Abstract
Coastal areas that stand out as natural attraction areas of cities due to their nature, have been focal points of many cities with their economic, social, historical, cultural and ecological values. Waterfronts which are defined as “interaction regions between urban development and water” are also regions that cities are differentiated and came into prominence due to their structure and functions. Nowadays, competition between countries has any longer given place to competition between cities with the globalization of economy and, sea, river and port cities have turn out to be a laboratory for process of urban regeneration intended for developing housing, commerce, tourism and recreational functions. Waterfronts regenaration projects offer significant chances by structuring relations between spaces, functions and visions and by searching port, urban functions and their economical, environmental and social aspects.

Today, comprehensive projects that contain integrated functions such as housing, service, culture, creative industries, entertainment and shopping are approved for successful and sustainable development of waterfronts as precondition and waterfronts are seen dynamic nodal points of post-industrial economies. While first examples of waterfront developments particularly focused on the spatial organization that contain entertainment and commerce, in time, they were improved in such a way that covering mixed-uses arrangements like working and different human activities. In the process of transformation and restructuring of industry, projects and designs take attention that come into prominence housing, service, culturel and recreational functions specially cultural tourism in different scale and scope. This study aims to investigate waterfront regenaration projects that are important place in terms of sustainable development of coastal areas with world cases, and critical evaluations on Turkey cases.

Keywords: Coastal areas, spatial transformation, regeneration, sustainability

1. Introduction
Changes in the spatial and socio-economic order have offered significant opportunities for reuse of urban waterfronts since the mid 1960s, waterfronts have become the common areas for the implementation of urban regeneration projects in USA, UK and many other countries [1]. In the development of this process which initially started in America; many factors including need for more recreation and activity diversity for the increasing leisure time, particularly need for the conservation of historical and architectural heritage in the old port areas, increasing environmental and social concerns related to coastal ecology, government support through tax incentives for urban renewal and development actions were effective. Coastal areas which were previously places for the movement of passengers and goods, while serving the marine industry such as cargo transport, fisheries, shipbuilding and repair, they increasingly became hosts for the organizations featuring commercial and urban functions [2]. In the process of transformation and restructuring of the industry, the first examples of the regeneration practice for the waterfronts, particularly focusing on arrangements for the entertainment and commercial, in time, developed to include mixed-use...
functions covering housing, work and different human activities (cafes, restaurants, entertainment areas, recreational areas, cultural tourism, etc.) [3, 4]. Today, projects containing complementary functions including housing, services, culture, creative industries, entertainment and shopping are considered as prerequisites for the successful development of waterfronts and waterfronts are regarded as the dynamic nodal points of the post-industrial urban economy. Waterfront regeneration projects shape the relationships between places, usages and the visions and offer outstanding opportunities by investigating the harbor, city functions and their economic, environmental and social aspects [5]. Urban development in coastal areas are seen as an important tool, especially for the solution of urban problems, withdrawal of global capital from and inter-city competition [6, 7]. Also, these areas are the image areas supported by political and economic trends and reflecting the cosmopolitan city life. From a social perspective, they are competitive areas featuring culture, sites and facilities, which, at the same time increase the quality of urban life providing ecological modernization via developing green strategies for the land and water. In this study which discusses waterfront regeneration projects which has an important place regarding the sustainable development of coastal areas, world examples are examined and Turkey examples are evaluated.

2. Literature Review

Transformation process of the port and waterfronts are closely related with worldwide economic restructuring, technological changes in the production and organizational processes in industry in coastal areas and competition between cities in the global hierarchy [8]. Reorganization of economic production systems on a global scale in the late 1960s and technological innovations has led to a retreat of industry in ports and waterfronts. With the abandoning of ports and waterfront industry from shores, new usages began to replace them. Waterfronts which became a scene of a series struggles in the times of industrialization, deindustrialization and post-industrial era, offer important opportunities during the conversion process of the cities to the post-industrial society. Transformation process of the waterfronts and experienced spatial and social changes symbolize the transformation from industrialization to knowledge-based economies and post-industrial societies. Analyzing the changes and transformation in the waterfronts in the world, the emergence of two different planning processes are observed [9]. The first of these features the transformation of traditional ports to meet the needs of the ships and containers of the new age and to provide the necessary transport infrastructure; and the second contains the planning and urban design projects including the displacement of the old ports with the new land use (urban services, offices, housing, recreation, etc.). Projects related to the restructuring and transformation of waterfronts are discussed in four different generations in the literature [10]. Although these generations are not separated from each other with clear boundaries, they differ due to the adoption of different strategies and approaches for the transformation and regeneration of waterfronts.

2.1. First Generation Projects-1960’s

First generation projects began to emerge in the mid 1960s in North America (Baltimore, Boston and San Francisco) due to the abandonment of the harbor areas [10, 11]. In this phase, the planning has assumed a new role by taking an experiential approach and waterfront organizations were seen as a symbol of the transition to a post-industrial era. New uses in waterfronts has emerged as mostly tourist facilities, hotels and office uses. The most effective examples of the first waterfront regeneration projects are located in the literature as Baltimore Inner Harbour, Boston Quincy Market, New York City Pierhead Building, San Diego Waterfront, San Francisco Giradell Square and Pier 63 [12].

Figure 1. Baltimore inner harbour (www.wrtdesign.com/projects/detail/Baltimore-Inner-Harbor/157)

Baltimore Inner Harbour development of waterfront is successful in various aspects [13] (Figure 1). The creation of a network that allows you to reach an agreement on the development strategies of public institutions and private organizations, the presence of semi-public institutions, adoption of different approaches such as financial incentives to attract private investors, the organization of design competitions to enhance the city’s image, the provision of a tight control on the implementation of the design criteria set by the public, etc. On the other hand, despite the many achievements, Baltimore waterfront regeneration process has received significant criticisms from the social point of view. Use of job opportunities created by the project by suburbs residents rather than the low-income groups, increased costs of the existing working-class life as a result of the prosperity brought by tourism and facing a large-scale gentrification pressure are some of these criticisms. Boston waterfront development and the New York Battery Park City are two other important examples of first generation projects. Boston waterfront which is important financial center, the re-integration of the coast and
the city and pursued a development based on public interest by improving the housing, entertainment and commercial usages. Inclusion of large state-owned land in the coastal areas, the creation of inter-agency cooperation and preparation of the waterfront development plan are the factors that have been successful in practice. Two master plans were developed for the New York Battery Park City and an urban design guide has been prepared. City and the coast were linked by a series of public open spaces and high-quality public spaces served as a model for other waterfront developments. As the earliest examples of urban renewal, these first generation waterfront projects have affected the waterfront development projects in many countries including Scandinavia, UK, Netherlands, Spain, Australia, Japan, Latin America, and South Africa.

2.2. Second Generation Projects—1980’s

In the early 1980s, due to dramatic changes in container transport, waterfront transformations that will meet the needs of ships and container has come to the agenda, and regeneration projects at larger scale and sizes have become common [10]. In this second phase of post-industrial waterfront development; the main theme of the projects were the mixed-uses containing office and leisure activities at the coastal areas. The projects in this period which spanned to the world cities including London, Barcelona, Sydney, Toronto, Cape Town, Singapore and Shanghai, brought new approaches to the creation of public-private partnerships and the use of private investments.[10, 11].
In this second phase, architects, planners and investors following a new and a dominant style in coastal area projects, this style known as ‘concrete curtains’ has been heavily criticized [10]. On the other hand, in waterfront organizations all over the world, due to weak planning and implementations, many monotonous, uniform and similar results have emerged in many coastal areas from Sydney to Toronto.

2.3. Third Generation Projects-1990’s

In the early 1990s, it is observed that different approaches were adopted for the development of waterfronts [10]. Participatory planning methods have been used in European port cities like Oslo, Rotterdam and Gothenburg and the local community were included in the planning process. In the restructuring of waterfronts; step by step approach in planning and design, urban design competitions and master plans have been effective. Often, activities containing cultural and leisure activities including the Olympic Games (Barcelona), aquarium and museums were organized in the regeneration of the waterfronts. London, Barcelona, Liverpool, Bristol, Amsterdam, Dublin, Berlin are the major coastal cities in Europe with the successful waterfront regenerations in this period [13]. Rotterdam example, reflected a different style with an adventurous architecture and well-oriented development strategies [11] (Figure 6). Barcelona waterfront regeneration project has successfully fictionalized the relationship of the city with the water by combining gaining a new identity and dynamism to the city and creating a new seaside European city purposes with 1992 Olympic Games Organizations [15]. The applied urban regeneration model began with the planners creating the idea of “New Barcelona” 77 in the 1970s, and with a qualitative planning and strategic planning approach in the development process, private sector and flexible planning approach has come to the forefront after 1990 Olympic Games.

Figure 6. Rotterdam waterfront (www.holland.com)

Liverpool regeneration project, as a result of the significant decrease in industrial production and population since the 1970s, featured repurposing the historic city center, shipyards and existing warehouse-store structures, cultural and entertainment-oriented arrangements at the city center and the introduction of a marina function (Figure 7). For the revitalization of Liverpool center, an independent company with public and private sector cooperation, Liverpool Vision has been established. The company which carries out their activities to attract new investment and to create new business opportunities with the resources taken from Europe and the government, prepared “Strategic Regeneration Framework” in 2000. In this document, Liverpool is defined as one of the leading cities of Europe, emphasizing the importance of the waterfront, it is proposed to improve the national and international conferences and leisure tourism.

Figure 7. Liverpool (www.liverpoolecho.co.uk)

Dublin waterfront regeneration project, have set an example for the complex relationships between technological, economic, architectural, social and cultural changes, and aims to be a world city with the city’s dynamic and developing new image [16]. Transformation of waterfront, bringing together the requirements of everyday life with the vision of the future, both intended to protect the industrial heritage of the area and showed a new style of architecture approach.

2.4. Forth Generation Projects-2000’s

With the beginning of the new millennium, forth generation projects have been developed. In this period of adoption of public-private partnerships and professional planning management, waterfront cities is in a competition with the new city marketing strategies based on unique seaport heritage in a global scale. Today, luxury residential and mixed-uses are dominant in the waterfront regeneration projects. In the port cities in Europe, there are big differences in the development of waterfronts in terms of planning culture, future planning strategies, implementation and results, and a shift in from small-scale and project-based transformation projects to a planning approach based on regional approach has been observed in the recent years [8]. London Docklands, Rotterdam, Hamburg HafenCity, Denmark Aalborg and Odense waterfronts, Edinburgh Leith Docks and Granton Harbour transformations are the striking waterfront regeneration projects of this phase.
In the regeneration of Hafencity waterfront located close to Hamburg city center, increasing the city’s economic and spatial charm, mixed land use and a contribution to the international image of the city has been intended [17] (Figure 8). Hafencity Master Plan which aims to strengthen the links between the city and the waterfront and to develop social and cultural facilities for new businesses to the city, was accepted in 2000 by Hamburg Senate. Planning and implementation process is intended as a flexible process that can adapt to unpredictable situations in the future. A special fund was created to finance the project and the infrastructure, and public assistance is provided in the application process. Development process has been shared with the public with a series of exhibitions and meetings, and a great importance is given to the participation of the people.

Denmark Aalborg waterfront is an important example of the regeneration process [18] (Figure 9). Project proposal which envisages a mixed residential and business areas in the waterfronts in 1999, has been a subject to strong criticisms of local citizens due to lack of comprehensive strategies for the public areas. In the 2000s, strategies were brought forward for public debate, in 2004, development strategies are discussed again in a project by Aalborg University funded by the European Union. In this process, workshops and meetings on the mentioned project have been organized with the participation of various groups and discussions have been effective in directing the planning process. Strongly focused topics were, the creation of mixed-use residential and office spaces to prevent the privatization of the waterfronts, developing and utilizing the industrial heritage and high quality of design in public places. Denmark Odense waterfront communities project has emerged in 2002 through a process in which Odense Municipality directed by gathering with planners, landowners, citizens, users and other interest groups [19]. In order to make port functions and activities attractive for both present and the future users, forums have been organized and a sustainable and livable harbor area has been established which has a common vision—a mixed use for the future and a vibrant part of the city. For the development of public spaces in the waterfront, a collaboration has been made with The Centre for Public Space Research–Realdania Research. Harbour Square in the waterfront, has emerged as the largest public space of the city hosting many events and activities.

In Edinburgh Leith Docks and Granton Harbour regeneration projects in England, consistent development of new residential areas, public areas and mixed uses were encouraged and the creation of a waterfront image at national and international level has been intended [20] (Figure 10). In “Waterfront and Leith Docks Development Framework” published by Edinburgh City Council in 2011, principles were laid down for the integration of existing urban areas and waterfront.

London Docklands example is the most controversial regeneration project which its development and impact has continued until today [14]. Despite the closure of London Docklands Development Corporation (LDDC) in 1998, the transformation of the area has continued. New institutions have emerged in time, free market has left its place to different political discourses, and spatial transformation of the area has accelerated at least until the financial crisis of 2008. London waterfront regeneration, as in other waterfronts around the world, has experienced a turning point due to the global economic crisis. Although the construction of the Wood Wharf near Canary Wharf continued, it’s been thought that cutting the public spendings would be a significant impact and changes in...
politics and government in the UK will increase the complexity of the process. While London regeneration area keeping its importance in policy documents, it’s less emphasized regarding social integration and state aid issues. The continuing effects of the crisis, indicate that the basis of many regeneration approaches and the sustainability of the development strategies is under threat. Some interpret this as the end of the prevailing forms of urbanization since the 1980s and a return to the 1970s plan-led and public-sector-led approach.

3. Coastal Area Regeneration Projects in Turkey

The regeneration project for the transformation of the industry located in the waterfronts of Turkey has gained importance in the 2000s. Izmit Sekapark Project, which is the first example of projects in this context, is described in the literature as an example of which all procedures were successfully carried out [21]. Following the closure of Seka Paper Factory in 2004 due to the loss of function, Kocaeli Metropolitan Municipality has prepared the Sekapark Industrial Regeneration Project. Sekapark Project, is considered as a successful project regarding the transformation to a usage with intensive recreation, resting and green spaces by considering the current public interest of waterfront, sustainable development of waterfronts, meeting the city’s social, cultural and recreational needs and increasing interaction between the public and the waterfront. On the other hand, projects including Istanbul Galataport, Haydarpasa Port, Küçükçekmece and Kartal urban regeneration projects which came to the agenda with “Global City Istanbul Vision” in recent years, are discussed with great debate [22, 23, 15]. With Galataport Project, tourism, trade, cultural facilities and terminals at 1200 meters of coastline and a green area consisting of 14% of the area open to public has been planned (Figure 11), while, with Haydarpasa Project, port is intended to be opened to tourism with hotels, convention centers, shopping malls and marinas. It’s been emphasized that these projects which propose non-public dense constructions incompatible with the unique urban identity of Istanbul, especially Galataport and Haydarpaşa Projects, allow constructions contrary to the “coast” concept in the Constitution and the legal frameworks developed for these projects constitute a threat for all the waterfronts [22, 23]. Additionally, it’s been observed that these projects have received great criticism from chambers and civil society organizations and there has been a great impact on the public, due to projection without the preparation of the infrastructures, and adequately sharing and discussing, disabling the local governments and carrying out through the central government channel, function choices not taking the planning policies into account, annuity based approaches, remotely holistic and non-participatory planning processes.

4. General Evaluations

Today, waterfronts are the most important urban areas which reflect the competitive development strategies of 21st century cities, and host large investments targeting the regeneration of abandoned port areas and their economic revitalization and the sustainability of the urban economies [24]. In the global scale, in the interurban competition supporting the network of urban hierarchy, waterfront regeneration projects, shapes the relationships between places, uses and visions, offer extraordinary opportunities by investigating the harbor, city functions and their economic, environmental, social aspects. Along with the globalization of the economy, now the competition between the countries left its place to interurban competitions and sea, river and port cities have become laboratories for urban regeneration processes which develop residential, commercial, tourism and recreational functions.

Since 1960s which the earliest examples of waterfront regeneration projects were carried out, new usages have been replaced with abandonment of ports and coastal industries from the waterfront, important experiences have been gained so far regarding the regeneration projects and application processes in global scale. When the debate on the regeneration of waterfronts began 50 years ago, it was thought that this was a unique and special planning experience [8]. However, experiences in Baltimore Inner Harbour and Boston examples have constituted a model in the regeneration of waterfronts on a global scale, and waterfronts have become the areas in which the urban image was reconstituted and a transformation towards a post-industrial and a knowledge-based urban areas took place. Since the 1980s, major regeneration projects were implemented and in this context, ‘mega-projects’ were carried out in many cities in the world. These projects are usually integrated with urban activities such as the Olympic Games, the world exhibitions and cultural events. Cities such as London, Barcelona, Rotterdam, Hamburg and Dublin are among the cities in which implementation of successful waterfront regeneration projects took place. Waterfronts in urban development, taking the American cities as a model in the beginning, in time, some negative experiences in European waterfront developments (uncleanness of the responsible organizations, negative urban images, new land uses exploiting the coastal areas for their
own purposes, etc.) showed that standardized regeneration models did not bring the best local solutions and cities have started to bring their own approaches (7). Waterfront regeneration projects have undergone a transition from a single-functioned and small-scale approaches to large-scale strategic perspectives, and integrated with medium and long-term sustainable urban renewal studies. Waterfronts have begun to be seen as an important part of the broader concept of the city and the region.

Today, romantic and nostalgic perspective was left behind, the planning of cities and waterfronts began to monitor the different growth parameters increasingly. Future development of waterfronts depend on the global economic developments and the interactions, transportation opportunities, the natural environment as well as the climate change and the interests of local people. All of conflict of interest groups in the world lived in the waterfront development is expected to increase in the future. Visions of architect and expectations of urban investors and the real estate sector is supported by the media. These expectations are in conflict with port logistics requirements and economies. City marketing strategies are mainly concerned with landmark projects and these projects are also important items for the entire city. From the countries which have adopted the waterfront interurban competition, countries which have adopted new governance approaches in which prospective regional strategies and the public and private interest groups included in the planning process will succeed in the long-term.

Examining the development processes of waterfronts which came to the agenda especially with Istanbul’s “Global City Vision” in Turkey in the recent years, it’s been observed that these projects have received great criticism from chambers and civil society organizations and there has been a great impact on the public, due to projection without the preparation of the infrastructures, and adequately sharing and discussing, disabling the local governments and carrying out through the central government channel, function choices not taking the planning policies into account, annuity based approaches, remotely holistic and non-participatory planning processes.

Regarding the sustainable development of waterfronts, the adoption of a transparent, participatory, and sustainable planning process which oversees the public interest and is considered as a whole from the large scale spatial strategy plan to urban design scale is of great importance.

References


