

Urban Coastal Environment and Management Policies in Attica

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1 ABSTRACT

Nowadays, the coastal area of the Attica region faces many problems that degrade natural resources and the quality of life of the residents. In addressing these problems, the European Union has issued several directives and guidelines for actions taken at a local and regional level.

The research refers to the urban sprawl of cities on the coastal environment and its repercussions. Specifically it focuses on the problems of coastal cities as well as the policies that have been implemented to address these problems by taking into account the directives of the European Union.

To carry out the research, land use plans, legislation for regulations land use, statistical data and existing surveys, are used. Also a research in situ and a method of personal interviews with the persons who are responsible for dealing with the problems that coastal municipalities are facing and the policies which have been implemented in order to face them, took place.

The research showed that the coastal area of the Region of Attica has a great economic and environmental significance for enhancing the quality of life for residents. The degradation of natural resources is continuing, despite the policies that have been implemented up-to now. Thus, the search for new policies and measures as well as the active participation of citizens for an integrated management of the coastal urban environment are necessary.

2 INTRODUCTION

Nowadays, the proportion of European citizens that live in urban areas stands at 80 % and most of it is concentrated in the coastal area (CEC, 2004). Coastal cities face many environmental problems that degrade the natural and cultural resources, having as a result serious repercussions on quality of life and the sustainability of these areas.

According to the Sixth Action Programme for the environment, the main issue concerning urban areas were the management of the urban environment, sustainable transport, construction and urban planning and harmonization of different policies in accordance to the instructions of the European Union (EC, 2007).

Additionally, the Seventh Programme proposes the research for the urban environment to focus on innovative urban management, reconstruction of the human environment, promotion of cultural heritage, environmental risk assessment, energy efficiency, renewable energy, safety and protection.

Urban areas are currently called upon to play an important role in reducing greenhouse gas emissions and adapting to that decrease. The basic guidelines involve sustainable use of natural resources, waste production prevention, recycling waste, saving energy, using renewable energy sources, proper land-use planning, at protection of soil, water, air and other (CEC, 1997).

Also, urban areas play an important role in achieving the objectives of the EU strategy for sustainable development and are both economic drivers and areas where entrepreneurship and investments take place.

Regarding coastal urban development, the European Union is pointing out that: (OJE, 2009).

- The distribution of land uses in the coastal zone should be balanced and the unnecessary and the excessive concentration of urban development should be avoided.
- Priority should be given to public services and activities that require immediate proximity to the sea.
- The development of spatial plans and programs that cover the urban development and socio-economic activities as well as and other relevant sectoral policies should be secured.
- The linear extension of urban development should be limited and a new transport infrastructure along the coast should be created.

Taking the above into account, the present work refers to a research in coastal urban areas. As a case study the coastal urban area of Athens is selected. The problems which this particular area presents, the policies

that have been implemented until today, as well as the measures that have been taken for protection and its upgrading were investigated.

3 METHODOLOGY

To complete our study, legislation for regulations land use, statistical data and existing surveys and land use plans, are used. The study is based on a survey in situ and a series of personal interviews with officers of the municipality who are responsible for dealing with the problems that coastal municipalities are facing and the policies which have been implemented in order to face them, took place. Also, a geographic information systems (GIS) is used.

4 THE COASTAL REGION OF ATTICA

The coastal region of Attica has an area of 3092.9 Km² and covers 81.22 % of the total area. According to the nomenclature of Territorial Units for Statistics (NTUS), belongs to category NUTS II. In this region lives 4,335,110 inhabitants, a number that corresponding to 62.09 % of the total population in the region of Attica (HSAG, 2012a) (Fig.1).

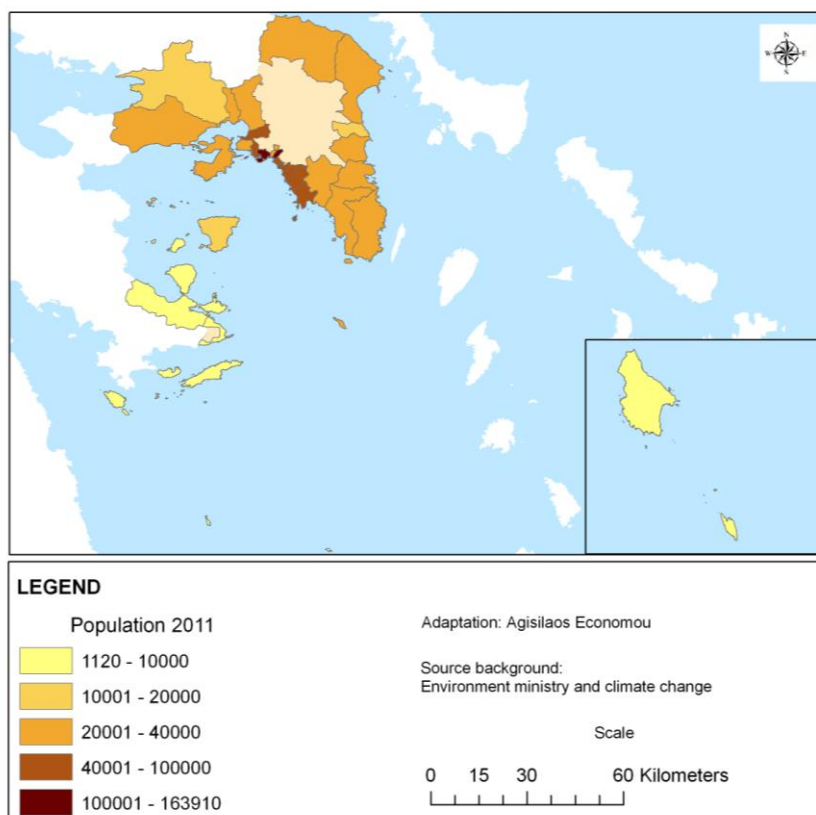


Fig.1: Population in the region of Attica.

The importance of the coastal region of Attica is great because:

- It presents good climatic conditions, mild and wet winters and relatively warm and dry summers, a high rate of sunshine and an average annual temperature ranging from 16 oC to 18 oC (HNMS, 2012).
- It presents great biodiversity. Many areas are included in the lists of the European Union as a highly valued landscapes, habitats Corine, area Natura and National Parks. The main areas that have been included in the protection Network are the Mount of Parnitha, the area of Oropos and the estuaries of Asopos, the area of Schinias, Vravrona, Sounio with the Islet of Patroclus, the mount of Hymettus, the Vouliagmeni lake and the National Park of Parnitha (Fig. 2).
- It has remarkable natural resources, such as the plain of Mesogion and Marathon.
- It has remarkable cultural resources such as global monuments, Temple of Poseidon (Sounio), Temple of Amfaias (Aegina)

- It includes a great number of sports facilities and Olympic facilities that were created to serve the 2004 Olympic Games. The Olympic projects are not sufficiently utilized so it order to contribute to tourism development.
- The region of Attica includes four ports of National Importance (Piraeus, Eleusis, Rafina and Lavrio) which are associated with the Trans-European Transport Network. It also includes the largest airport in the country Elefterios Venizelos, airport, which establishes the region of Attica as a primary national and international hub of Greece.
- It presents a strong growth of coastal areas driven by residential and tourism development. Tourism is oriented to tourism for water recreation in coastal areas (Fig. 3).

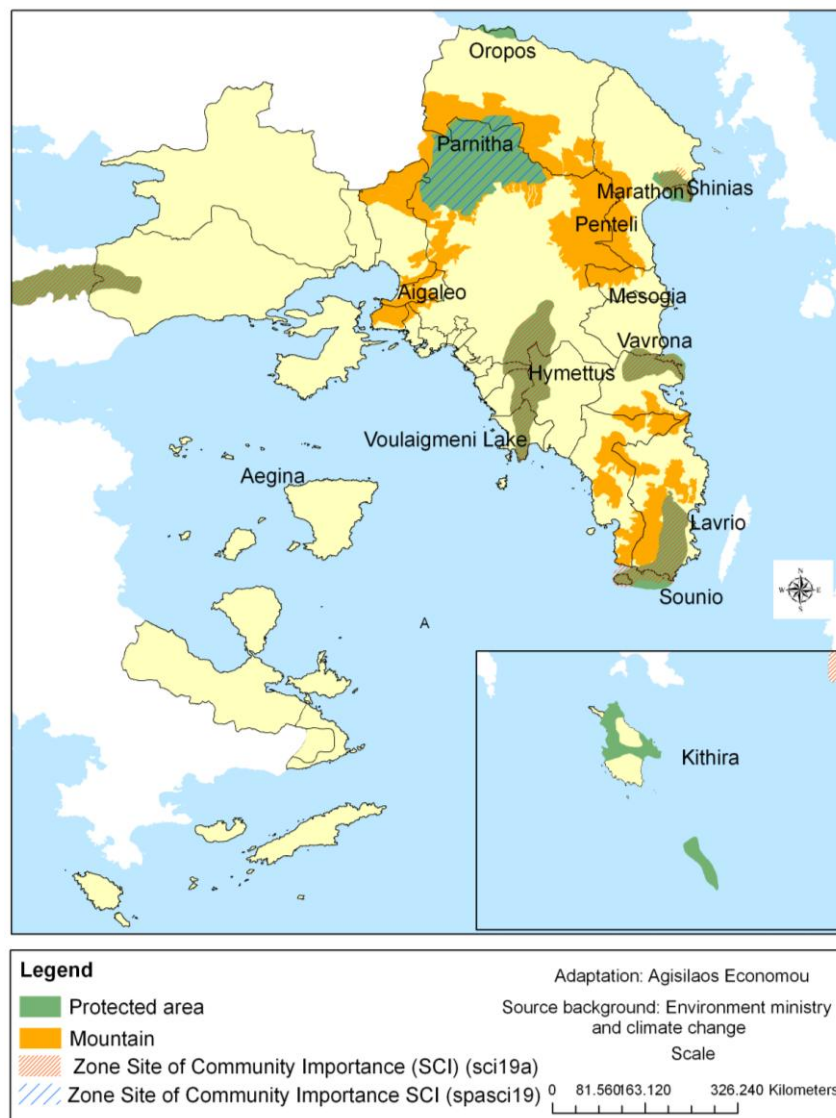


Fig 2: Protected areas in the Region of Attica

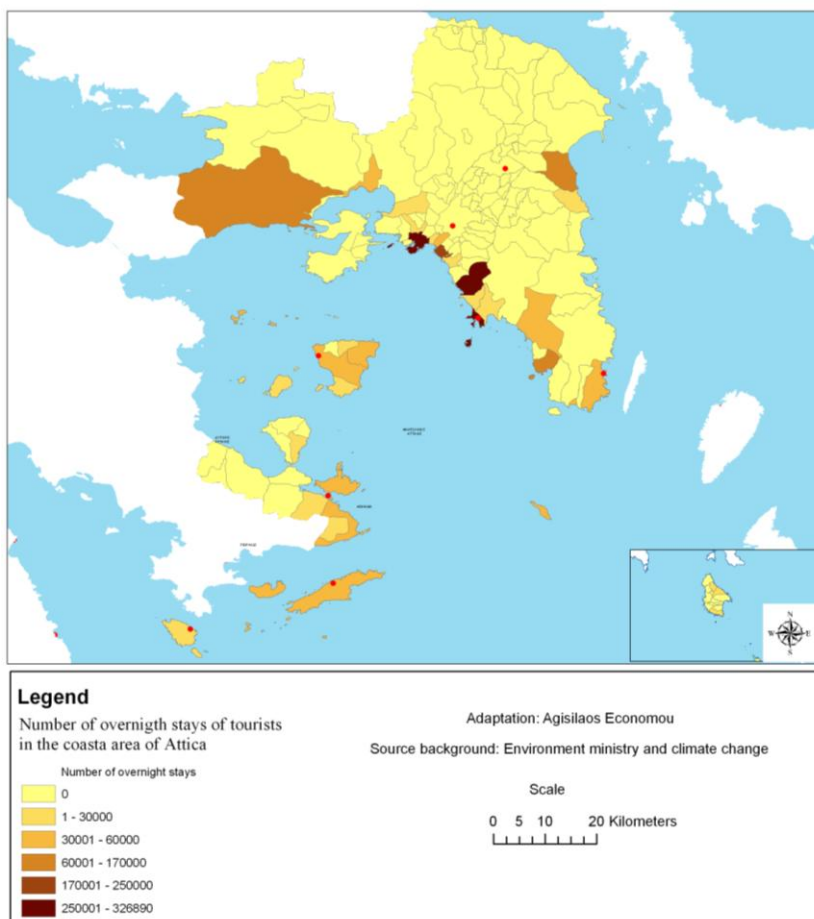


Fig. 3: Number of overnights stays of tourist during the year 2009 in the coastal area of Attica

According to the statistics data, the number of overnight stays in the coastal area of Athens presents an upward trend during the period time 2005 – 2009 (Fig. 4). The higher number of overnight stays of tourists is presented in coastal municipalities with have remarkable hotel potential.

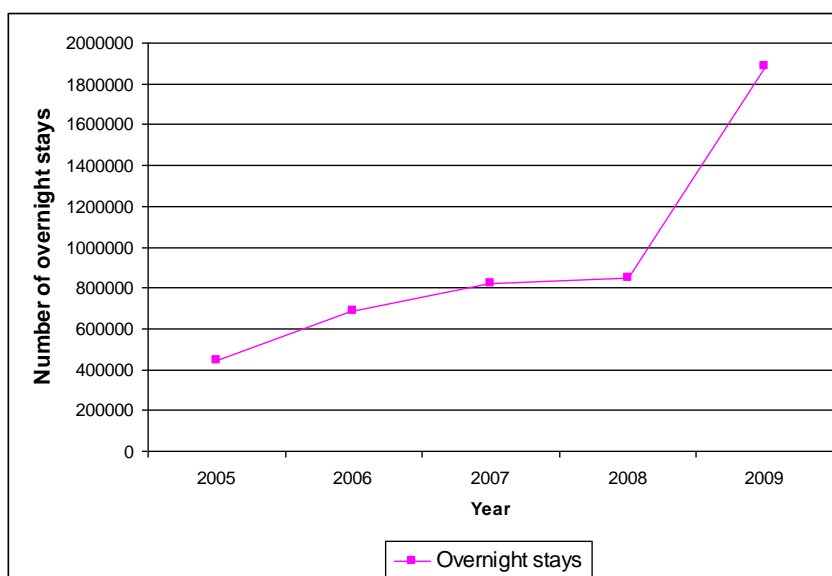


Fig.4: Number of overnight stays of tourist during the period 2005-2009 in the coastal area of Attica (HSAG, 2012).

The results showed that the municipalities of Piraeus, Glyfada, Vouliagmeni, Faliro and Megara present the higher rates of tourism, in contrast to other areas which present fewer overnights stays. It is underlined that, the tourists movement in the Municipality of Piraeus is supported by passenger and commercial traffic of the port. Also, the area of Glyfada is a center for entertainment and commercial traffic for the southern suburbs

and an attraction pole thanks to its beaches. Vouliagmeni presents big hotel units due to the large area of beaches and the remarkable natural environment that it has.

4.1 Problems in the coastal urban area

The urban environment of Athens faces a number of problems associated with the evolution of the urban network and the spread of the conurbation Region. The reason for this expansion was the degradation of the central area of Athens.

This fact has a result to push residents to look for new housing near the center which also present remarkable natural resources. Thus, the coastal area of Attica and especially from the area of Paleo Faliro to Vouliagmeni, became a place for the accommodation of people who look for a better quality of life.

In this survey an interview with the staff that is responsible for coastal municipalities from Moschato to Vouliagmeni, took place. Our research aimed to identify the main problems that the area presents and which are officially registered by the responsible authorities which manage them. The survey showed that:

- The coastal road has cut off the coastal area of the urban fabric.
- There are incompatible land uses in the coastal zone.
- The Presidential Decree that determines land uses and limits of construction, has not been applied except from the Alimos area.
- A little recycling rate (20 %) has taken place in some municipalities.
- There is a lack of solid waste transfer stations, resulting in the increase of transportation costs.
- Circulatory problems (noise, congestion) due to the continuing increase of cars, the lack of parking and the fact that the means of stable track do not serve all areas of the Capital, appear.
- Noise pollution from nightclubs is presented.
- The involvement of many authorities often creates problems for regulations of land uses.
- Land use intensity problems and increasing pressures for the expansion of construction in search of new residential areas, are presented.
- The inadequate flood protection system, the sewage, wastewater, and rainwater problems, as well as the covering of the two rivers of Attica, Kifisos and Ilisos and the excavation and construction in their streams, had as a result the appearance of flooding phenomena.
- The land use plans do not cover the entire area so that areas which are outside the plan undergo heavy pressures to expand construction.

However, it is noted that the region's coastal area presents remarkable natural resources, despite the large construction development that it suffered from the 60s and onwards (Fig. 5). Nowadays, natural resources are receiving heavy pressure from the continuous construction and the high intensities of land uses.

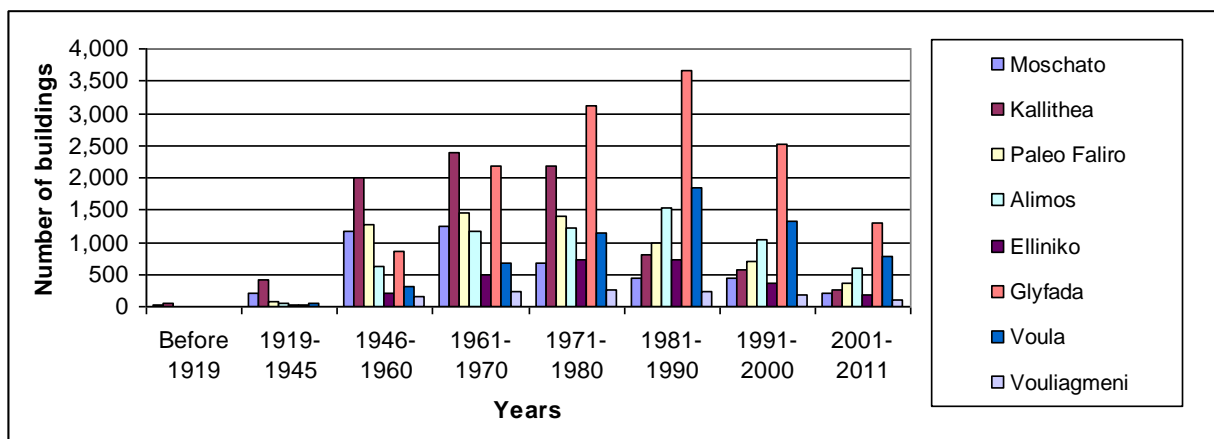


Fig.5: Building in coastal area of Attica (HSAG, 2010).

4.2 Construction in the coastal area of Attica

Many of the above problems occur in the rest of the coastal area of Attica, with different intensity. For example, coastal areas in the eastern region, face wastewater problems due to their remoteness from the major sewage treatment plant in Psyttalia and the lack of sewage treatment plants.

Other areas face problems of illegal construction (area of Sxinia) and other area face degradation problems due to the existence of industries (Area of Aspropyrgos). Also, coastal areas host ports and shelters, which are threatened with pollution due to the movement of boats.

A large number of areas are under protection status, due to their natural and cultural resources. Nowadays these areas are threatened by human activities such as forest fires, logging, illegal construction, construction expansion and others.

Green problems also appear on dense urban areas. Many of these areas have a low proportion of green areas per inhabitants, while the lack of open spaces as well as their improper utilization, makes the situation worse. However, there are also examples of actions such as regeneration, planting, cleaning of the area and others that have upgraded many areas and have improved the quality of life for their residents .

A typical example is the area which hosted the Olympic works. The supporting works that have been constructed in order to serve the Olympic Games, have contributed significantly in improving the environment and the quality of life.

It is underlined that apart form the environmental problems, many areas present other problems such as unemployment, poverty, immigration and crime. According to the latest statistical data of the National Statistical Service, in the region of Attica, the unemployment rate for the third quarter is 26.8 % (HSAG, 2013).

From 2009 until today, due to the global economic crisis, the Attica region shows a decline in all sectors. Moreover, the poor fiscal policy had as a result the swelling of the external debt of the country, which has affected the region's economic growth and the welfare of its residents.

The tough fiscal policy and the cut-backs in the public sector have major economic consequences on the private sector as well, resulting in reducing incomes and job losses. Thus, intra-regional disparities such as demographic inequalities, rising unemployment, population movements in search for work and others, increase. The economic crisis has affected the construction activity in this specific area, which is currently in decline.

4.3 Measures in order to face problems and growth prospects

The measures which are proposed to address the problems in the study area are:

- Implementation of legislative decrees
- Utilization of areas with present remarkable natural resources.
- Increase recycling and expansion of recycling programs
- The utilization of natural resources (wind and solar). Nowadays, taking into account the installed capacity (wind and solar) in the region of Attica, it is found that the penetration rate of electricity production from renewable energy sources is very small. This means that there is great potential for expansion of both photovoltaic systems and wind farms, especially in areas with significant wind resources.
- Rehabilitation of degraded areas
- Traffic regulations and take measures for noise pollution.
- Expansion of sewerage and rainwater networks.
- Creation of bicycle routes and encouragement of people to use more environmentally friendly means of transport such as cycling.
- Better use of beaches, protection from arbitrary structures, cleanliness and development of other maritime activities.
- Utilization of open spaces and increase of green areas.

- Increase on the use of natural gas and expansion of the existing gas network, with the aim of reducing emissions of air pollutants
- Utilization of abandoned areas in order to limit construction
- Connecting the beachfront with the urban fabric (subterranean access)
- Utilization of all Olympic sports facilities which are located in the coastal area (organized sporting events, exhibitions, use by the local residents).
- Use of public property. Nowadays at the coastal region of Attica there are large areas of open space that could be used appropriately by attracting new businesses or even by creating green spaces.
- Strengthening of tourism development, by means of upgrading hotel accommodation in order to provide high quality services.
- Strengthening of rural economy. In the Attica region there are many areas that could be used appropriately and increase agricultural production.
- Creation of additional wastewater treatment plants for areas that have none, as it is necessary for water pollution prevention.

4.4 Other actions and measures

In the region, 94 General Urban Plans have been approved. Also, Development Control Zones have been approved for areas that are outside the boundaries of these plans, and laws relating to the permitted land uses in protected areas have been passed. Such examples are the area of the mount of Egaleo, Hymettus, Penteli, Lavreotiki and Parnitha.

Many works in the coastal area have been funded by European programs. For example, in the period 1994-1999, the Region of Attica was supported with 950.1 million euros for projects that were included in the Regional Operation Programmes (ROP) for Attica. The ROP for Attica projects were focused on priority axis, such as human resources, support in productive activities in the region, transport infrastructure improvement, improvement of the quality of life and technical assistance.

Also, the coastal area is supported by the National Strategic Reference Framework (NSRF) for 2007-2013, which aims to stimulate the development of better quality of life, strengthen accessibility infrastructure and infrastructure in general, increase competitiveness and revitalize urban areas (MDCITN, 2007).

5 CONCLUSION

By recording the current status quo, the advantages and disadvantages' of the study area, the following conclusions have been reached.

The main features of the coastal urban environment in the Region of Attica are, unregulated urban sprawl, traffic problems, insufficient urban and suburban green areas, lack of public open spaces, air pollution, poor sanitation rainwater and wastewater infrastructures, and shrinkage of the unstructured urban environment.

As noted above, the coastal area has remarkable natural resources. These natural resources are currently receiving heavy pressures from human activities and are threatened by degradation. The measures that have been taken through the spatial plans for land use regulation and restriction of construction, are not sufficient. There are many areas that are outside these land use plans, which are under heavy pressures from existing land use intensities many of which have been degraded.

The survey showed that new measures and new actions are necessary for further protection of the coastal area. The conservation of natural resources is a top priority, because it is due to them, that the coastal areas will remain sustainable. Otherwise, by degrading the natural resources, in addition to the degradation of the quality of life, these areas lose the advantage for economic growth, as well.

Nowadays, due to the economic situation of the country, new initiatives for the growth of the economy which is in recession, are sought. The conservation and utilization of natural resources, of such favored by nature regions, such as the coastal urban area of Attica, is becoming particularly important, as this area is a valuable asset on many levels.

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