ABSTRACT

The dissertation intends to analyze the concept of sea-based development, in terms of a floating marine habitat which can serve as an alternative for future development.

This paper analyses the factors of land scarcity and the implications to the marine environment. The physical environment of the coastal zone due to rapid urbanization and land reclamation. The concern with the marine pollution with its impact on the coastal zone.

In order to understand the elements and characteristics in relation to the aquatic condition, the study into the sea-borned communities in the tropical region. The analysis of the architectural language of a marine structure in term of its floating structures, mobility, modular systems and the environmental response. In order to achieve a condition that is homogenized to the environment, the necessity for the marine habitat to response to the 'water terrain'.

The intention of this paper is to establish a spatial area necessary for man habitation in the marine milieu with the balance between man and ecology. In the physical planning of the marine environment, the studies include the urban development of the sea and the exploitation of resources in the sea. It provides man with the material possibilities and an integration of man to the marine existence, in order to create a new habitable space on the ocean.

The sea covers 70 per cent of the earth's surface with a plentiful of resources. The ocean represents a new frontier for science and technology, in contribution to the survival and advancement of man civilization. A study into the exploitation of the renewable energy within the oceans and the proposal related with the energy technologies at sea. An attempt to examine the future prospects for ocean research and exploration in term of the technological possibilities and the environmental conditions.