

Abstract

This research is concerned with one of the most distinctive places in the city. It discusses the urban design of the waterfront, which means the lands adjacent to water bodies or water ways. Although many cities in the world compete in the development of such areas, policies of waterfront development in Egypt suffer from some shortcomings. This deficiency has led to more discrepancy in the urban image of those places. Because there are no sufficient regulations, at the local level, that control architectural and urban development of such areas. Thus, this research seeks to develop a system of indicators or guidelines that ensure the efficiency of river front urban design, and achieve the best functional and visual benefit from their potentialities. To attain this objective, the research is divided into four parts. The first and the second parts contain the theoretical study, the third part contains the case study, and finally the fourth part contains the conclusion and the recommendations.

The first part deals with the basic concepts of waterfront development. It consists of two chapters. The first chapter discusses the various forms of water elements in the urban context, and it explicates the advantages and potentialities of waterfronts. The second chapter explains the waterfront development methods in the past and modern eras, and compared between them. It detected that most of the past civilizations were interested in developing those regions, except the medieval era, because of wars and fortifications that isolated the sea from the city. Also there was a decadence after the industrial revolution, due to the large number of factories and warehouses that led to more pollution. In the modern era, attention has returned to waterfront development. There are five approaches to develop those regions, the first is the urban approach (the core of this research), the second is the morphological, the third is the environmental, the fourth is the legislative and the fifth is the social development.

The second part explains the principles and guidelines of the urban design of waterfronts, at the functional and visual levels only. It consists of two chapters; the first is concerned with waterfront spaces, while the second is concerned with its structures. Each chapter contains four sections, the first defines the related terms and associated concepts, the second discusses the different forms and kinds of waterfront spaces or structures, and the third analyzes some of the most important development projects in the world. Finally, the fourth section identifies the common principles among those projects.

The design guidelines of waterfront spaces contain five basic principles. The first principle identifies the most appropriate uses of those spaces. The Second principle is concerned with the ratio of public spaces among them (i.e. the area of public promenades, plazas and gardens). The third principle is concerned with