

Waterfront Planning for Sustainable Development of Natural and Archeological Heritage

Florian Nepravishta, Dorina Pllumbi, Klaud Manehasa

Polytechnic University of Tirana, Faculty of Architecture and Urbanism
Tirana, Albania

florian.nepravishta@fau.edu.al; dorina.pllumbi@fau.edu.al; klaud.manehasa@fau.edu.al

Oltion Marko

Polytechnic University of Tirana, Faculty of Civil Engineering
Tirana, Albania

omarko_78@yahoo.com

ABSTRACT

Orikum area, with many natural and archaeological potential, is positioned in the meeting place of three water systems: the sea, the river and the lagoon with the wetland. The waterfront planning design aims the development of this site in harmony with nature and its history. The paper is oriented toward practical problems of the waterfront planning for sustainable development of Orikum. The specific issues which are addressed include changing the waterfront image by improving accessibility, linking and preservation of natural and archaeological heritage. An incremental approach to implementation is recommended, with emphasis upon principles of sustainable and environmental design for tourism development and the role of urban design guidelines for waterfront development and the preservation of the natural and cultural heritage, as well as to the development of the community. The results of research show that the waterfront planning concepts of sustainability and innovation will be highly strategic and operative to reach successful urban development.

KEYWORDS: waterfront planning, sustainable development, natural and archaeological heritage

1 INTRODUCTION

Orikum is located in the south-west of Albania. Surrounded by a beautiful landscape consisting of mountain, sea, meadow, wetland and long views of expansive sky and horizon, the area is a rich with attractive archeological heritage, visited spots and other elements related to cultural tourism.

Ancient city of Orikos was established by the Eubeas in the VI century BC in the Illyrian land of the Amantians, over the hill known by the name Paleokaster. It has been mentioned by the ancient authors of the V century BC as an important harbor. The place had an important role in the war between Cesar and Pompey. It was invaded by Alexander the Great in 214 BC. In the VII century BC, close by the Marmiroi church was built. Archeological excavations were limited to these territories because of being part of the military naval base. The ancient military harbor, so-called by Ottomans Pashaliman¹, served as an important naval base during the Cold War between the Eastern and Western blocs.

¹ In the Byzantine and Medieval times was known as a small port named Jericho, and later, at the time of the Ottoman conquest was named Pashaliman.

The Orikum zone is around 31 400 hectares and it includes many villages. City lacks infrastructure, agricultural lands are not cultivated by the farmers anymore, marshes and lagoon are in poor condition, water irrigation channels are used to shed wastewater of the city into the sea, archaeological sites (old city of Orikos, Necropolis and Marmiroi church) are not used for the development of tourism in Orikum and are unknown from anyone. The seashore along the national road from Vlore to Orikum is chaotically constructed and damaging the environment.

Orikum has many natural and archaeological potentials undiscovered. Its position is the meeting place of three water systems: the sea, the lagoon and the wetland. The waterfront project is part of a master plan that aims the development of the site in harmony with nature and its history. The theme chosen will highlight the waterfront values and the necessity of the sustainable development planning.

2 WATERFRONT DEVELOPMENT

Orikum is a small and quiet town which lacks an active social life and is inhabited only during the summer by tourists. Tourism and related services represent one of the most important sectors of the Orikum's economy, through which give the main income for residents. Orikum offers potentials for various tourism activities in different destinations. What make it unique are a variety of waterfront attractions and the relative proximity of these sites in a remarkable natural and cultural context.

While the main attraction of tourism development will continue to be the coastal bath tourism market, the tourism profile for Orikum area should shift from the mass market predominance of visitors to the beaches in a great variety of more active tourists with wide interests. Along the entire length of seaside Orikum - Radhimë, in recent years, were built hotels, bars, tents, tourist villages and buildings with residential destination. The area is somewhat protected by massive and uncontrolled construction, while maintaining the character in a certain way and the natural landscape. The "Orikum Archeological Park" next to the "Orikum Lagoon" and the sea, the "Marmiroi Church" and "Karaburun National Park", which are exceptional beauty, are unexplored and has limited accessibility. Tourism market is very interested in this type of natural and archeological heritage. The archeological excavation in the ancient Orico's and its opening to the public makes this part of waterfront very attractive for tourism.

Other tourist attraction is Vlora Bay with attractive historic buildings, archeological monuments, visited spots and other elements related to cultural tourism. Local villages with their livestock and agriculture developed and based on tradition present excellent opportunities for agritourism development. Because of the climate conditions, terrain and tradition, farming occupies an important role in the waterfront economy. The agriculture remains important economic activity as opportunities for development of this sector are good. Cultivation of viticulture, horticulture, citrus, have increasingly grown trend. Olive, citrus and fruit trees join the largest surface of the planted areas.

The economic development of the area has led to demographic changes associated with changes in terms of social structure and the increasing demand for construction. New developments, occurring after '90, have increased the informal construction without complying with any kind of survey and urban planning. In the transition period we noticed a certain trend and pressure from private investors to build formal and informal tourist facilities in the waterfront area of Radhimë-Orikum.

The informal constructions and the cemented beaches are a clear risk to environmental protection and sustainable development of the waterfront. In this context the Orikum's Municipality has to develop new local planning instruments for its development. Waterfront planning enable the sustainable development, controlled and oriented territory ensuring a healthy environment for today's and the future generations.

3 THEORETICAL BACKGROUND

The seashore and riverfront are the most attractive water features for human settlement development. The interest in promoting waterfront redevelopment in many countries was caused by environmental protection, shoreline access, water quality, historic preservation, tourism and economic development, as well as the growing potential of the waterfront for recreational, commercial and residential uses (Krausse, 1995). In general, a waterfront is the zone of interaction between urban development and the water and a waterfront area is considered as a unique and irreplaceable resource where it is the interface between land, water, air, sun and productive plants (Wrenn, 1983).

In the last decades in many developed countries have been undertaken many initiatives for the development of urban areas that are confined by water. Many of these planning projects have resulted successful and other less successful in terms of environment and cultural heritage. One of the main factors that affect the success of these projects is the design.

Waterfronts are one of the most valuable resources for a country – being limited, precious and non-renewable assets. To secure long-term growth of this resource, it is important for waterfront areas to be used strategically to maintain their economic value and enhance their specific features or image (Bruttomesso, 2006). According to Bruttomesso the following design principles have proven to be critical components of successful waterfront projects:

1. Secure the quality of water and the environment.
2. Waterfronts are part of the existing urban fabric.
3. The historic identity gives character.
4. Mixed-use is a priority.
5. Public access is a prerequisite.
6. Planning in public-private partnerships speeds the process.
7. Public participation is an element of sustainability.
8. Waterfronts are long term projects.
9. Revitalization is an ongoing process.
10. Waterfronts profit from international networking.

4 TOWARD AN INCLUSIVE SUSTAINABLE WATERFRONT DESIGN

Sustainable planning of Orikum's waterfront could be an economic advantage with good prospects for tourism of local economic development. It faces a dual challenge of meeting environment imperatives and negotiating meaningful expressions for the coexistence of waterfront development, human activities, and ecological processes.

The waterfront sustainable design address issues such as habitats and cultural heritage preservation, water management, and energy and resource conservation. But, the design projects often fail to engage multiple understandings and forces in an undeveloped waterfront context and urban heritage. Parallel to the discourse of sustainable design, the literature under the rubric of waterfront development or redevelopment has stressed the blurring boundaries between architecture and waterfront, forms and processes, environment and cultural heritage protection (Corner, 1997; Bruttomesso, 2006; Wrenn, 1983; Breen & Rigby, 1996; Hall, 1992). Based in these theoretical experiences and practice the planning proposals offers variety of design solutions. However, actual outcomes in terms of sustainable design for the improvement of ecological functions and protection of archaeological heritage in the waterfront environment remain to be seen.

How would an inclusive approach of sustainable planning address the imperatives of preserving and enhancing the waterfront ecosystems and protecting cultural heritage?

Emerging vision of a sustainable design in the waterfront development proposals in Orikum addresses the unique context and functions of river, Laguna and seashore urban waterfront. In treating the waterfront as a hybrid matrix of urban development and ecological processes and recognizing the dynamic interactions of social and ecological processes at the waterfront edge, the proposals provide a

glimpse of new expressions and meanings of environment design in urban, natural and archaeological heritage sites. While still conceptual, the groups of student proposals offers an alternative to the prevalent model of undeveloped and informal waterfront development, to sustainability that often overlooks the multiple layers of environment and socio-economic forces on this ever-changing natural and urban heritage edge.

Recognition of this diversity of development problems allows the students to move away from essentialist and binary notions of architecture vs. landscape, infrastructure vs. ecology, and city vs. nature. Specifically, it allows for negotiations between different processes in the urban landscapes and encourages critical and nuanced expressions of the socio-cultural, ecological and structural complexity of contemporary waterfront development.

5 ORIKUM'S WATERFRONT PLANNING

The project for the sustainable development of the Orikum waterfront started as a cooperation between HEPIA, Joint Master of Architecture, of Genève and Faculty of Architecture and Urbanism, Polytechnic University of Tirana. From these joint project a variety of design and planning proposals have emerged. Aside from addressing the multiple needs and challenges, one of the most consistent themes across the different proposals has been the articulation of the Orikum waterfront's dual identity as both an ecosystem and an urban space.

The study includes in its surface area the seashore of Orikum city with Lagoon and channels, archeological and the natural parks. The main idea of the study is to make use of the natural beauties of the zone, and to create a modern city atmosphere, which will be the attention absorbing element to walk through, to arrive to ancient Orikos, where the archeological site with historical values, the natural site with the lagoon and the agriculture fields, and the marina military base easily coexist.

The waterfront design proposals intended to enhance tourist values on an area that is defined by the significance of its archeological, historical and natural heritage values and regarded as a major cultural resource with scientific, social and economic dimensions. This waterfront design is a tool through which the local government and communities can manage, control and protect their natural and heritage resources.

Planning for sustainable development of Orikum waterfront intersect many disciplines related to each other like: urban planning, architecture, archaeology, environment and landscape. The design process responded to the complexity of this project.

Specifically, the various combinations of waterfront, natural and archeological site, military base and habitat functions became a key feature shared by many of the proposals. To provide sustainable design proposals, the following discussion focuses on three management strategic elements that explicitly respond to the waterfront's specific conditions:

- Accessibility
- Linking
- Preservation of natural and archaeological heritage.

In the urban scale the design proposal create visions on how to develop the city waterfront. It exams issues related to the management of expanding the city limits, the relationship of the built environment with the water, morphology of the territory and natural elements, orientation and character of spaces and hierarchical relationships.

It planned the expansion of the city towards the seashore waterfront and on both sides of the river waterfront, by creating a connection with the archaeological area and the "National Park of Karaburun" through physically as well as visual itinerary, by opening some axes to lead in these areas. Putting limits for the expansion of the city with parks. In the direction of the national park the expansion of the city will go up to the main channel that has shedding into the sea, where is located the pumping station. It will create a massive green park to prevent further expansion of the city. The Izvori River shore also will become a natural park, about 150 meters large, to stop construction and the erosion (Figure 1).

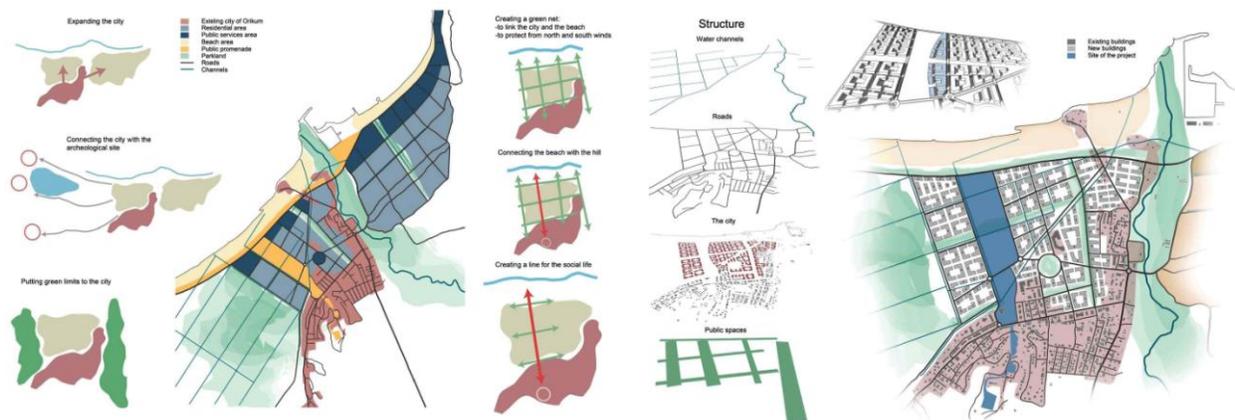


Figure 1: The proposed zoning and waterfront and urban development plan of Orikum.

New part of the city will be built with closed squared blocks of residences with common green space in the center. These buildings will be 3-4 floors while those closer to the coast will be 2 floors in order not to impede the view to the sea.

Preservation and revitalization of parks and archeological heritage was mainly successfully faced in the waterfront design with different proposals for alternative tourism development such as the beach tourism and the cultural, natural, agricultural tourism. The sustainable development of the area suggests that the course of the project has to re-evaluate the major natural and historical assets.

Design proposals for the transformation of different developing zones happens gradually, having natural limits, but with no clean cuts. And so, the city goes from just a dense urban zone, to a more expanded residential zone. Nature expands into the new part of the city by the conversion of the channels from roads to park ways. The channels come out from the natural park (from the wetland), and flow into the residential zone, bringing the nature to the city.

The orthogonal system helps in creating residential spaces fulfilling all requirements for green spaces, respecting distances between buildings, and forming different kinds of spaces, private and public ones. Starting from the city the buildings are developed around the perimeter, forming closed residential cells, and after the linear connecting element they become linear developments, allowing visual contact towards the sea.

First step for the improvement of accessibility was relocating the national road, away from the coast and approach to the villages of Kanina, Radhima, Tragjas and Dukat to be easily accessible and a place to visit. In this way the road will not go through the city while avoiding noise and pollution there. A new city entrance is proposed and with the existing one it forms a ring road, which goes close by the natural park and then turns around. Just before it turns around it is provided with an exit towards Orikos and the Military Base. The complex existing road system is transformed into a regular orthogonal one, which follows the channel system from the agriculture fields, to the wetland in the natural park, and then into the city. Interconnected street grid network disperses traffic and eases walking.

Pedestrian routes will be used to visit the archaeological zone, while from the city until the beginning of this itinerary will be used minibuses for tourists as well as bicycles. The automobile road that serves to the military zone will be preserved and will only be used from them, not allowing personal vehicles to cross check point. In the lagoon there will be used several small boats to visit archaeological sites in a shorter way and less tiring. Marina port will be used as a starting point for touristic trips by sea to visit the marvelous seashore of Karaburun.

In the master plan are proposed the connection of the important points not only by a road, but also with a green line that flows naturally from the parks, in order to develop them. This green line shows the way to the historical site (Figure 2).

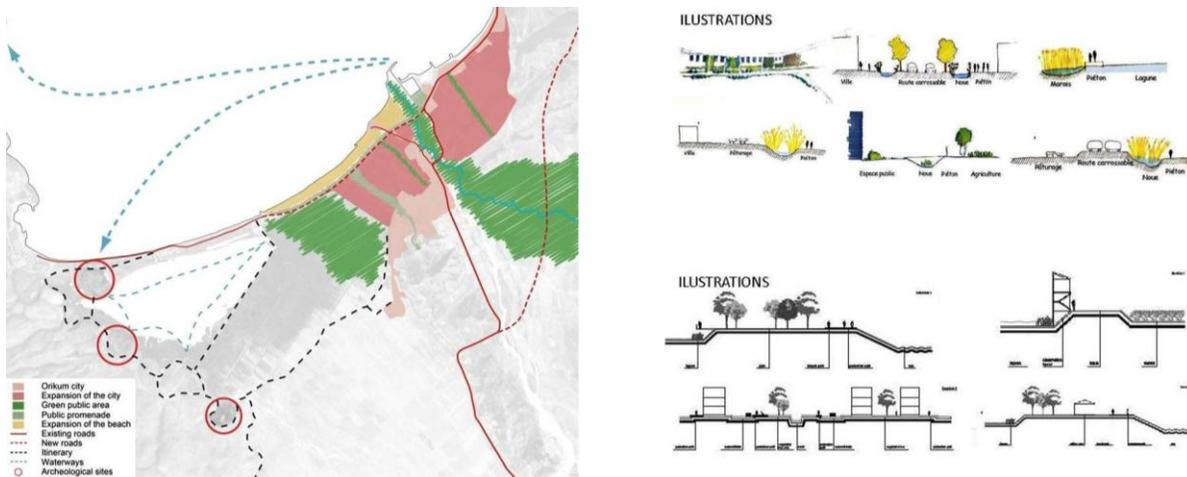


Figure 2: Proposed connections of the important points, illustrations and details.

The central promenade design proposal as one of the main lines of future development of the city offers green spaces, parks, recreation, water basins, commercial services, relaxing spaces, information pavilions, an ethnographic and archaeological museum and other social and cultural activities. The promenade connects in an integral way important parts of the city, creating a rich space with social and cultural functions. Its purpose is to create a mix atmosphere with diverse elements that attract and fill the needs of the community and tourists (Figure 3).

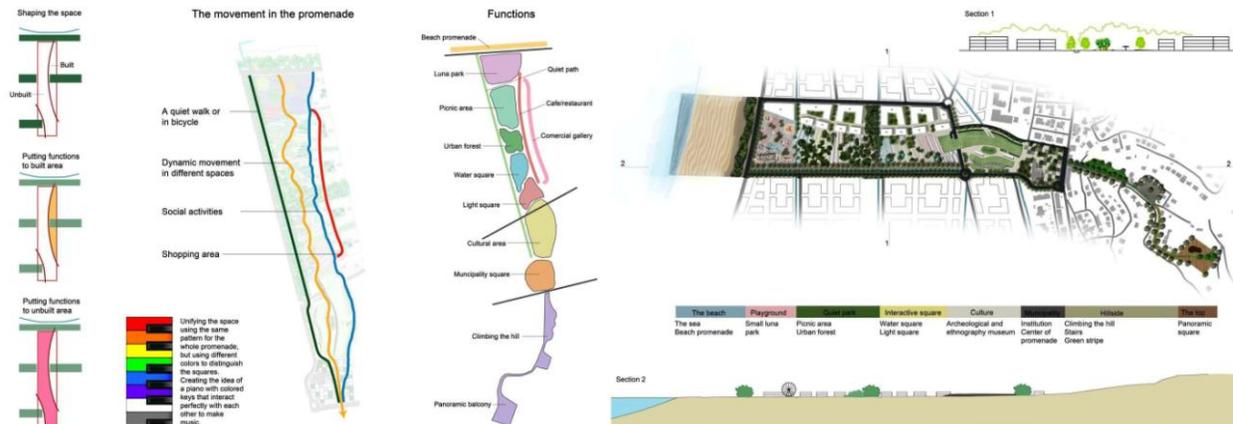


Figure 3: The concept design and proposed design of the central promenade of Orikum.

Promenade movement is natural, dynamic and interesting the transition from one space to another. Despite the different functions and different styles of design of each square they unified as a whole in a harmonic way using the same pattern in the whole promenade, but using different colors to distinguish different squares that have a perfect interaction with each other.

The museum is included in the promenade as an integral part of its functions and spaces. This topic of the museum was chosen for the preservation of cultural and social values of this region, for the function of social and cultural life regeneration. Climbing the hill is done with wide stairs decorated with vegetation. A green grass stripe runs up to the top of the hill where is located the panoramic balcony.

Promenade zoning highlights the potential that it creates in a new city as Orikum. Separate spaces create the appropriate privacy, connectivity and access with other parts, compact and interactive organizing with the space functions, forecasting and fulfilling all people needs. Promenade functions serve for all ages, since it includes an Luna Park for children, quiet parks for picnics, intimate spaces with massive vegetation, water basins square and fountains, lighting decorated square, spaces with bars and

activities for the youth, commercial spaces for shopping, open square with stairs for concerts and various activities, an ethnographic and archeological museum which shows the culture of the region, Municipality square, and the hill that offers tranquility and a great panorama (Figure 4).



Figure 4: The detailed proposed design of central promenade of Orikum.

Another design proposal was the waterfront promenade with green, sidewalks and services, situated next to the beach and to the edge of build area. Buildings near the promenade will be used for tourist services like hotels, bars, restaurants, shopping centers, etc.

This linear waterfront promenade serves as a connecting way between two natural limits of the expansion of the city, the natural and archaeological park of Orico's and the Izvori River, and between the city and the sea, creating another attraction point in between. It takes one of the main irrigation channels and uses it as a decorative feature that encourages different kinds of activity (Figure 5).

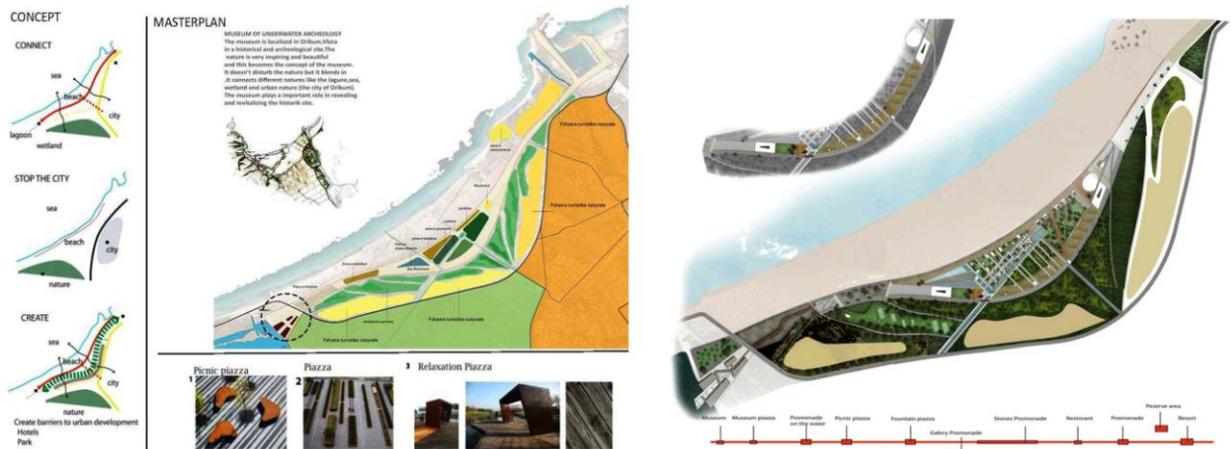


Figure 5: The concept and detailed proposed design of waterfront promenade of Orikum.

The promenade, with pedestrian friendly street design, provides connectivity and leisure walking. The whole axe is a pedestrian path free of cars, as are also some other parts of the road system. As along other road system along the promenade the bicycle lane is present. The limits along the promenade are formed by human scale architecture and beautiful surroundings, with 1 – 3 floors buildings, while creating special pauses during a long tune of walking with a big closure in the end. A green park is confining the promenade with the first line construction. These pauses create a chain of landmarks with different activities in each one. The urban squares are located in the nodes between the promenade and the passage ways, pedestrian and mobile ones (Figure 6).



Figure 6: The detailed proposed design of waterfront promenade of Orikum.

Another proposal was to link the urban area and the seafront promenade with Orikus archaeological park and lagoon, which will be through the wooden crossings passages associated with greenery. These passages are associated with resting places and observation points for tourists (Figure 7).

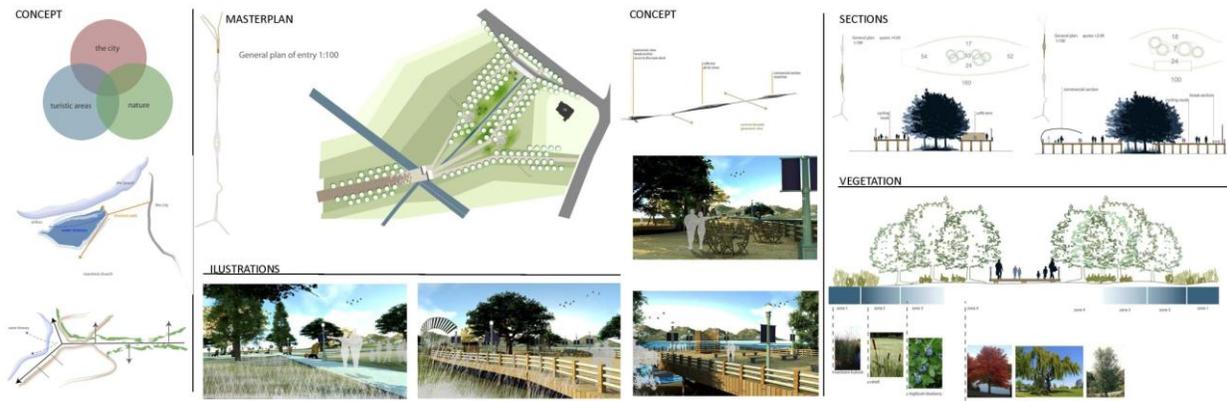


Figure 7: The wooden crossings passages associated with greenery.

For the region coastal profile was prepared an analysis of the socio-economic situation, artificial and natural resources, and definition of the environmentally sensitive areas. Discussions of the sustainable planning in terms of socio-economic dimension have been the key aspects of the development of the guidelines for a sustainable tourism product as the public private community partnership, participation of community in the planning process, relationship between local community and global tourism market, research and promotion of the touristic territory.

6 SUSTAINABLE DESIGN CRITERIA ADOPTED IN ORIKUM WATERFRONT PLANNING

When designing the waterfront plan, landscape and facilities, contextual, environmental, functional, formal and technological criteria were reviewed. These criteria were later adopted when it came to taking project design decisions. These criteria involve taking a stand on the future desirable environmental results and the spreading of the project sustainable design elements.

The principles of sustainable planning and environmental design for waterfront development of Orikum could be focused in the following topics:

Landscape design. It is necessary to develop a master plan and a site plan to set up a balanced relationship with the topography, landscape, wetland and agricultural land, fauna and flora, sea water, lagoon water, water drainage canals, heritage sites and urban development aspects.

Linkages or touristic itineraries. Consideration should be given to the environmental conditions of linkages or touristic itineraries between different interesting points, adjusting the scale and proportion of the human-made environment to the natural environment.

Built facilities and their services. The planning for touristic facilities and housing will be based in the sustainable development of territory taking in the consideration all environment factors influencing them. The use of green, water canals, orientation could influence positively their impact in the surrounding environment and its preservation. Services in the planning area will be based in the use of renewable sources and passive technologies.

Preservation of nature and resources. Sustainable project should commit to the preservation of natural habitat and archeological sites as well as among the others minimizing waste, sewage, noise and maximizing of the use of renewable sources.

Use of environment friendly technologies and materials. The sustainable planning design should be based in the local resources and traditional technologies adding comfort and environmental quality.

7 CONCLUSION

Project proposals for the sustainable development of Orikum were concentrated on the biodiversity and environmental protection; tourism, conservation and cultural heritage; institutional capacity building; and integrate them.

In treating the waterfront as a hybrid matrix of urban development and ecological processes and recognizing the dynamic interactions of social and ecological processes at the waterfront edge, the proposals provide a glimpse of new expressions and meanings of environment design in urban, natural and archaeological heritage sites. Tree management strategic elements that explicitly have responded to the waterfront's specific conditions were: accessibility, linking, preservation of natural and archaeological heritage.

Spatial planning is a major tool to create conditions for the waterfront development in Orikum. The concept of sustainability identifies new trends of waterfront design. The case study presents an experience in terms of planning and design that makes it possible to think of a sustainable use of water, heritage resources and their relationship with tourism. The concept of sustainability could be an instrument for thinking possible ways of implementing it, in this case ways to connect heritage and tourism. This should be understood in relationship with the persistence in time and the current and future conception of the human-made environment.

Examination of natural and archeological heritage and the key trends in tourism development clearly demonstrates that tourism, and in particular, international tourism, will be the fastest-growing sectors of the economy in the Orikum. Tourism has the powerful economic, social and ecological contribution and potential; it will give positive effects by increasing the number of jobs, boosting economic development.

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