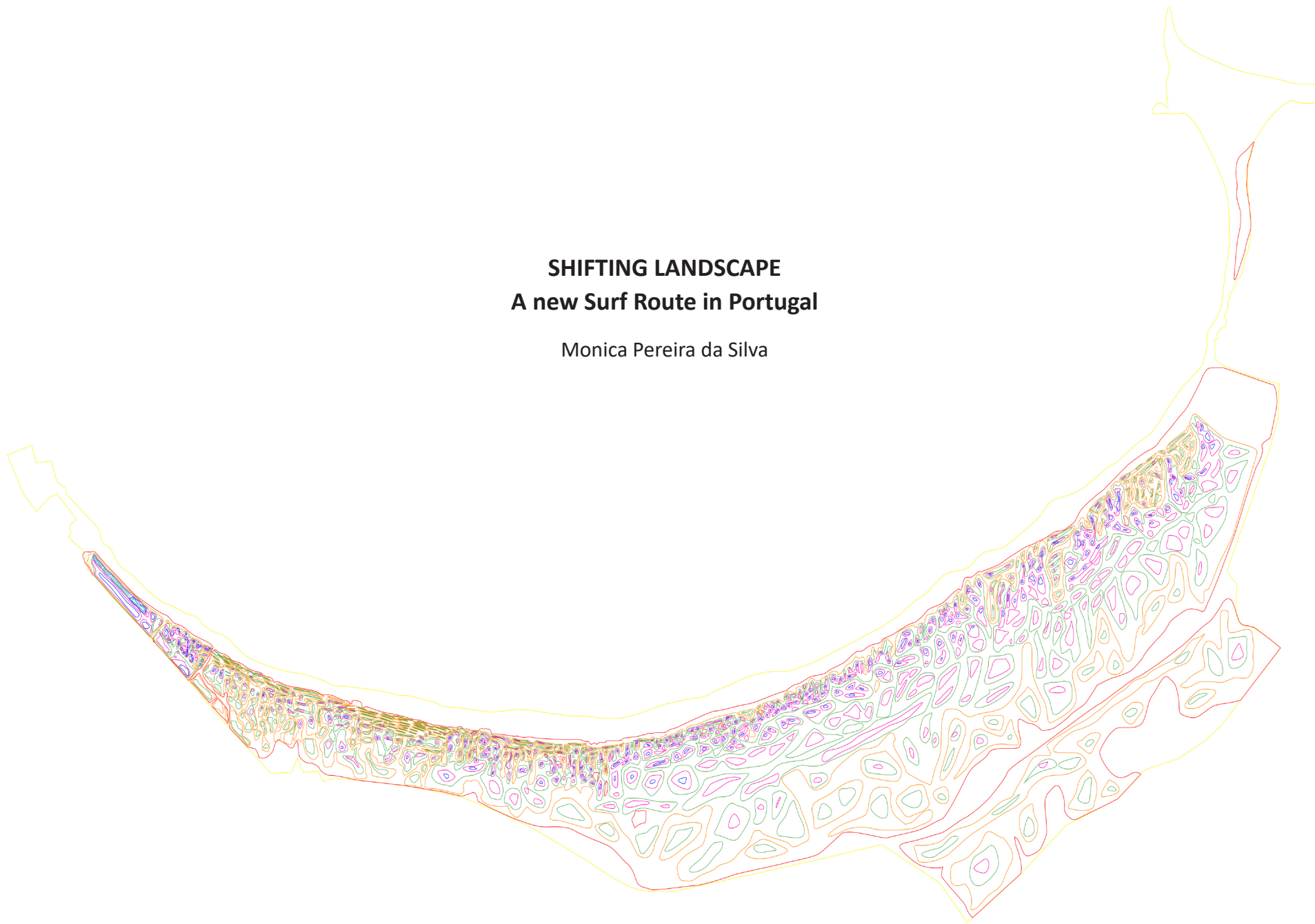


**SHIFTING LANDSCAPE**  
**A new Surf Route in Portugal**

Monica Pereira da Silva



## **Touristic Routes**

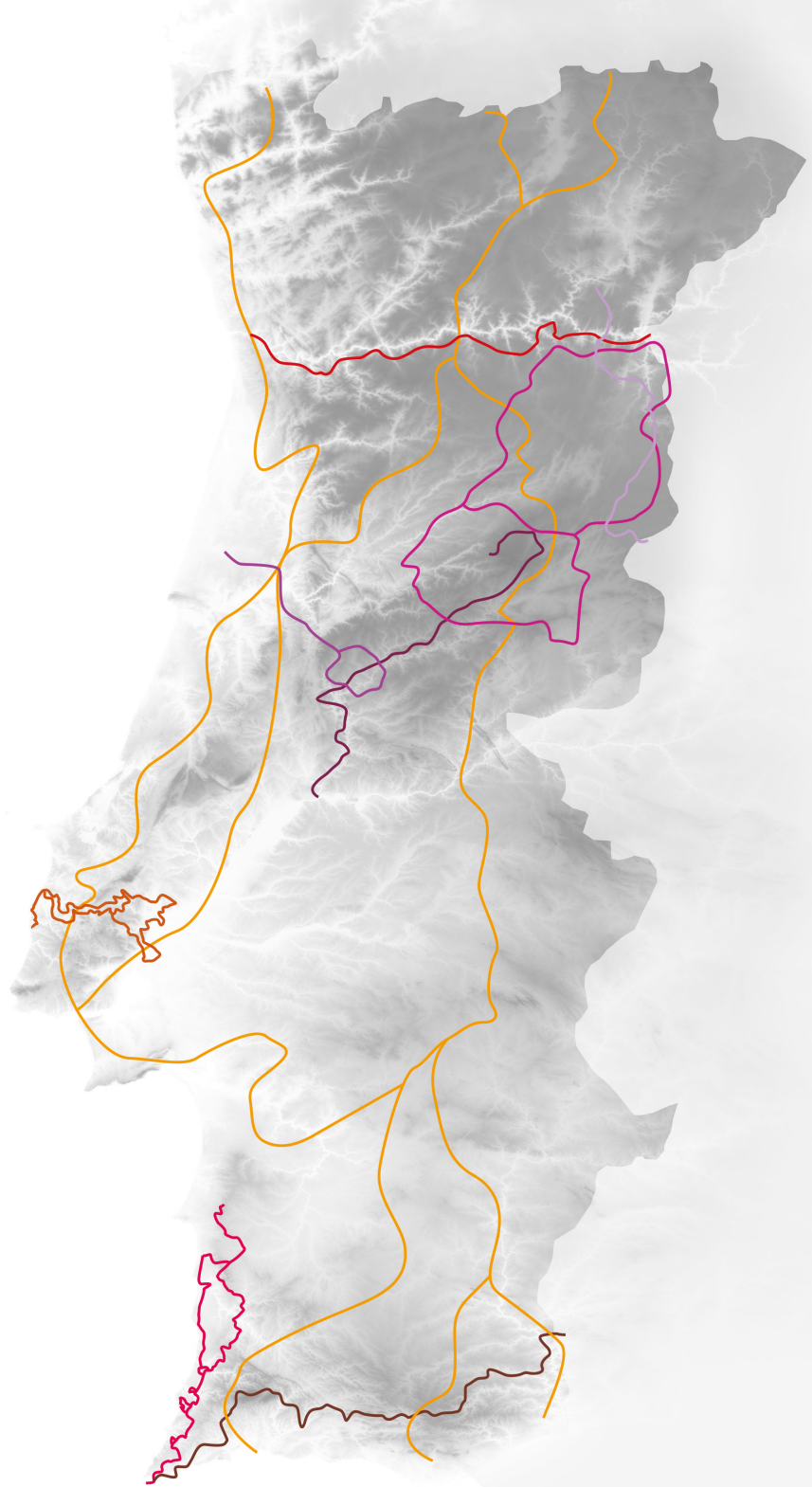
Portugal already has a big list of touristic national routes that are proving to be very popular and essential for the development of certain regions. Thus, a surf route could also be a proposal with potential to promote the basic conditions of the surf tourism, as well as to provide national and international visibility to specific regions of Portugal.

The advantages of touristic routes are the revitalisation and valorization of resources and landscape and also the attractiveness of the region.

This can grant an anchor to a city development by generating synergies to the economic level and consisting on a cultural and social progressive factor of a specific territory.

The implementation of touristic routes has had a significant growth in the recent years in Portugal.

Some of the most important ones are for example: the Europe wine route, the Schist villages route and the Vicentina route.



#### Portugal Touristic Routes:

- Caminho de Santiago GR11-E9
- Via Algarviana GR11-E4
- Rota Vicentina GR11-E9
- Linhas de Torres GR30
- Zezere Valley GR33
- Schist Villages
- Historical Villages GR22
- Vale Coa GRVC
- Europe Wine Route GR14

## **Surf in Portugal**

Portugal has an extensive coastline affirming in this way it's unique conditions for the surf practice as a european touristic destination, being one of the main surf destinations in Europe. The country conditions are: the mild climate, the quality of the waves, the amount of beaches with different qualities and the fact that there are good conditions to surf during the whole year.

Phenomenons like the seven waves of Ericeira or the giant waves formed by the Nazaré canon, contributed a lot to make these small fisherman villages popular in the whole world.

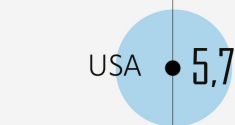
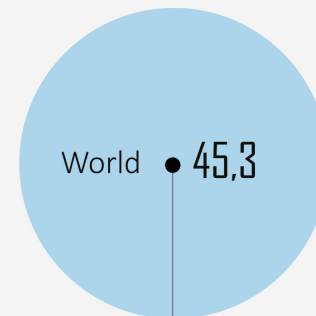
We can safely say that surf is now part of the Portuguese culture and in some regions is what keeps coastal cities alive.

We can safely say that Portugal is one of the main European surf destination since we have 38,3% of the market.

Since 2009 there was a big jump in Portugal in everything related with surf, from job creation , new businesses, and an increase of tourism not only on high season.

However there are still important measurements and actions to define and to implement a way to guarantee the quality and sustainability of surf in the country so it could encourage the establishment of infrastructures that can give support to surf.



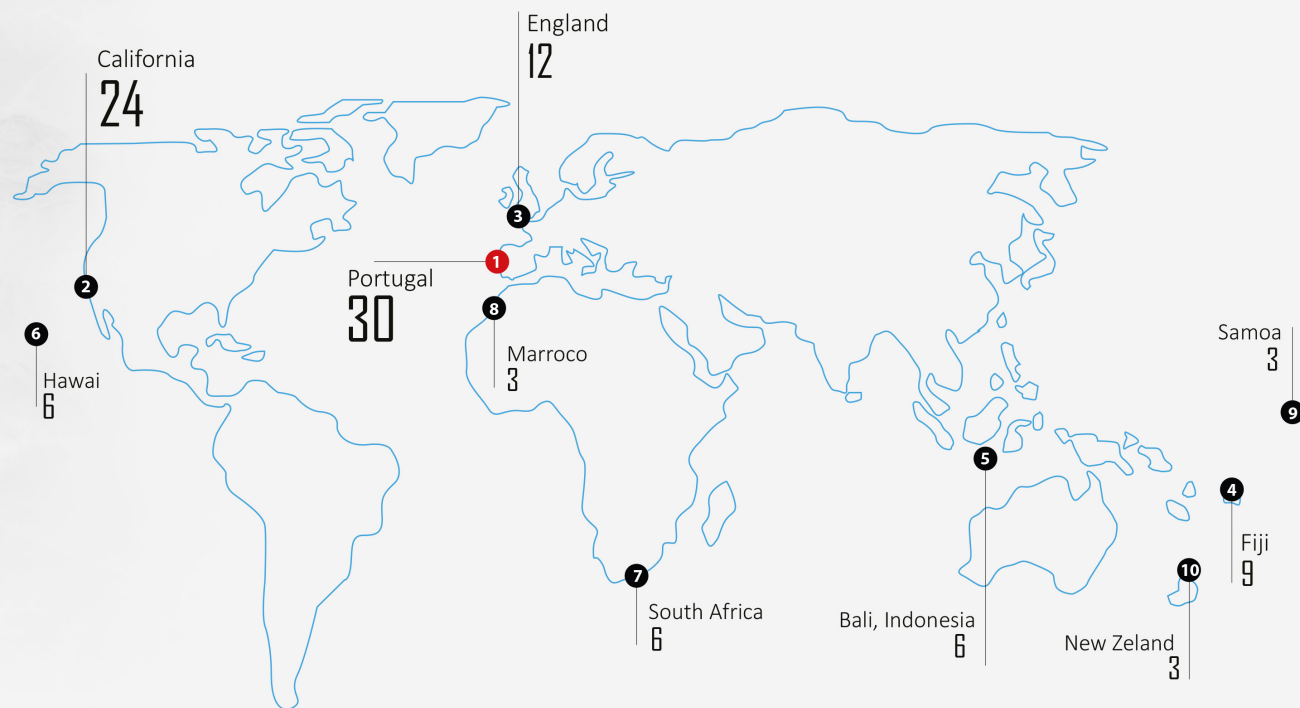


Surf in the Economic Plan  
Values in billions

Peniche  
34,5 %

Ericeira  
25,5%

Sagres  
12,2%



The biggest surfed waves in the world  
Values in meters

### **Surf in Peniche**

A small study about the economic impact of Rip Curl Pro Portugal in the last year, placed in over than 10 million euros the total economic impact of the competition in the region of Peniche. Here we can see just a small parcel of the global contribution that surf has been giving to the portuguese economy, that is now worth more than 400 million euros.

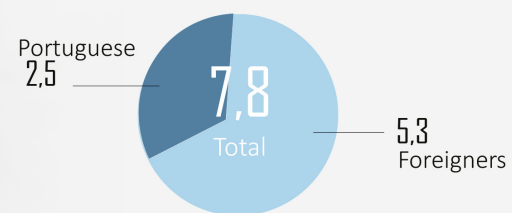
The region of Peniche saw tourism grow after entering the world surf circuit in 2009. Last year only, the 15 days of tournament had a local economic impact of 10,6 million euros and 100 thousand visitors.

The consolidation of the brand “Peniche the Wave Capital” made it possible for the emerge of a local identity, distinguishing it from other surf destinations and identifying the market opportunities.

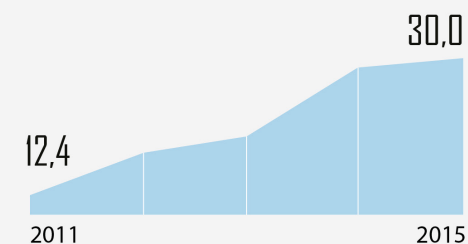


# 100,000

Number of Visitants Estimate



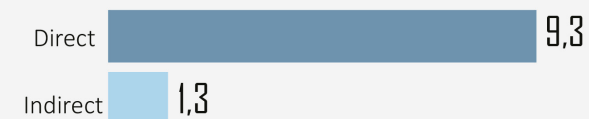
Visitors Spendings  
Values in millions



Global Returne  
Values in millions



Average Individual Spendings  
Values in euros



Economic Impact Estimate  
Values millions

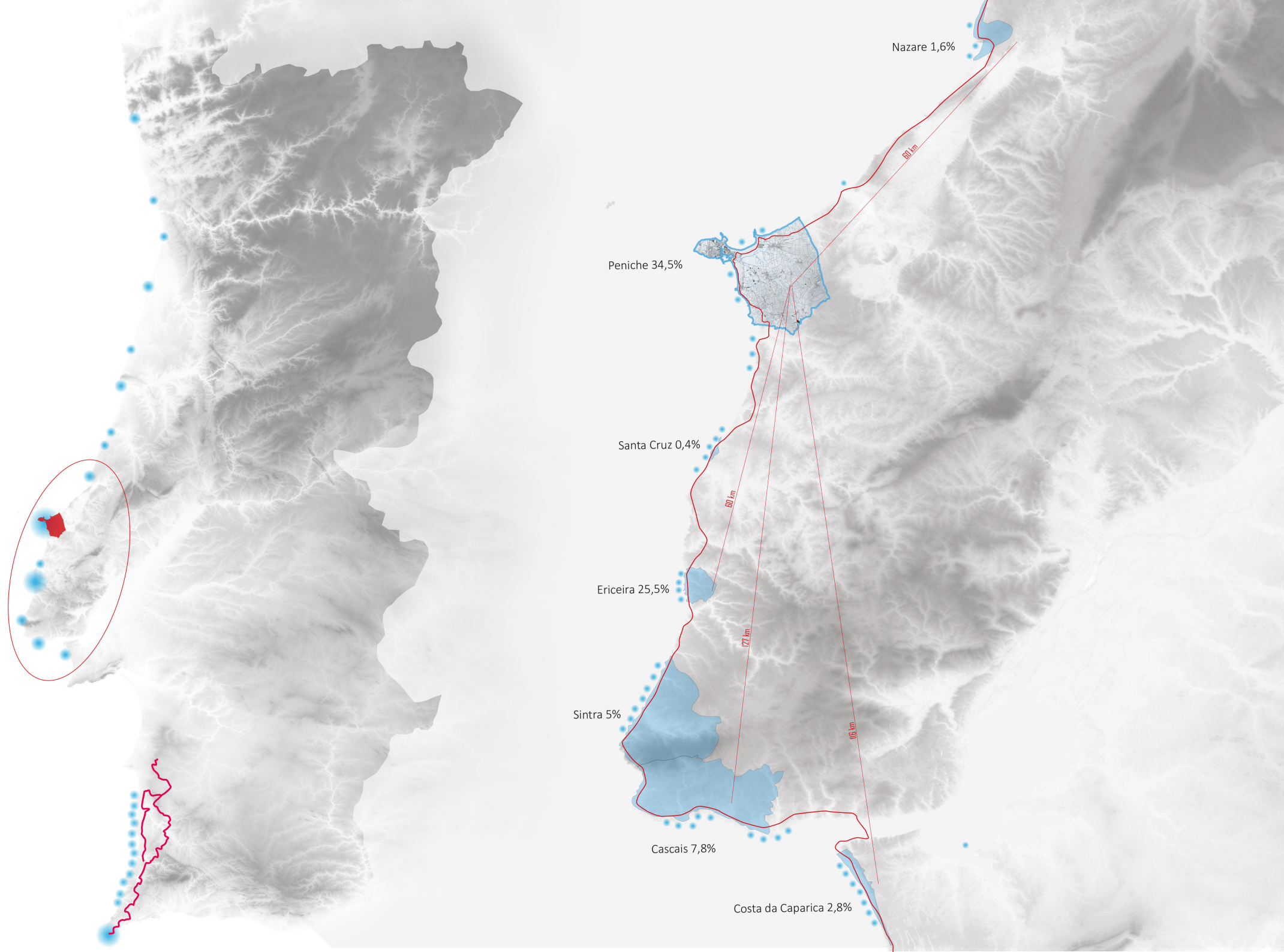
## **New route**

Although surf has such great potential in Peniche its development evolves structural challenges like to guarantee its sustainability, a bigger social integration and solving the lack of important surf and beach supportive infrastructure.

The establishment of a thematic surf route enables the recognition of surf and because of this, a section of this route in Peniche can propel the improvement of the base conditions as well as contribute for a stronger national and international visibility of Peniche.

During my reasearch I also concluded that the regions in the middle part of the countries cost line, are the ones with bigger potential to receive this new route, since there is already an existing touristic route in the south (Vicentina route) that can be updated to receive the surf infrastructure; and in the north the percentage of surf use is very limited and scatered.







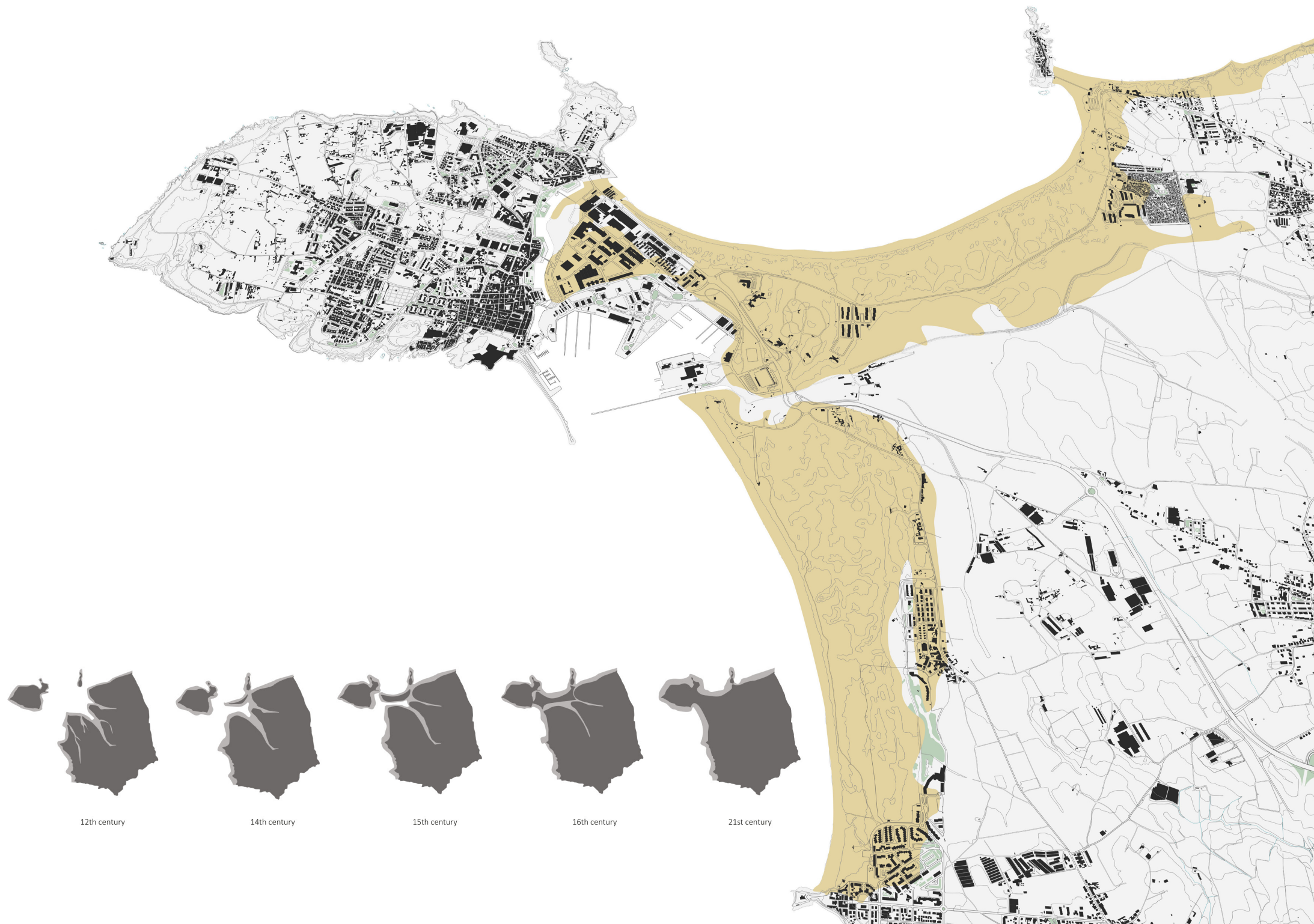


### **Peniche sand formation**

Peniche is a seaside municipality and a city in Portugal.

Peniche started to be an Island and with time slowly connected with the main lands because of agglomeration of sand, becoming in this way, a peninsula.

Even today, a big part of Peniche's ground is consisted of sand.



12th century

14th century

15th century

16th century

21st century

## **Peniche programme**

What is now considered a big and well developed city, was born as an illegal fishermen's village, which is still very visible in the old city center.

Peniche's main industry is all related to the sea, from boat building to freezing fish. And of course, surf industry is a big part of Peniche, well represented with the brand: "Peniche the wave capital".

Peniche is mostly known for its long beaches which are very windy and form perfect waves to surf.

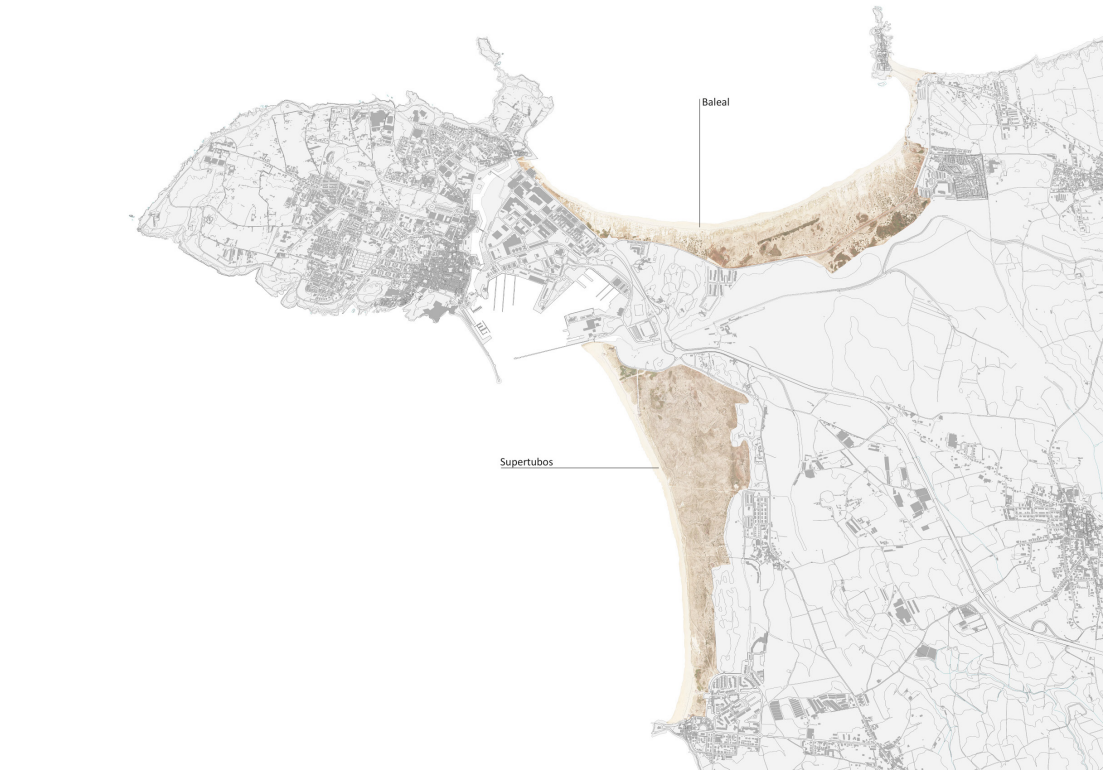
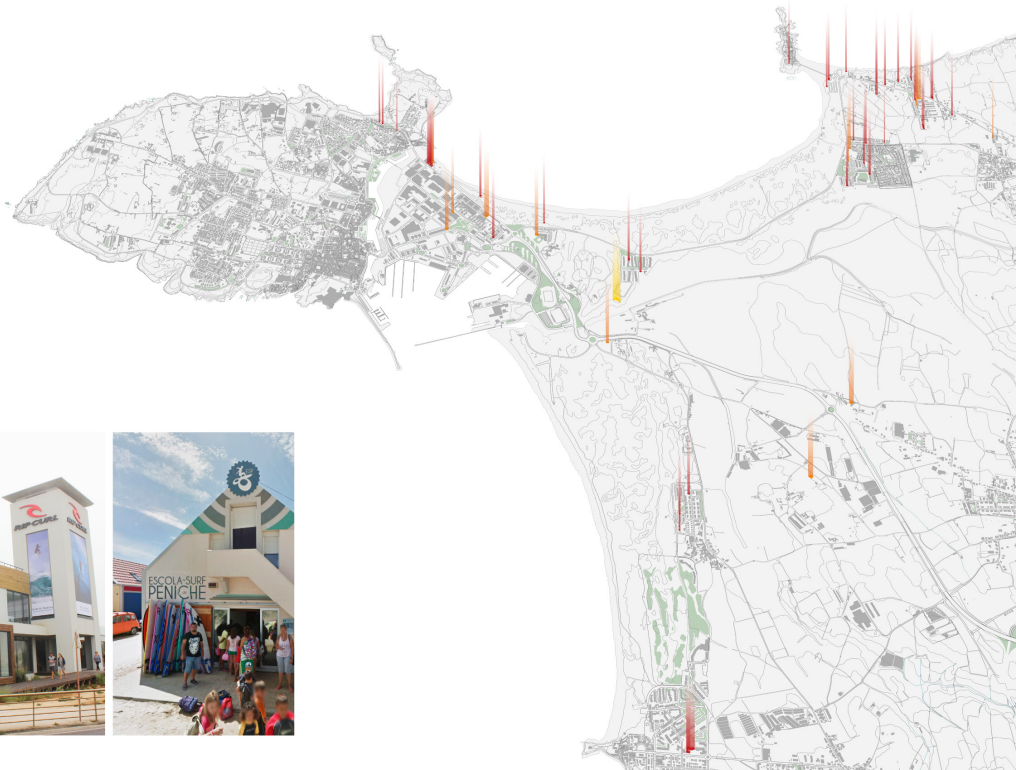
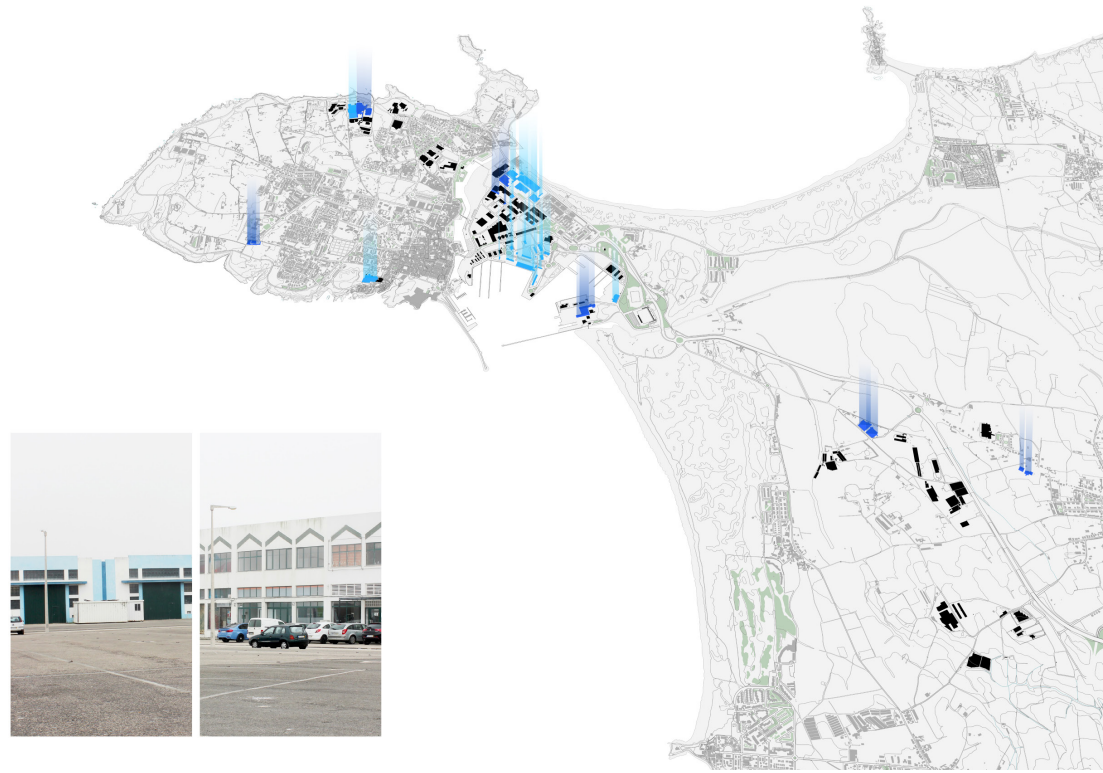
Both beaches have a curved shape, forming a long bay, and are facing different directions, which is perfect because when it is not good to surf in one, it will definitely be good in the other beach.

It also enables the use of the beach for different types of surfers and their different levels of experience.

Baleal beach, in the north of Peniche has the biggest waves, strongest winds and storm weather.

Supertubos beach, in the south, is more calm and forms the famous tube waves.





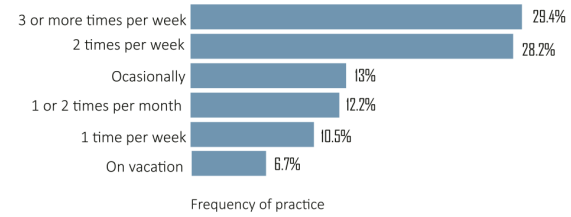
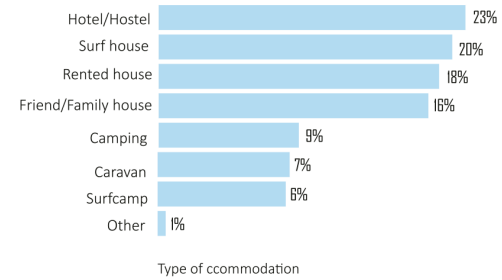
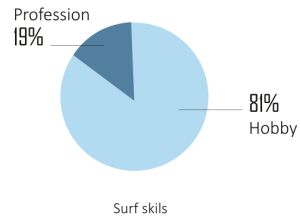
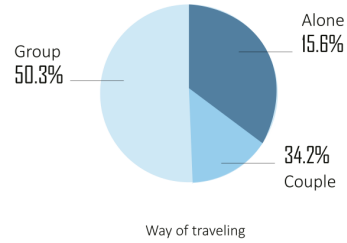
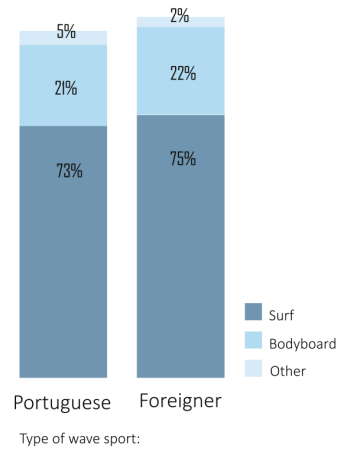


### **Peniche Surfers**

When we speak about surf, we speak much more than just a sport. We evoke a lifestyle and a relationship with the ocean that is natural and ancestral.

Peniche is frequented equally by portuguese and foreigners surfers that have a very specific routine which need specific support infrastructure.





#### PROBLEMS TO SURFERS



#### GENERAL PROBLEMS

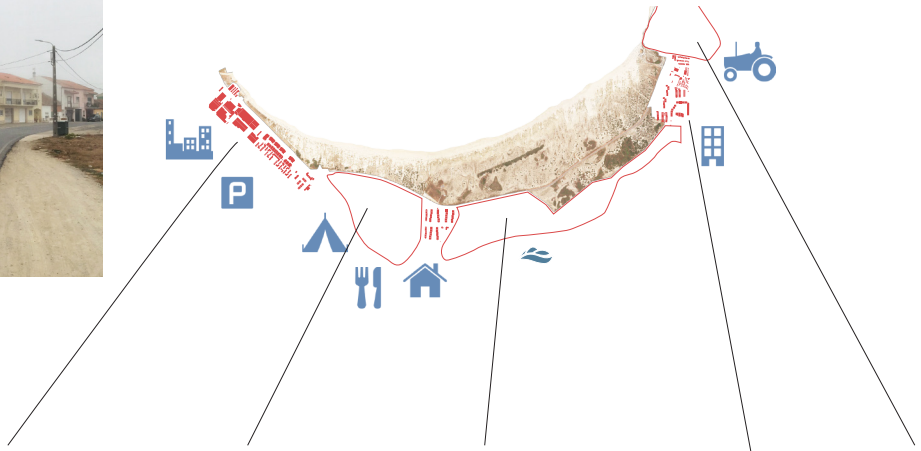
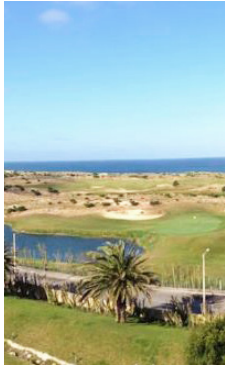
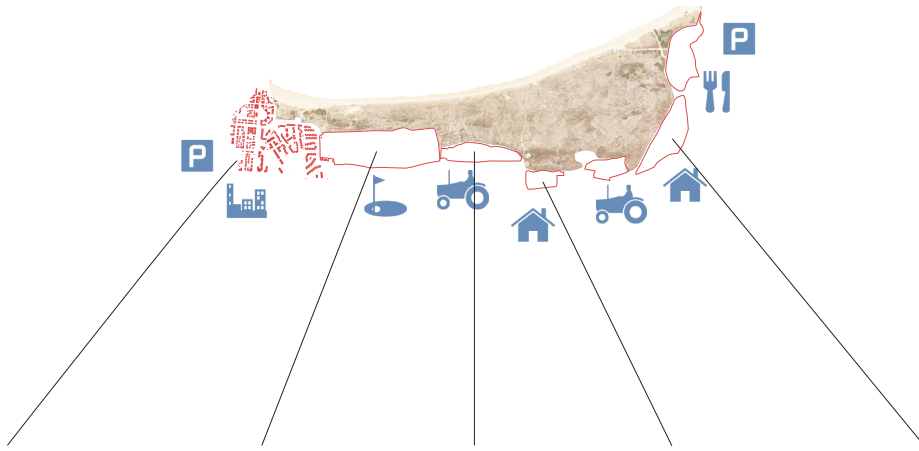


#### Dune Limits

Both beaches in Peniche have a big dune system that makes the separation, mainly between the city and the ocean.

Along the dune limits we can observe different types of housing agglomerates, mostly summer houses; farm land; a gold resort; a camping and parking lots in the end of each beach.

Unfortunately we can also observe many problems regarding the protection of the dune and the lack of support infrastructure to surfers and other users of the beach.





## Dune system

After an extensive reaserch to comprehend the dune system, I concluded that both beaches needed a better protection and requalification of their dune system, especially Baleal beach which is the most endangered one.

The biggest problems are the movement of people throught the dunes in non defined paths and the poor distribution of plant species. All of this leads to non ideal formation of dunes that by them selfs lead to erosion and wind blow out problems.

Consequently, in the future we could be looking at inexisting dunes and rising of sea level which woud afect the city and the cosystem of Peniche.

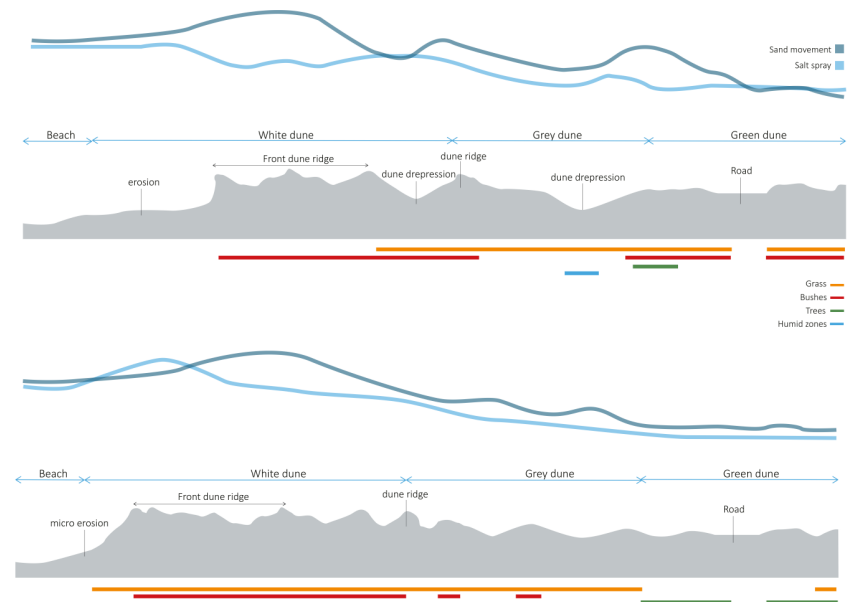
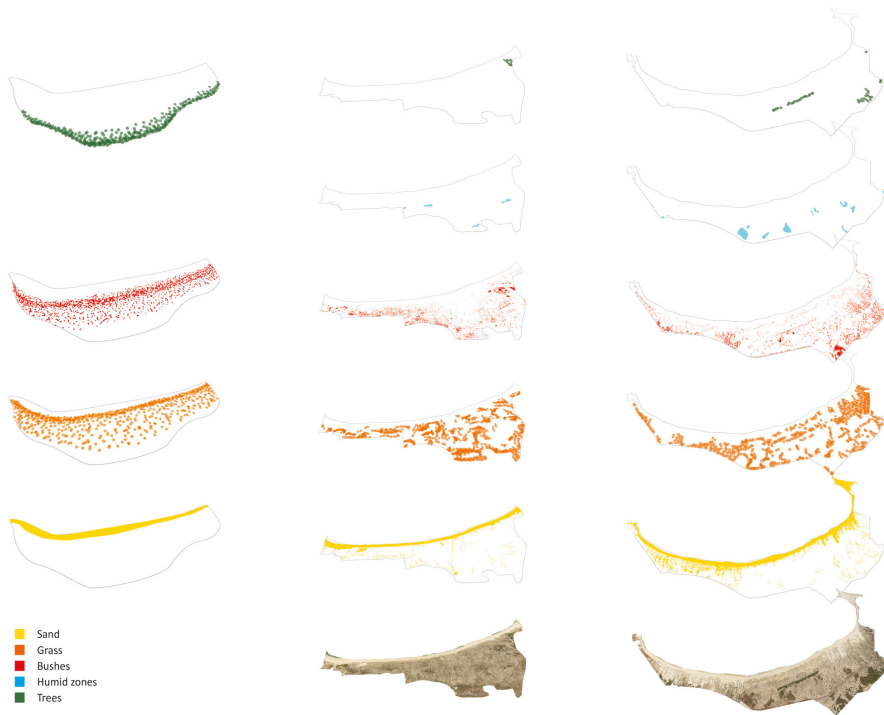




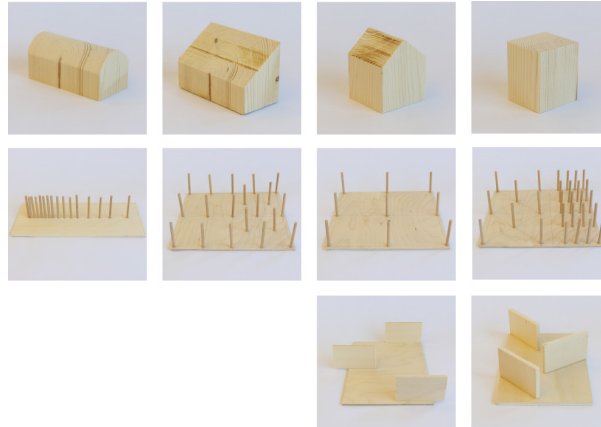
Correct dune system:

Supertubos Beach

Baleal Beach





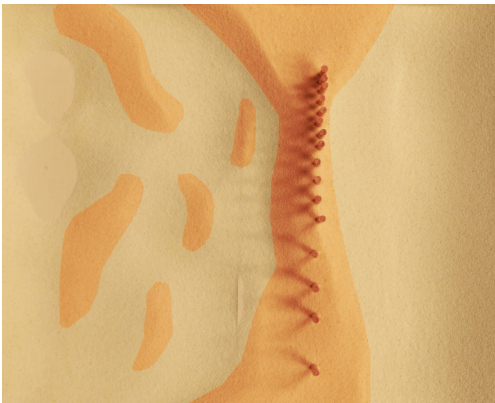
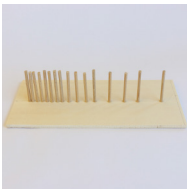
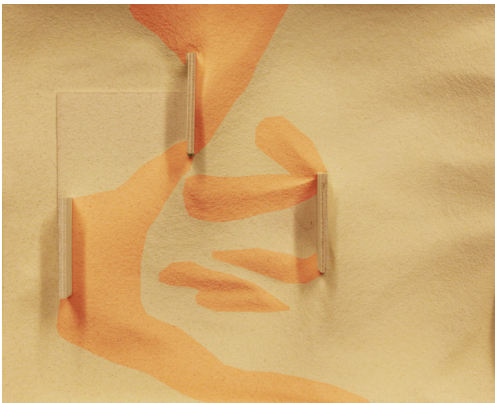
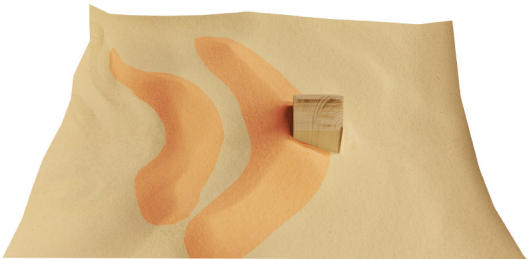
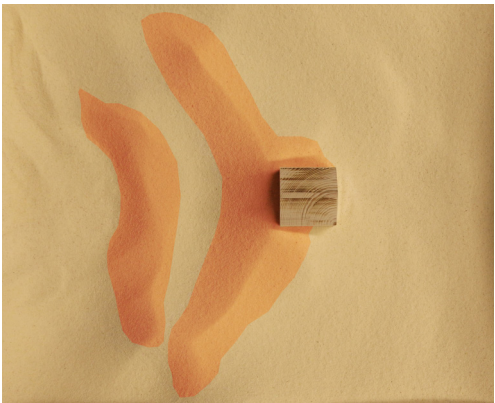


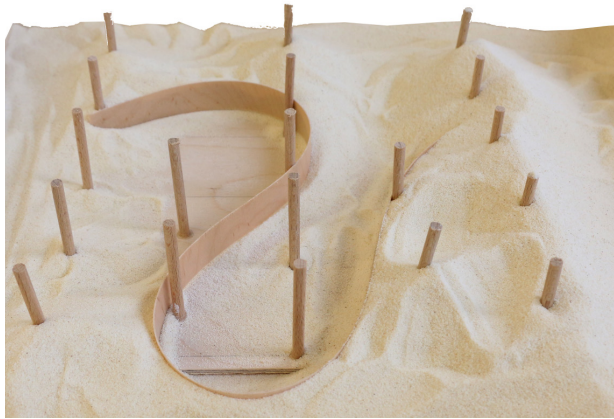
## Sand / Wind studies

It was important to understand how wind can shift sand and consequently affect objects / infrastructure that is placed on the dunes.

It was also interesting to discover that the objects placed on the sand box would create new dunes after being exposed to wind. The ones that showed to be more efficient where the poles.

Poles have a small surface touching the dunes, can have different thicknesses or distances between them, creating different types of dunes.





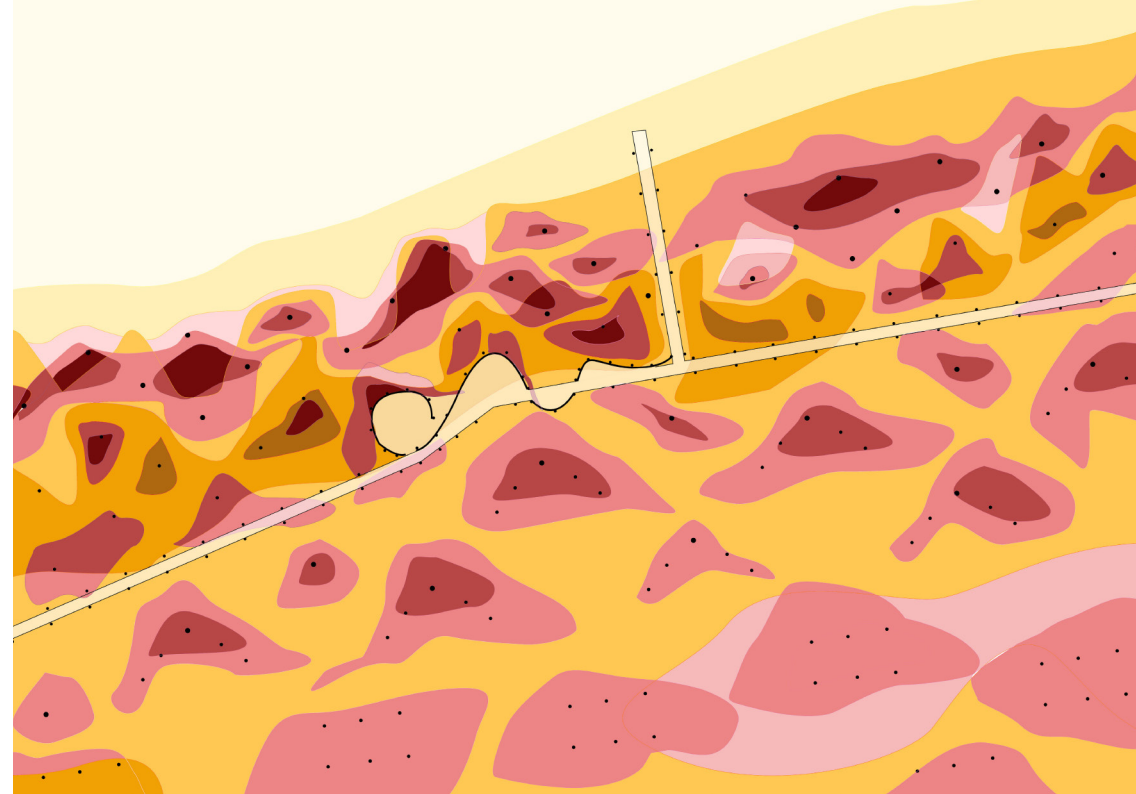
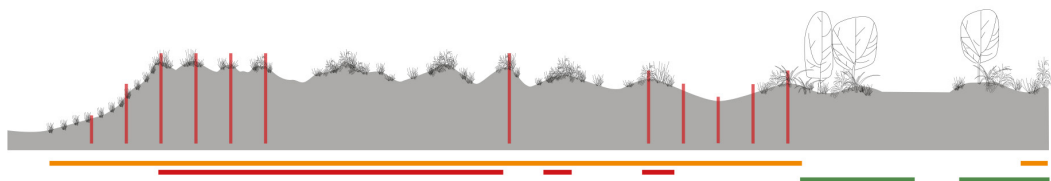
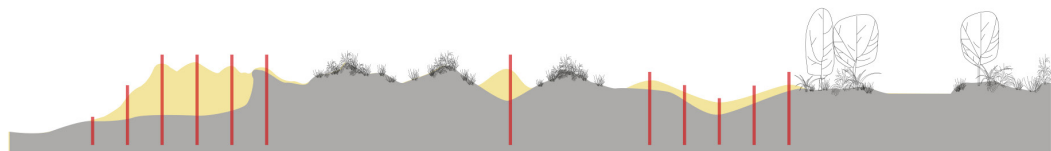
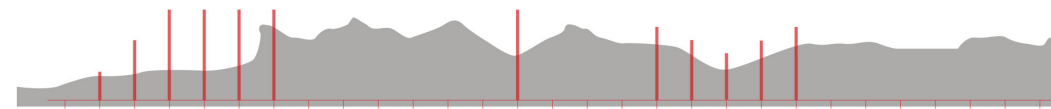
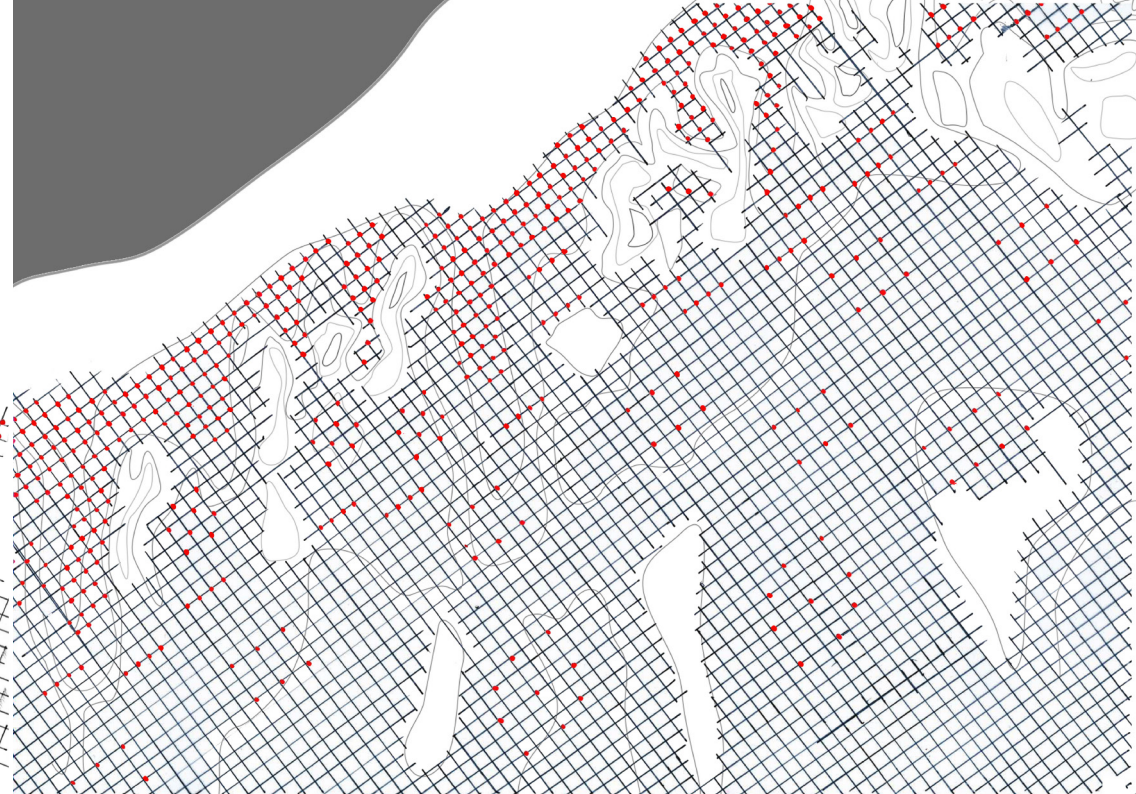
### **Grid of poles study**

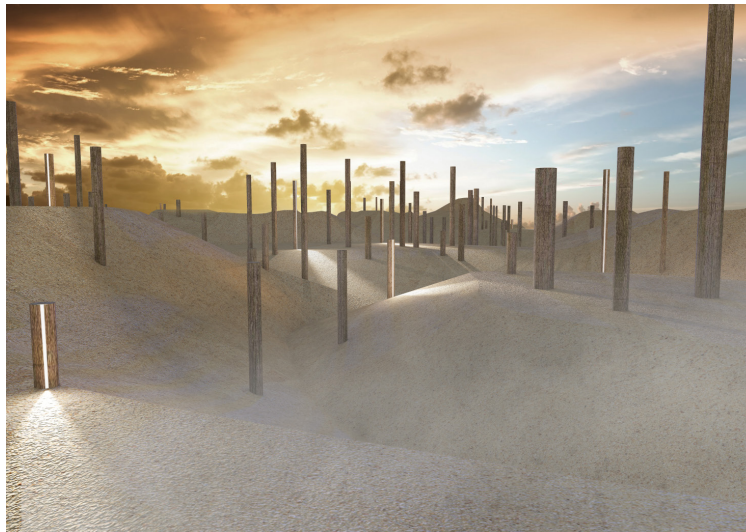
The next step was to understand how these poles could affect the landscape and protect the dune system.

Because it interacts with a dynamic landscape, this grid operates in different scales and directions, and it is never static. The thickness, height and placement of the poles also differ depending on the dune profile required to each specific area.

The poles not only create the new dunes, but are also the generators of program and spaces.



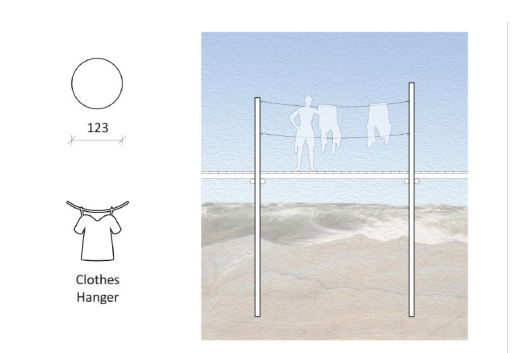
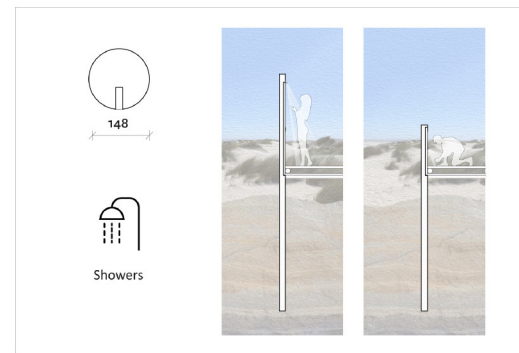
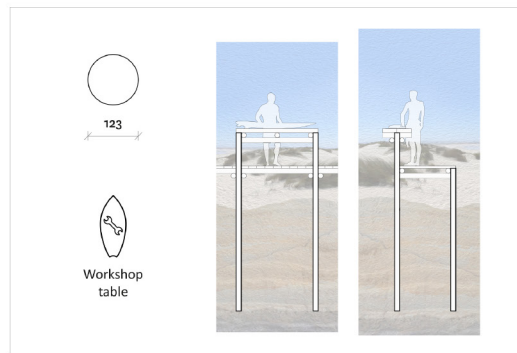
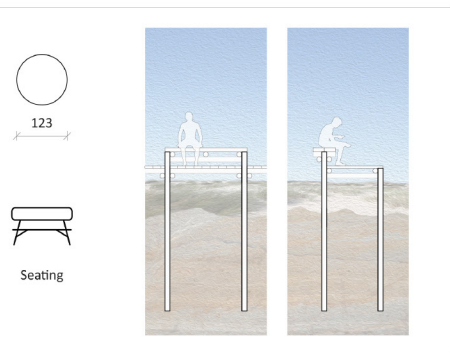
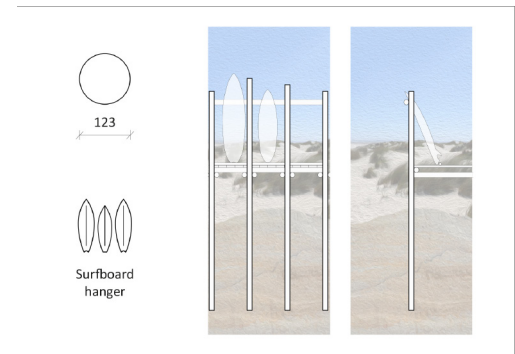
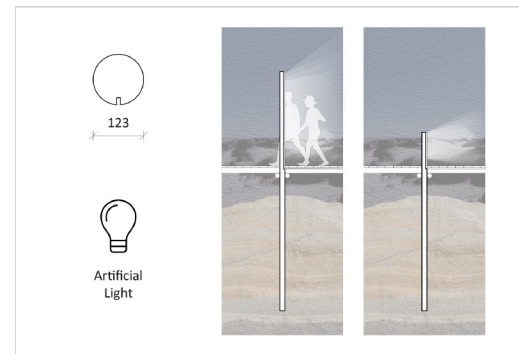
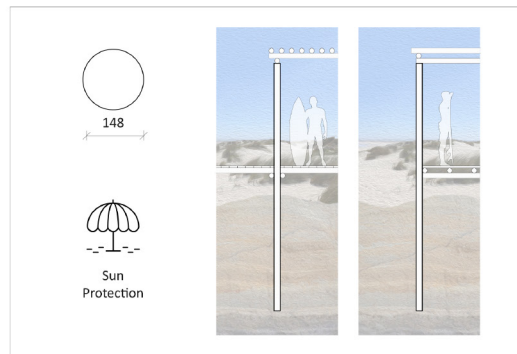
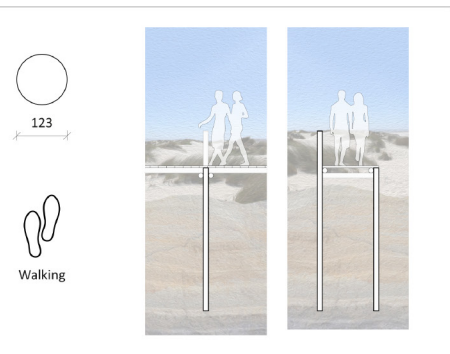




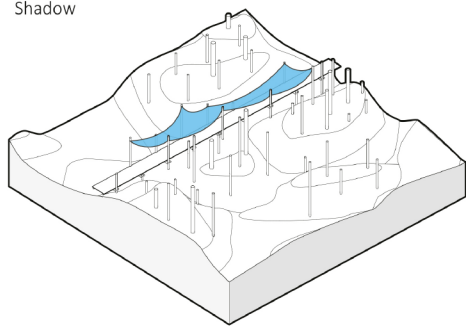
## Poles

The poles not only create the new dunes, but are also the generators of program and spaces. Programmatically they can be light poles, water suppliers, support for surf boards, and so on. Spatially they can enclose walls that take advantage of the sand/wind dynamics, and can create spaces such as toilets, workshops, rain/sun protection, etc. These spaces can grow overtime, move and transform depending on the sand movement.

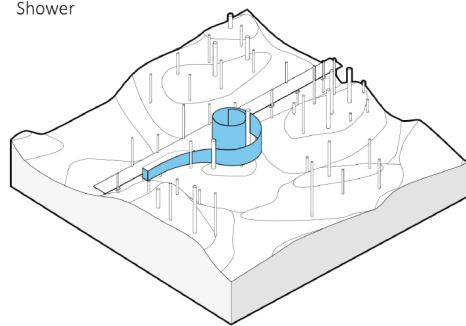




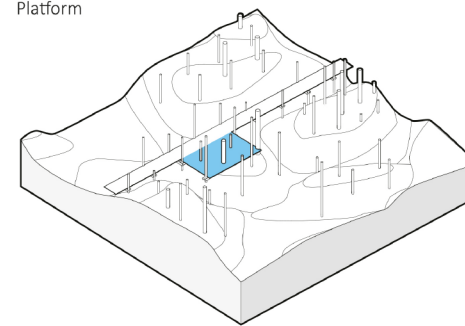
Shadow



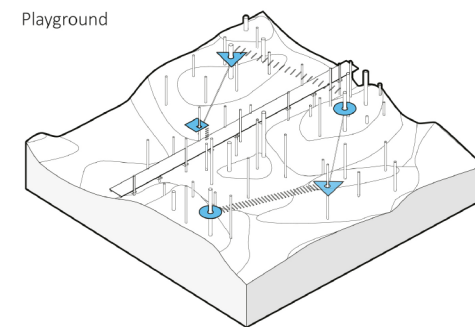
Shower



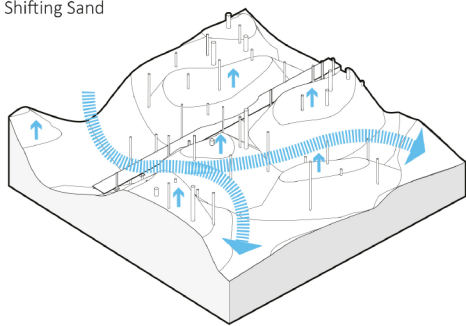
Platform



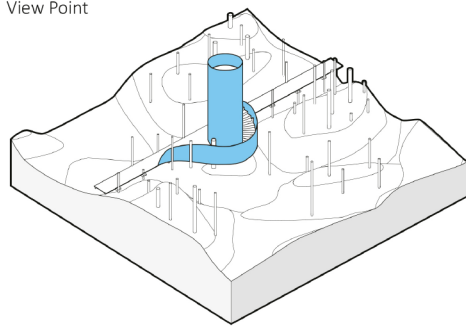
Playground



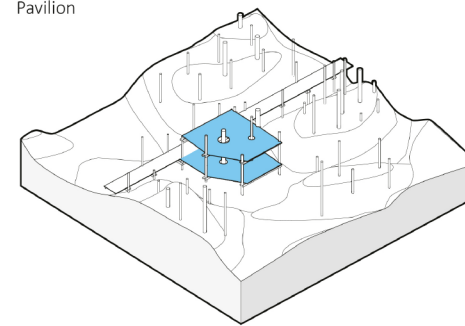
Shifting Sand



View Point



Pavilion

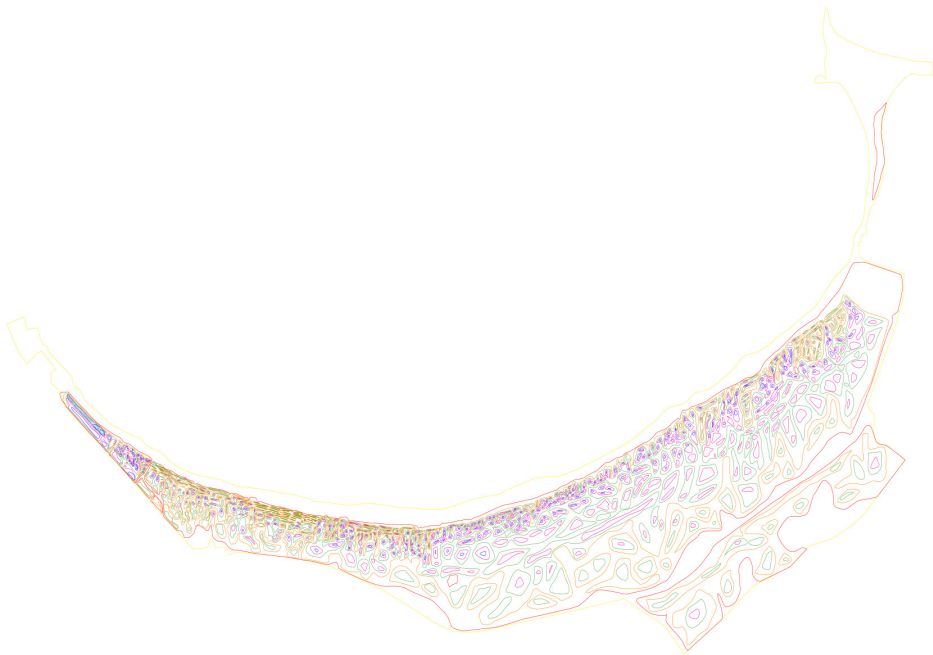




### Master plan

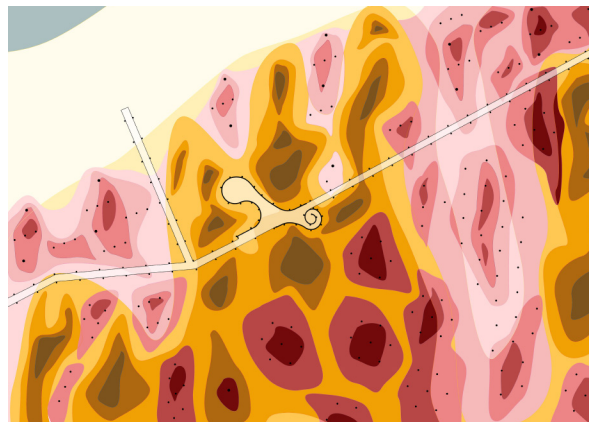
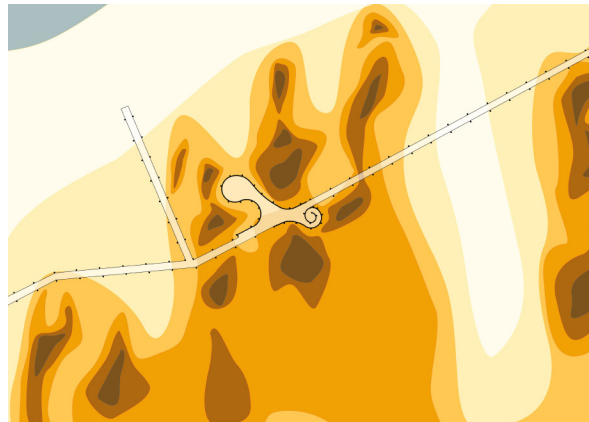
The path is designed based on the dune morphology, people's movement and the grid system.

It is a rational element that connects different parts of the city to the ocean and gives the users the possibility to interact with the dunes and the infrastructure.









## Building

The buildings are implemented on the empty spaces in the existing dunes gaining the shape of these spaces and almost merging with them.

They are also very permeable and “transparent” with the objective not to clash with the dunes. This means they are also unpredictable and will change together with the surrounding landscape and its shifting sand.

The one developed in detail in this project serves as a meeting point for surfers and other users of the beach, with shadow, an eating area, showers, workshop tables and board storage.



