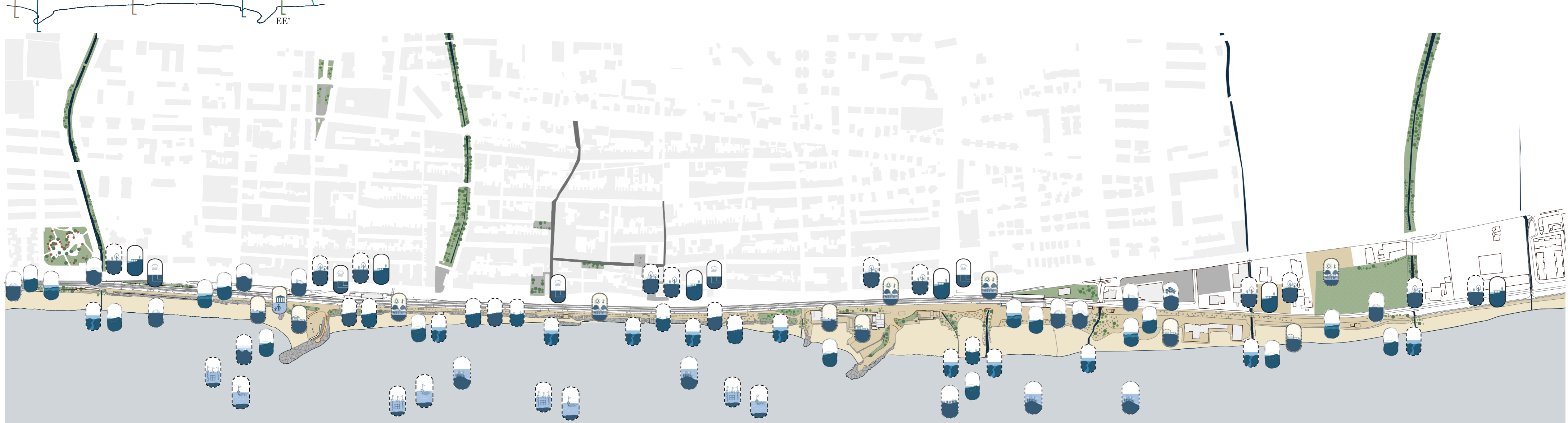
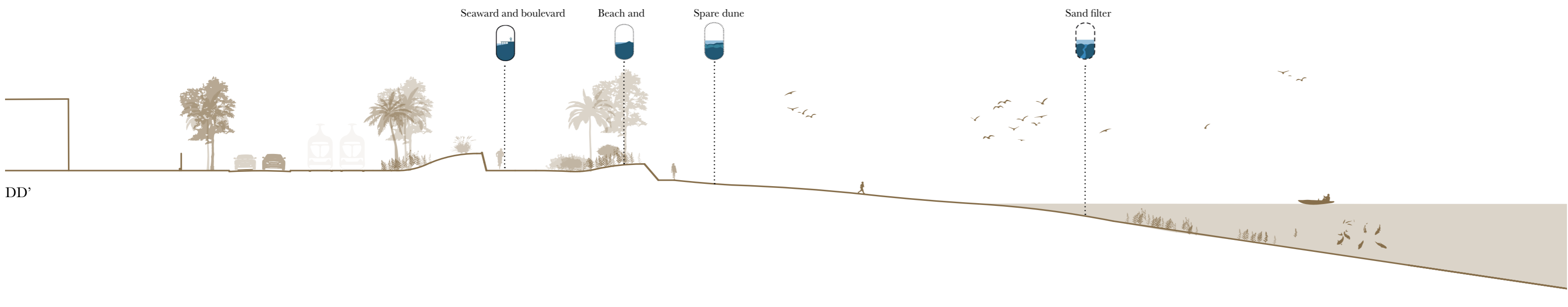
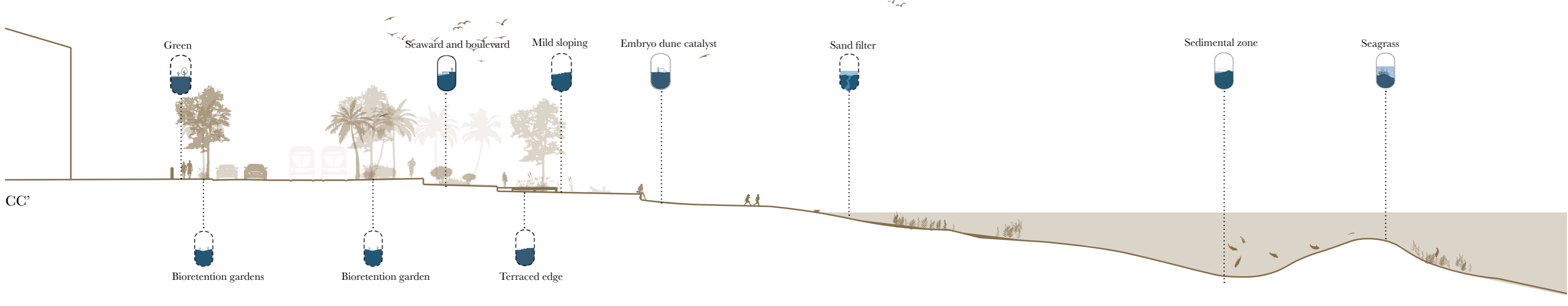
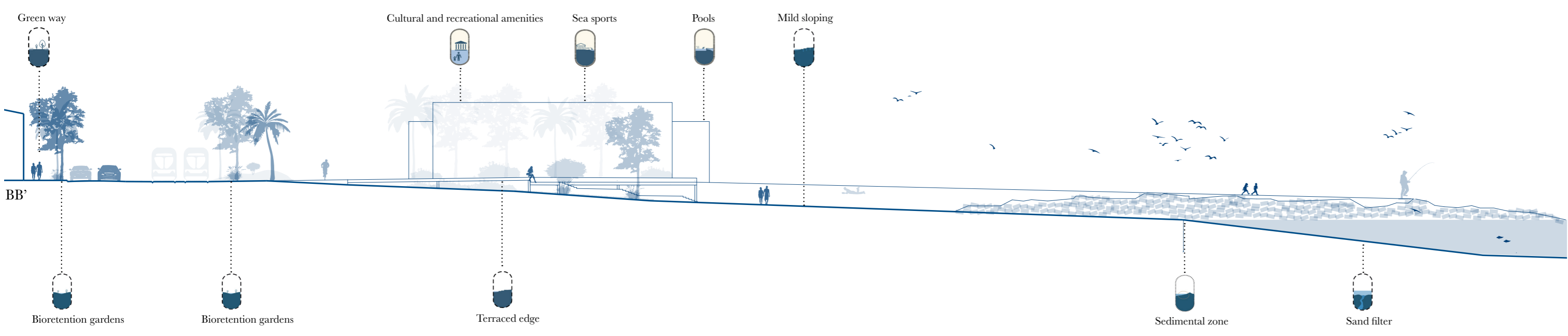
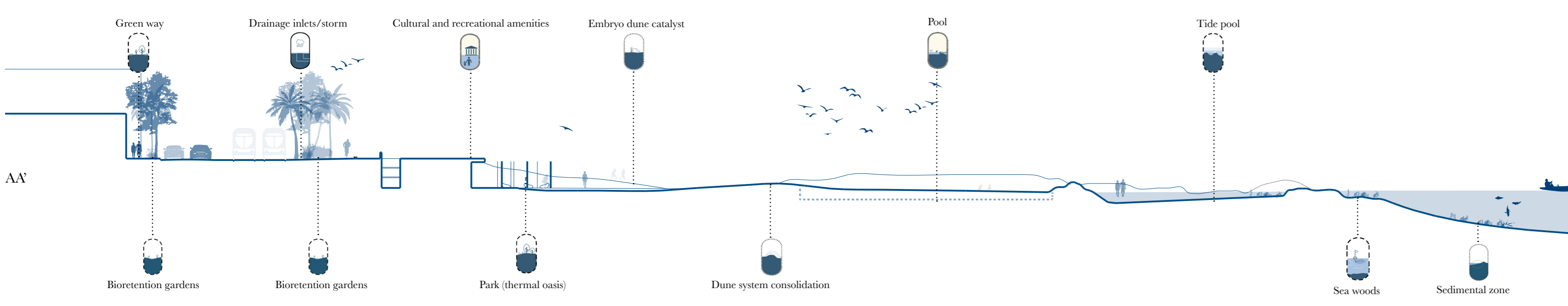


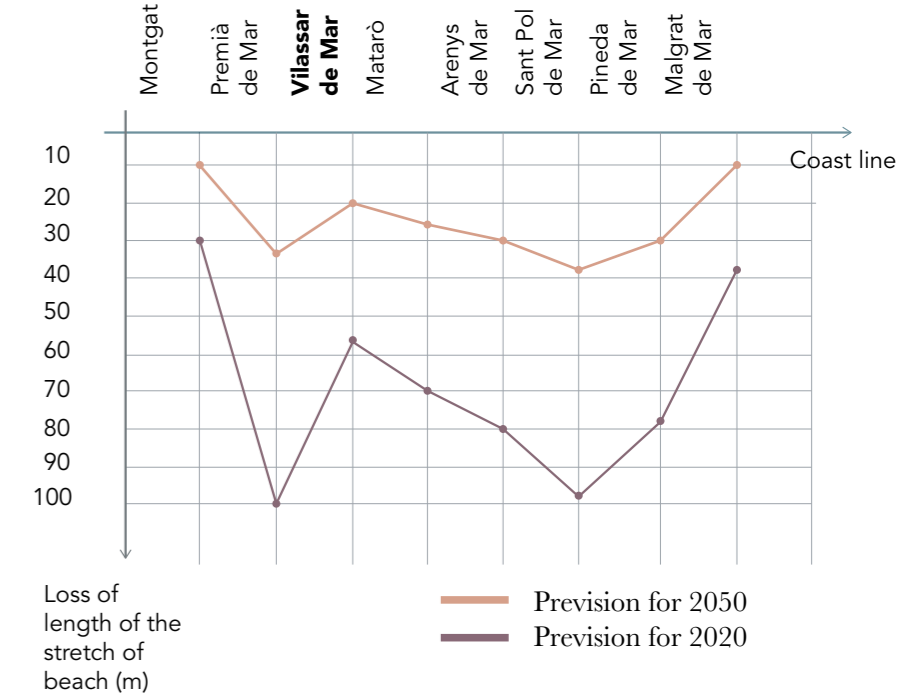
WINNING BACK THE WATERFRONT pt. 2

Nature Based Solutions as a design tool for regenerating urban spaces and the Mediterranean coastal ecosystem



Nature Based Solutions basically consist in the increase, improvement and enhancement of natural areas, in order to generate a series of ecosystem benefits and services. As priority actions they include increasing coastal resilience and restoring ecosystems.

Graph of the erosion trend in the Lower Maresme (Data from the Technical Report of the Ministry of Agriculture, Food and Environment)



The increase in erosion, as well as the result of the combination of rainfall and sea level rise, is an opportunity for the gradual transformation of this homogeneous coastline into different types of spaces along the front (coves, terraces, sea pools etc.). Less vulnerable and more consolidated landscapes are more capable of promoting activities related to idleness, sea sports and socializing. Created starting from consolidation operations, the structuring physical bases allow the establishment of functions capable of lasting over time because in favorable conditions. The purely functional action of consolidation and protection becomes a project input where the safeguard intervention itself also acquires the function of public space.

(1) Rate of longitudinal transport of sediments due to the action of currents and waves (in thousands of m³/year): the calculation performed according to the CERC model, with the calibration coefficient adapted to the characteristic measurements of the grain of each section of coasts and according to the Kamphuis model.

(2) The main actions to be undertaken can be summarized in the tables of the PhD Thesis of Miriam Garcia (scholar and researcher of issues relating to coastal protection): *Towards the Synthetic Metamorphosis of the Coast*.

2. New visual alphabet of coastal landscape design tools

- Bioretention gardens
- Green path
- Park
- Active catering dune system
- Beach and dunes
- Sea sports
- Sand filter
- Mild sloping buffer
- Spare dune
- Dune system consolidation
- Seaward and boulevard
- Cultural and recreational amenities
- Terraced edge
- Sea wood
- Sedimental zone
- Ridge restoration
- Drainage inlets/storm drain
- Pool
- Tide pool
- Algae purifier
- Embryo dune catalyst
- Seagrass beds
- Climate shelter