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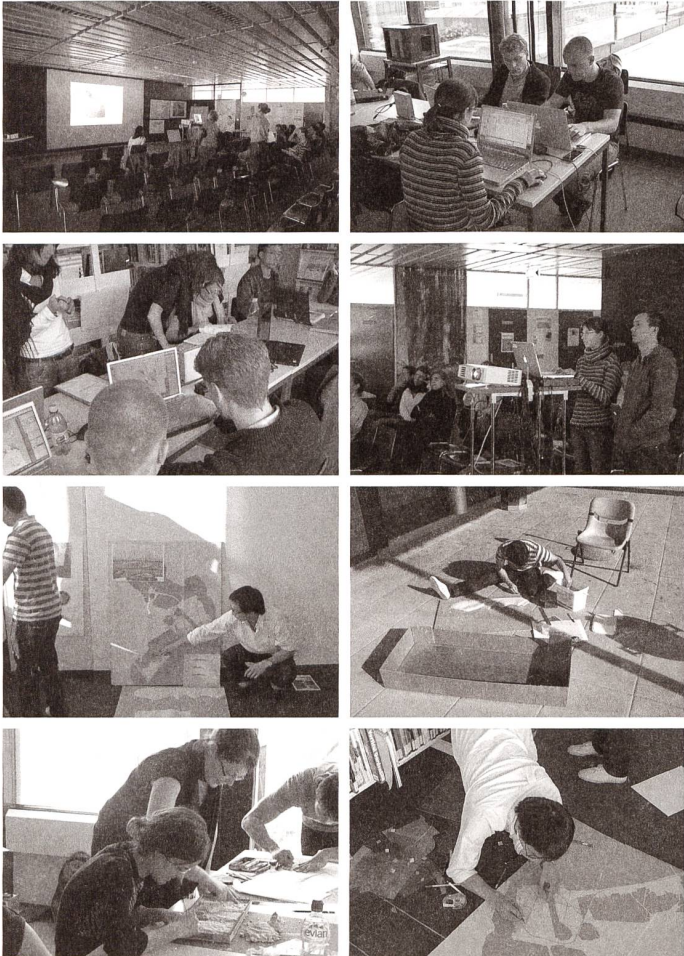
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POTENTIAL OF A WATERSCAPE

Identity of Place Diverse Waters Urban Development



October 2008

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Still in the stage of preparation, we investigated the design potential of the vast water landscape of Santa Gilla. We focused on today's identity of place, where water is predominantly made to serve infrastructure. Pivotal questions which fed the design process included the following: How and in what manner can one rethink and redesign this water landscape? And how can it be brought back to a new way of living and working place for the community? Is it possible that this waterscape can accommodate more than one industrial use? Is water diversity a possible tool to enhance the atmosphere and quality of open space?

IDENTITY OF PLACE

In order to be able to determine the potential of this landscape, we first identified the disconnected elements which make up Santa Gilla Bay as we know it today. These are the physical elements of the vast horizontal landscape and the man-made interventions which define the space and lend it its unique character. The interventions include the salt industry and the industrial port with its towering cranes at the Porto Canale, which dominate the skyline of Santa Gilla Bay from the city of Cagliari. The salt industry uses up a vast amount of this land and is only represented by a few salt mountains that can be seen in the distance from Cagliari. The process of refining salt requires many basins of slowly circulating salt water to allow for the extraction of sodium chloride. This has generated an ideal environment for various birds, animal species, and natural salt water vegetation, creating a home

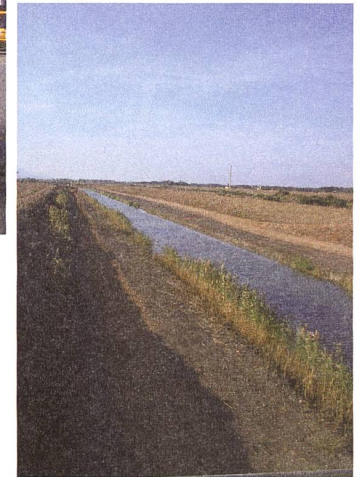
for the largest population of pink flamingos in Europe due to the shallow salty water. This vast and flourishing natural salt water vegetation now provides a very scenic waterscape whose great potential can be exploited by simply making more people aware of it. In contrast to this vast empty open landscape, the dense and raw character of the industrial port provides another element with huge potential for transformation and again, only by increasing its visibility. The strictly controlled water system, which prevents various water types from mixing, has the potential for expansion in order to create several diverse systems structuring the landscape. Although the people of Cagliari do not have direct access to this landscape in order to enjoy it to its full potential, they still have a visual connection to it, and a physical connection could be initiated.



Salt industry



Industrial port



Controlled water systems



The city of Cagliari
at the estuary



Vernacular architecture along the shoreline



Natural salt water vegetation found in the
vast horizontal landscape



View of Santa Gilla from the fortified city of Cagliari

DIVERSE WATERS



The watershed in Sardinia of which the Mannu River is the longest at 93 kilometers

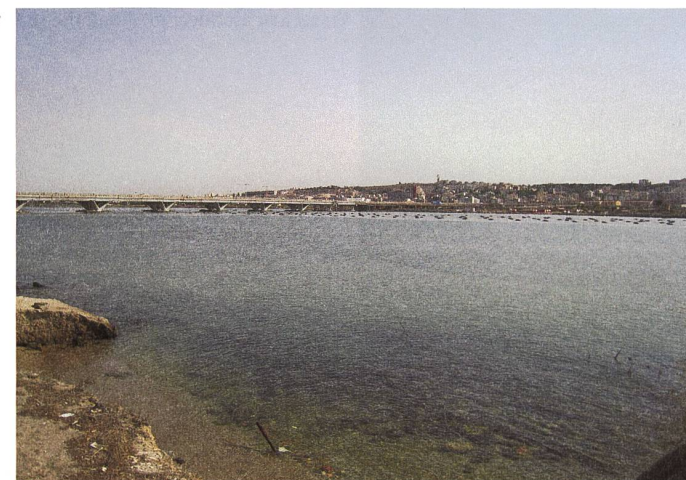
The current water palette consists of two water types with fresh water coming from the rivers, in particular the Mannu River, currently polluted, and sea water found both in the saline basins and the lagoon. Although there are currently only two water types in Santa Gilla Bay, they generate various conditions depending on salt concentrations, which allows the water to portray a different character in these situations. For example, in the lagoon we find only salt water suitable for fishing and boating activities. The salt water here is shallow but still has a slow moving current. The salt water of the saline basins is also shallow but has an even slower current, allowing vegetation to grow naturally. However, this water is polluted in the areas surrounding heavy industry and the recycling center, which prevents the growth of vegetation, promotes algal bloom and emits rather pungent, unattractive smells. Other seawater conditions can be found along the shoreline

where industrial infrastructure interrupts the water circulation, which has in turn led to an infestation of small potato-like sea vegetables. These organisms cover the coastline of the Gulf of Cagliari and do not make it very attractive to visitors. With only two water types, we find diverse water conditions which may either be maintained or expanded and modified to introduce more water types into the system. The widening of the water palette can be achieved by cleaning existing water types and mixing them in various concentrations to allow a more diverse vegetation system to develop.



A comparison between water and built environment

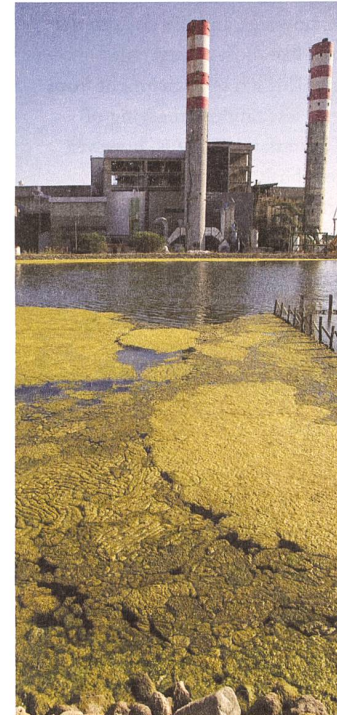
Existing lagoon water at the estuary to the Mediterranean



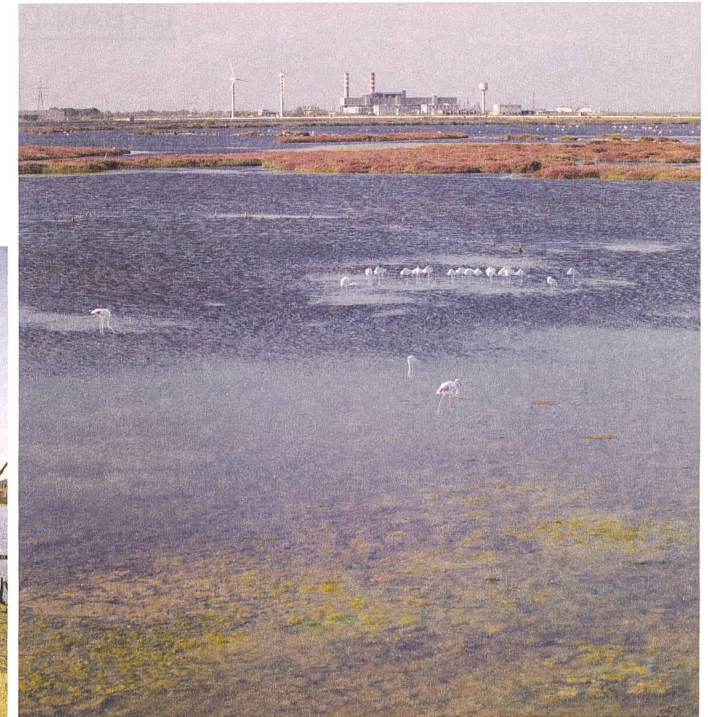
The channeled river water flowing to the lagoon is polluted from agriculture.



The circulation of water along the shore has been interrupted by industrial infrastructure, which creates pollution along the beach.



The lagoon water is also polluted through various types of industry, such as the recycling center.



The nature reserve that has evolved from the salt industry

URBAN DEVELOPMENT



The location of the capital Cagliari on Sardinia

Cagliari, the capital of Sardinia, is located on the southern end of the island. It was initially founded here as the geographic center of Europe, and it was hoped that it would flourish due to its prime location. This was not the case, however, and the city did not develop along the coast like most coastal cities but towards the hinterland. This led to detachment from the coast and a more or less random merging of smaller towns in the hinterland. There is, however, an opportunity to reestablish the connection to the water and encourage development along the

coast. First, the vast amount of land abandoned on the reclaimed island would have to be made accessible to the public in order to change people's perception of it, and secondly urban development should be made possible. This would create a new urban area at the water's edge and provide the urban situation needed to sustain Cagliari's more positive and natural development over the next ten years.

An aerial view of the urban sprawl around Cagliari





The urban growth of Cagliari has shifted away from the bay of Santa Gilla into the hinterland.



There is vast potential for development along the shoreline of Santa Gilla Bay with its attractive water landscape and proximity to the city.

