninsula. I shot the entire thing from the boat, not going inside the water, so I conducted an interview with Nathan(he went in) about the experience. He said he couldn't see anything but sand on the bottom of the ocean. The captain told us, that we changed our destination due to the wind. Strangely we never used the sails to begin with, so I really didn't

understand why they bring us to a place where there is nothing to see. It was highly suspicious.

Post production

This is where all the recordings come together and get composited into a unified unit. I use several softwares and plugins for the editing process.

Here is a short list of what I will be using:

- Sony Vegas Pro 12
- Adobe After Effects CS6
- Adobe Photoshop CS6
- Adobe Illustrator CS6
- Audacity
- Fruity Loops Studio

Film Structure

The structure of the film basicly follows this paper as I investigate the situation, analyze it and then trying to find a working solution.

Purpose:

Through telling about the past and showing what is happening now, draw out a solid, realistic assumption for the future possibilities of this area. Through investigation, observation and research, showing the destruction of environmental values and the lack of local community integration in the coastal management. At the end, providing working alternatives, that other countries used for their development or reinstallation.

Time progression

The time progression of the film follows the major point in this paper. This is a draft storyboard for the pieces, displayed in the movie.

0-5minutes: In the first 5 minutes or so, I am about to introduce myself and talk about the project and the premise. Here my main focus would be to grab the attention of the viewer and introduce them to Southern Taiwan, Hengchun Peninsula including history, culture and development.

5-12minutes: Context for explaing the situation. Introducing the main factors of this story such as the Aquarium, National Park, Hengchun Town, Power Plant etc. . My focus here is to make the view aware of all the controlling factors of the area. Make them sure, that they know what is the basic premise for the investigation.

12-23minutes: This section is where I focus on my research and investigation on the local communities and the natural ecosystem. Featuring interviews and contemplations about the phenomenon that is currently visible. Showing the ghost villages and the downfall of the area. The situation of corals are also represented to emphasize the seriousness of the situation in the viewer. My main focus here is to provide information and at the same time, make people think about the case. Why did this happen and what could be the treatment?

23-28minutes: In this ending segment, the alternatives and solution ideas are display. Eco-tourism and the Integrated Coastal Zone Management system. I would use it to support my final thoughts which are basicly summarizing, that only we can change this predicament. I want to concentrate on giving a strong message as a summary of what I've found through

my investigations. Because if no steps are made towards the right direction, Taiwan's so called „Paradise" will in 20 years, be completely abandoned and also continue to despair.

28-30minutes: credits roll

Conclusion

I've seen with my own eyes, what happened to this gorgeous gorgeous place and that currently noone is trying to fix it. The local people are getting less and less benefits from what is rightfully theirs, because of their lack of integration into a system, that doesn't even exist. All that is out there, accumulating reasonable amount of money is the National Aquraium and the hotels on the coastline. Local fishermen and sailors are seemingly diminishing in number and motivation. A very few people actually walk on the streets at night and because of the lack of infrastructure like convenient stores and restaurants, it doesn't happen to be a fun place to be. Definitely hard to see large numbers on the beach, which may have to do something with the Taiwanese culture and their fear of sun tan. Strangely enough, when I asked my friends and acquintances about beach resorts, they've been in their lives; they all had a long list of nice places happening to be in one of the neighbouring countries. It really makes the situation straight forward. Hengchun Peninsula still has more than 150 unique coral species and a decent fish biodiversity, that could drive thousands into the water throughout the year and could also facilitate the preservation and protection of these wonderful beings.

I believe this film shows a complete picture of this case and opens people eyes about the inevitable. If no action is taken, Taiwan's Vanishing Paradise will evaporate in front of our very eyes.

References

Dictionary.com, "coral reef," in *The American Heritage® Science Dictionary*. Source location: Houghton Mifflin Company. http://dictionary.reference.com/browse/coral reef. Available: http://dictionary.reference.com. Accessed: April 05, 2015.

Kleypas, J., 2012. Coral reef. Retrieved from http://www.eoearth.org/view/article/151486

Chen, Ta-Yuan, 2009: http://www.murdoch.edu.au/Research-capabilities/Asia-Research-Centre/_document/working-papers/wp159.pdf

www.upi.com: http://www.upi.com/Business_News/Energy-Resources/2011/12/29/Taiwanese-seas-threatened-by-overfishing/79181325170080/

www.world66.com: http://www.world66.com/asia/northeastasia/taiwan/kenting/history

www.travelking.com: http://www.travelking.com.tw/eng/tourguide/kenting/hengchun-old-town.html

www.cbd.int: https://www.cbd.int/marine/imcam.shtml

Michael Steenson, 2010: Applying Integrated Coastal Zone Management principles at a local community level: A Rakia Huts community case study

www.issuu.com: http://issuu.com/travelintaiwan/docs/travel_in_taiwan_2015.5-6

Gyan P. Nyaupane, 2007: Ecotourism versus Nature-based Tourism: Do Tourists Really Know the Difference?

Nathaniel Maynard, 2015: Seeing the Coral for the Reef (Written by Nathaniel Maynard, M.A., Middlebury Institute of International StudiesSaturday, 28 February 2015)

Appendices

Storyboard draft:

Intro

SP1 - Sitting and talking
"My name is Marcell Varga and I am a foreigner in Taiwan.
This side of the planet was enitre blank for me, since I am coming from Europe.
While studying and working here, I realised how beautiful this country is.
What excited me the most? I can tell you without thinking. It was nature.

Abstract, introducing taiwan

Chapter 1

SP2 - sitting and talking(same place)

"On the other side, there is everything else that is given less and less attention to preserve and keep intact.
Things that demand more attention and are part of this ecosystem for hundreds of years such as the coral, fish, crabs and turtles which are also reasons why many tourists come here.
Aside from the inhabitants of the sea, land-dwellers such also suffer from great losses. This is their story and hopefully a story that brings a little more understanding to the world.

Abstract end, Introduction voiceover
Introduce Dr fan , Nate

SP3 - introducing the case a little bit, hypothesis and research question

Chapter 2

History - Slideshow and clips with voiceover
SP4 - sitting and talking(2nd place)
about hengchun, southern taiwan, National Park and the Coral Lab

describing history and the different institutes

SP5 - The Museum, Power Plant (2nd place)
talking about the institutions
organs with benefits

SP6 - Fishing History (2nd place)
talking about overfishing and the hard recovery

SP7 - Nature (3rd place)
talking about the corals, tell everything I know about them, everything else will be in voiceover
Quick Coral guide
Sealife, other sea creatures

Chapter 3

Vanishing paradise

SP7 - What is going on - introducing Maynard Studies (4th place)
numbers
pollution,
abandonment

open thesis and explain: story experiences 2 (as a foreigner)

SP8 - Balancing process (4th place)
tourism - eco-tourism:
benefits and implementation
explain the solution

Hengchun Serenity Association

SP9 - idea that could work (5th place)
Integrated Coastal Zone Management and Eco-tourism

Chapter 4

Conclusion
Moral

Texts, used for voiceover:

The National Park was founded by Taiwan's government in the early seventies to protect the natural habitat for marine and land animals. As a way to enpower the development of the area, the government also built a nuclear power plant which is an iconic spectacle of Nanwan, the longest beach area along the coastline.

The national park was founded, but the overfishing in the previous decades left a huge scar on the marine life. Most of the fish population disappeared from the coastal waters also affecting the very

susceptible corals. Over the years, the area started a slow recovery and in order to boost the conservation the government made a huge investment.

The National Museum of Marine Biology and Aquarium has officially opened its gates to viewers in 2004. Aside with the Museum, a massive research park was founded for marine and biology studies. Probably the biggest of these institutions is the Coral Laboratory. This place provides the museum with corals, but they also study and reproduce them to help medicine industry and the development of science.

Dr. Fan installed all the coral tanks in the Aquarium mostly from local hard corals, that can only be found in these waters.

So even Dr. Fan thinks that tourism is good for the area, but then were are those visitors?

Knowing, that this area is the top tourist attraction for beach lovers, I expected to see a tropical paradise. To be frank, it has everything to be just like that. Unfortunately my experiences were on the contrary. I didn't see many tourists or locals who were accomodating or serving them. The Aquarium is always full of visitors throughout the year, but they are mostly student groups or guided tours coming from the mainland.

We travelled around the whole peninsula, to see all the beach shores and the spectacles, that this place has. Again, my expectations as a foreigner was high, but I had to dissapoint again. All the coastal villages we visited were blank or scarcely while i was there in may. In houbihu, one of the main diving resorts, we could only find 1 restaurant that was open in the whole town and yes, we were searching for other options.

CORALS

By the most recent study, Hengchun Peninsula's Coral habitat's economic value is more than 40billion NT dollars, yet they seem very underutilized by the community. This could be a paradise for divers and people who supply them with housing and convenience. But there is one man, who knows

more about these corals and the area than anyone else on this planet. Dr Fan is the lead researches of the Wanlitong Coral Laboratory.

Solution

The answer seems to be very simple, change is needed. What I want to emphasize in this film, is that this place has a huge potential to be one of the highest rated tourist areas and also natural wonders of the world. The problem is that, if the locals stay powerless and poor, the corals and the marine life has a higher chance of being a victim of the exploitation of the current unsustainable system. All over the coastline you can see a massive growth of algae, which offurs because of pollution that is coming from uncontrolled human activities. If everything stays like this, there is no hope for either people or nature having a mutual development in the peninsula.

ICZM

Taiwan's Paradise seems to disappear in front of my very eyes. What is the solution then? After visiting the Kenting National Park Headquarters, The National Park Visitor's Center, Yoho Hotel and staying in the area for weeks, the answer seems to be very simple yet the government gives no money for implementing the plan. Integrated Coastal Zone Management would be an ideal scenario for the local people and also for the marine habitat. If the government would boost eco-tourism and start promoting this area, Taiwan's Vanishing Paradise could shine once again.

Wide adoption and implementation of integrated marine and coastal area management are necessary for effective conservation and sustainable use of marine and coastal biological diversity. It requires a full framework of information collection, planning, decision making, management and monitoring.

ICZM is a dynamic, multidisciplinary and iterative process to promote sustainable management of coastal zones. It covers the full cycle of information collection, planning (in its broadest sense), decision making, management and monitoring of implementation. ICZM uses the informed participation and cooperation of all stakeholders to assess the societal goals in a given coastal area, and to take actions towards meeting these objectives.

Coastal Zone management is a popular way of organized protection of the coastal areas. There is an increasing shift in management responsibilities to local governments or coastal communities. This trend is illustrated within both existing and proposed management initiatives in the Philippines,24 Sri Lanka,25 Barbados,26 Tanzania,27 Ecuador,28 Bulgaria,29 the U.S.,30 and Australia.31 The Tanga Coastal Zone Conservation and Development Programme in Tanzania has successfully introduced a particpatory, 'bottom-up' community-based and community led ICZM programme based on the principle of sustainable resource use, integration and primary environmental care (PEC).

Taiwan could use the similar principles to help both natural environment and the locals of this wonderful piece of paradise, since their current practise doesn't show overwhelmingly positive results.

Everything needs to work at the same time to be helpful for both sides, which seems impossible without the help of the government. Let's hope for the best and wish Hengchun Peninsula a better future.

There were no Taiwanese national parks before Kenting. The first Taiwanese National Park Law was decreed in 1972, claiming that spots with ecological, historical and recreational value to the country would be eligible to become national parks.

In 1977, the Taiwanese premier at the time, Chiang Jing-Guo(蔣經國), reacted to studies of ecological damage done in the Kenting area as the result of overzealous farming and construction, by determining that the government had to take steps to preserve the natural resources of the area. In 1979, the Ministry of the Interior then asked National Taiwan University to conduct an in-depth ecological and topological survey on the Kenting area, in order for the Taiwan Housing and Urban Development Bureau to draw up a plan for the Kenting National Park Project.

. The aim of making Kenting a national park was to preserve the land for educational, scientific and recreational purposes for generations to come. Kenting became a national park in 1982. In 1984, Kenting's National Park Headquarters was established and continues to be administered by the Executive Yuan's Ministry of the Interior.

A proper implementation of eco-tourism could be a huge part of the success in the kick start of the zone management. Instead of the currently ongoing nature based tourism, eco tourism could minimize the impact on the environment and also giving money for conservation and protection of marine and forest life. It could build environmental awareness and respect for the values of this region. Furthermore it would also provide more positive experiences for both visitors and hosts as well. Financial benefits of this system could also open a new forum for conversation between government, academic institutions and local communities. It would accelerate the empowerment of local people making them learning about their values and the importance of nature and humans living in mutual harmony.