

SUSTAINABLE DEVELOPMENT OF SICILY EAST COAST AREA¹

43rd Congress of the European Regional Science Association
Jyväskylä (Finland), August 27th - 30th, 2003

Caterina Cirelli

Department of Economy and Territory, University of Catania, Italy
cirelca@unict.it

Leonardo Mercatanti

Department of Political Sciences, University of Trieste, Italy
superleo2@tin.it

Carmelo Maria Porto

Department of Economy and Territory, University of Catania, Italy
cmporto@unict.it

ABSTRACT

Sicily has an unusual coastal reality: widespread illegal building, industrial pollution, abandonment, under-valued unique sites with strong natural, tourist, cultural and economic potential.

A common topic nowadays is the integrated management of the coastal area for a sustainable development. The aspects to consider are many: administrative, managerial, juridical, political, scientific, planning and so on.

These aspects will be important both in the realization of operational interventions for the recovery of degraded areas and of eco-compatible planning.

It will be necessary to tie the economic development to the maintenance of the environment according to the recent directives of the European Union that point out - in the principles of sustainable development - the guidelines for community politics.

In this paper we will focus on the problems of the eastern Sicilian coastal zone (with particular attention paid to coastal protection and port/harbour management) and the opportunities that marine tourism can offer to local development in general.

1. Integrated management of coasts: some considerations on the Sicilian case

Historically, coastal areas have always represented an important pole for the development of civilization. The possibility to use the sea for trade and transport and the availability of food coming from the sea have encouraged new settlements. We can still observe this in the culture and lifestyle of many European coastal towns, which represent a great potential for modern society.

Backwaters, tide inlets, salinas, estuaries play a fundamental role in food production (fishing, aquaculture), and in the protection of the environment and biodiversity as well.

However, coastal areas have also other functions, as they are complex systems which determine the creation of job opportunities, the economic growth and the quality of life. We can summarise such functions as follows:

- agricultural production in coastal plains, using coastal waters (groundwater or desalination plants' water);
- diversification of fishing activities;
- energy production from traditional (oil and natural gas) and renewable (wind and sea waves) sources;
- transport and trade: natural ports and coastal roads are essential elements of transport networks;
- protection of the Cultural Heritage, both in present-day society and in archaeological sites;
- tourism and leisure (sea resorts, water sports and pleasant spots);
- old people's homes;
- protection against the destroying power of the sea; and
- decomposition of pollutant elements.

Coastal areas and their natural resources (both sea and land ones), therefore, play a potentially strategic role in satisfying the needs and aspiration of today and tomorrow European citizens (European Commission 1999).

Coastal areas are complex systems, which are influenced by many different but interrelated factors of the following kinds: ideological, geo-morphological, socio-economic, administrative, institutional and cultural. A sustainable management, therefore, requires a simultaneous attention towards all the macro-systems that influence coastal dynamics significantly.

As far as to the geographic aspect of coastal areas management, we'd better take into consideration the natural and social regions or *system*, thus avoiding *administrative* simplifications, which are certainly more suitable for projects implementation and management. A *systemic* approach generally requires the analysis of driving forces or impact areas of other administrative regions, even if they are far from the coasts.

In the end, we should consider that in the management of coastal areas, sea and land factors are strictly related (through human and physical processes) and consequently should be both considered for a successful initiative (Vallega 1999; Belfiore 2001).

In the past years, coasts management was seen as a “struggle against the sea”, where the natural events often prevailed over human efforts; even the studies about the relation between geomorphology and territory organization had the same approach.

This approach had two main characteristics: physical variables were given more relevance than social ones; the geographic scale was always very big, since the researchers often involved small coast segments. Indeed, they were done to solve the problems of single structure or small group of structures (Vallega 1996).

A correct management of coastal areas, on the contrary, should be based on the understanding of coast dynamics and natural processes, without contrasting them. Such an approach, which can be defined “precautionary”, allows you to develop more sustainable activities which are more remunerative in the long term².

In order to carry out this kind of management, it is necessary to introduce the concept of “participative planning”, that is the integration, in the planning processes, of all the involved subjects’ opinions and points of view. This should be achieved through collaboration, commitment, shared responsibilities, exploitation of local knowledge, the definition of real problems and their possible solution and the elimination of all conflict situations³.

Logically, planning precedes management, even if historically the opposite has often taken place. Indeed, for a long time we have had a kind of spontaneous management that was meant as the whole of human actions in relation to the sea.

Only when the network of interventions and their impact on the environment became complex, resulting in conflictual relations, and when the impact on the environment reached high risk thresholds, the community realised the need to control the activities concerning the sea through planning (Vallega 1990).

Although this participative bottom-up approach constitutes an important component of coastal area management, it is necessary that national and regional policies guide the definition of objectives and the investment plans and strategies concerning coasts and their natural resources.

These considerations are based on the principles of Chapter 17 of *Agenda 21*. This chapter includes seven programme areas, the first of which is called, indeed, Integrated management and sustainable development of sea and coastal areas, including the exclusive economic zones. If we read this title carefully, we notice that the concept of coasts integrated management is related to the principle of sustainable development, that is the first is meant as an instrument of the latter (Vallega 2001). Therefore, the integrated management of the coastal area is a suitable instrument to encourage the sustainability of the coastal areas development as it is a dynamic process aiming at the integration of economic development, social equity and the protection of the environment (Clark 1996).

The growth and the diffusion of demographic concentration processes, as well as the proliferation of leisure activities and structures along the Mediterranean coastal areas of both developed and underdeveloped countries have heavily influenced on the environmental changes of these areas. Moreover, the economic, social and cultural development, which has been already

achieved, and in particular the different population needs as to housing, have lead to different forms of urbanization (suburbs growth, that is sub-urbanization and counter-urbanization processes) just along the coast (Cori and Lemmi 2000). We can even state that a significant and growing part of the Mediterranean coastal population is “urban”: at present, along Mediterranean coasts, there are 538 towns and over 10,000 inhabitants. Forty-five of these towns have more than 200,000 inhabitants.

In particular, unlike south-eastern and southern countries, in Italy and France there is an almost uninterrupted urbanized coastline (Grenon and Batisse 1988).

Vallega’s deep analysis of the Mediterranean area (1999) points out the limits of methodologies (deterministic and mono-disciplinary approach) used so far to manage sea and coastal areas. It also underlines the need for a high level of integration between geographic areas and sea and land authorities in order to achieve the objective of an adequate management of coastal systems.

Indeed, the traditional separation of competences over the land and sea portions of the coast represents one of the most serious obstacles against coast’s integrated management. Moreover, Vallega (1999) thinks it necessary to integrate also the different economic activities which are present along the coasts. In this respect, the author points out the difference between economic *structure*, made up of the different activities, and economic *organization*, meant as a whole, in order to organize the development of coastal economic activities more coherently and reduce their impact on the environment.

Thanks to each strategic position, on the route which links the East and the West, Sicily has always played a central role in the Mediterranean both on the military and trade sectors. Although this central role has decreased during the time, it is still noticeable in features of the Sicilian ports system which is made up of communication and exchange nodes with different functions according to the particular natural factors and the economic and historical events (Cirelli *et alii* 2002).

The different civilizations (Greeks, Phoenicians, Romans, Byzantines, Arabs, Normans, Angevins and Spanish) which have succeeded one another in the island, have left a rich heritage in the territory, in terms of archaeological sites and monuments. But they have also left a sign in the space organization, in the territory division, in the relations between urban and rural areas, in the settlement structure and in the towns planning systems. As a matter of fact, the towns which developed along the coasts or next to it were those that reached the highest levels of development, thanks also to their ports (Randazzo and Scrofani 1996).

The various coastal towers and the castles which are close to the ports are evidence of the military system of defence while the different “loading wharfs” were an articulated network of smaller ports which were destined to the cabotage and linked to the main ports (D’Arrigo 1964; Boscarino 1976; Dufour 1992; Simoncini 1997). Many of these ports have a very long history and have maintained a low environmental impact; others, especially the most important ones, like Palermo and Catania, have changed during the years.

However, the Sicilian coastline is not everywhere suitable to ports, since the sandy plain areas alternate with the steep cliffs and rocky sea floor; therefore, mainly in the southern part, it was necessary to build artificial, projecting ports suitable for tourism and fishing.

Sicily, the biggest island in the Mediterranean, has a very varied coastline which covers almost a thousand kilometres (Randazzo and Scrofani 1996).

The east coast, on Ionian Sea, extends for about 160 kilometres between Cape Peloro and Cape Passero: 55% of this coast is made up of beaches (Amore *et alii* 1996). The east coast can be divided into two big physiographic areas, which are separated by the south-western Etna lava fluxes. These have reached the sea and formed the piers of Catania's port.

The beaches of the north coast, crossed by steep streams (*fiumare*), are characterised by sand and grit and by pebbles mainly of metamorphic origin. The south coast is mainly rocky and its inlets, especially near the streams' mouth, are often characterised by small beaches with medium and thin carbonaceous sands (Amore *et alii* 1990 and 1992).

Even if it is spoilt by unauthorized building and by wrong industries localization (Ruggiero 1972) and by a disordered growth of tourism activities, the Sicilian Ionian coast still maintains some unaltered segments as well as nature reserves and Parks. For such an environment to preserve its attractiveness we must protect its peculiarities and identity, which are fundamental in order to achieve the sustainable and lasting development of tourism. Therefore, tourism must be seen as an additional growth factor for local people, who have to join their traditional activities (craftwork, agriculture and fishing) to the new ones.

During the eighteenth century, the Sicilian coast, with its enormous tourism potential, due not only to its cultural and archaeological attractions but also to its leisure sea resorts, had not been spoilt by the big networks which characterised it today especially along the Ionian coast (Randazzo and Scrofani 1996). However, the anthropic activities, which developed along the coast and which were mainly based on fishing, the industrial transformation of local products (fish, lava stones, sulphur, sea salt and rock salt) and on the trade of agricultural and industrial products, didn't have a relevant impact on the coastal ecosystem. Neither did the sea traffic change the biologic balance of the sea.

From the end of the nineteenth century and for all the twentieth century, however, the increase in coastal area urbanization, the polarized industrialization, imposed during the sixties and the seventies (Ruggiero 1972), the adoption of intensive cultivation techniques, the building of second houses for holidays (Di Bella 1983) and, more recently, the promotion of tourism resorts as a solution to the problem of underdevelopment in Sicily, have determined an unbearable anthropic load. These forms of exploitation, which are often in contrast with each other, have led to a general deterioration of the environment and to serious risks for the population's health.

Starting from these considerations on the use of Sicilian coastal areas so far, we can focus our attention on a more correct use of the Ionian coast, extending from Cape Peloro to Cape Passero.

Indeed, if we want to achieve an efficacious integrated management of Sicilian coasts, we need to have a clear picture of the present situation. In particular, we should also take into consideration

the economic and social processes which have been already started by the Territorial Integrated Plans, in order to promote local development.

2. The north coast: from Cape Peloro to the nature reserve of the river Simeto

The coast extending from Cape Peloro to the river Simeto (the natural bound of Catania's province) is characterized by some peculiar physical features, such as high peaks, which give rise to an articulated and complex landscape.

The lofty volcano Etna (3340 m.), the biggest in Europe, raises among Catania's Plain, the valleys of the rivers Alcantara and Simeto and of the so-called Sicilian Apennine; it extends from Messina strait to the Toro valley and constitutes the prosecution of Calabrian Apennine, beyond the deep depression of the strait.

The Sicilian Apennine is made up of a long line of mountains, which extend along the north-east coast of the island and follow the direction ENE-WSW. They are divided into three groups: the Peloritans, the Nebrods and the Madonies. The first group, extending over cusp of the island facing the continent, are constituted by gneiss and phyllites, and are therefore strictly connected, from a lithological viewpoint with the opposite Calabrian mountains (Iacobacci *et alii* 1956); the Nebrods (or Caronies) and the Madonies are made up of easily erodible cenozoic rocks and by wide calcareous banks, thus presenting softer and rounder forms (Accordi 1957).

The coast segment extending from Cape Peloro to the river Alcantara's mouth is mainly alluvial. In particular, from Cape S. Alessio onwards the coast, though having the same physiognomy, becomes more sinuous because of the rocky outcrops that can be found near Cape Taormina and Schisò. These mark the end of the Peloritans chain and the beginning of the Etna mountain which softly slopes down to the sea (Alibrandi 1988).

The most interesting part of this landscape is certainly the "Alcantara Gorges", whose lava walls, which have a prismatic-columnar structure, constitute the most interesting spot in the whole Mediterranean area from a morphological point of view⁴ (Alibrandi 1988).

The river Alcantara⁵ marks also the beginning of Catania coastline which extends southwards until the Simeto river's mouth. These two rivers, which are the main rivers of the Ionian coast, mark respectively the north and the south borders of Catania province. But, while the northern administrative border coincides with the natural limit of the Etna region, the river Simeto, and therefore the south border, is far from the last portions of the typical volcanic soil. Indeed, it includes the vast sedimentary area, which was formed by the river, and therefore that part of Catania Plain which is north of the river, and some of the plain south of river (Di Bella 1982).

This results in a marked dichotomy in the Catania coastline which, from this town to the north border of the town of Acireale, is entirely made up of volcanic formations; while both south of Catania and in the territory from Riposto to the north border, it is characterised by an extended low beach of sand or pebbles. The latter, a geological formation which in the Sicilian dialect is called

“chiancone”, is the result of the sediments left by the river Alcantara and its tributaries, among which the most important are the streams Minissale, Fiumefreddo and Forche.

The landscape of this area is enriched by the presence of eucalypts and cluster pines which shades wide parts of the beach extending along the coast. A peculiar element of the landscape of this coast is the “Timpa”, an imposing fault slope, which now falls sheer to the sea, raising up to 200 m. asl, in the segment from Capomulini to Santa Maria La Scala and now is preceded by wide terraces of pebbles until the citrus orchard of the Acireale countryside (Migliaccio 1988).

The “Timpa” represents a very important geo-volcanic unit since, apart from being the result of ancient and recent volcanic events, it is also evidence of the constant tectonic uplift of the area.

The Etna landscape is a very peculiar one. It is characterised by high peaks asl and sudden plateaus *“the whole landscape is full of niches and caverns which are invaded by the sea and sharp rocks emerging from it, which add to the particular magic of this segment of coast. This is also enriched by many small fishing villages, which interrupt the black Etna landscape with their picturesque urban scenes”* (Di Bella 1982).

The segment of sandy coast which from the southern part of Catania gets to Agnone constitutes a specific territory unit, the “Plaja”, which is unique in Sicily as to continuity, width and length (a bit less than 20 km.). It is interrupted only by the mouth of the river Simeto and by the lakes Gurnazza and Gornalunga, which add to the beautiful landscape, and by the mouths of some streams coming from the so-called Catania “Terreforti”. The continuous advancing of the rivers’ mouths and the consequent deposit of materials on the beach are the reasons of the Plaja’s main modification during the past centuries.

The Plain of Catania borders to the east this sandy coast, which is an offshoot of the Plain itself, and the Hyblaean plateau to the west. The Plain was formed by the accumulation of the alluvial deposits of the river Simeto and some of its affluents, such as the Dittaino and the Gornalunga. Such deposits filled a wide gulf (Pre-Etna Gulf) which opened along the east coast of Sicily, separating the Hyblean plateau in the south from the Peloritan chain in the north. As the shoreline advanced, broad arms of sea were isolated forming marshes. This wide marshy area, later reclaimed, became Catania’s plain⁶ (Caffo 1988).

The Simeto waters in the past caused many floodings which made the surrounding plain fertile. Today, because of the need for water for agricultural, industrial and civilian purposes, they have been dammed through the creation of a series of artificial water reservoirs on the river affluents. These reservoirs have the functions of saving, containing and laminating the water of the floods (for example the Ancipa reservoir, on the river Troina, the Pozzillo reservoir, on the Salso, the Nicoletti reservoir, on the Dittaino and the Don Sturzo reservoir, on the Gornalunga. The river Simeto itself is dammed through the bar of Ponte Barca in Paternò and the bar of Bolo near Bronte, in order to deviate a part of its waters. Moreover, the decrease in the Simeto flow is due to the fact that many people get its water most of the times illegally to water the surrounding citrus orchards. Lastly, just before the mouth, even the industrial areas of Catania exploit its waters. This decrease in water, almost completely uncontrolled, is counterbalance by the wastewaters coming

from the towns situated along the river. The pollutant effect of these waters is augmented by the same decreased river flow, which prevents the rivers auto-depuration (Correnti 1988).

The Ionic coast anthropization, which started at the beginning of the twentieth century, the restoration interventions and the industrial development determined the raise of environmental problems and contributed to the definition of the coast present situation (Rizzo 1983).

The portion of coast between Cape Peloro and Cape Sant'Alessio, except the Gulf of Messina, has no inlets. Therefore, the ancient colonizers, looking for safe sites, left this part of the coast inhabited. Later, as the need for defence disappeared, the people of old mountain villages emigrated towards the coasts, which offered better means of communication and transport and, therefore, better life conditions. This migration determined the creation of various seaside urban agglomerations, with a uniform distribution of the houses parallel to the coast, along the road 114, which is also the main street of these towns.

The building along the coast of the railway first, and the motorway after, caused not only a further narrowing of the coast but they also contributed to start a process of urban growth which has never finished (Rizzo 1983).

At present, this segment of coast is completely urbanized; the north-eastern part, in particular, is full of seaside towns, extending longways and tourism resorts which link Messina to Taormina as to create a one only inhabited area. The latter in its turn is linked to the near Etnean towns.

Therefore, the traditional transition area which is constituted by the low valley of Alcantara is no longer uninhabited (Gambino 1982). In particular, on the middle-southern part of the Ionian coast we can find all the typical features of a tourist district, where Taormina, situated on a narrow terrace between 150 and 200 m. asl, plays a central role. While, the other towns of the coast, which link Taormina to the sea, and take advantages from it, form a system of functional relations which results in a district⁷.

The present district is the result of a proliferation of hotels and second houses for the holidays. These phenomena have first involved the area of Giardini- Naxos, then expanding in all the possible directions; in the north, for example, it has involved the municipality of Letojanni and Forza d'Agrò but the phenomenon is more extended in the south, where the buildings have almost completely saturated the area including the coast, the road and the last segment of the Alcantara valley.

In the last fifteen years, this tourist area has further expanded not only towards the Alcantara valley but also towards the coast (through the constitution inhabited centres having both a residential and tourist function, as Naxos) or towards the inland, such as Gaggi and Trappitello, which have had a remarkable expansion of their territories and a notable demographical increase, becoming the residence for people working in the tourist sector and, finally, towards the inland areas of the Peloritans. In this last area, in particular, the landscape and the cultural values of such historical towns as Savoca or Castelvechio Siculo have been exploited (Caffo 1988).

Figure 1: Total Presences in the District of Taormina, years 1998-2000

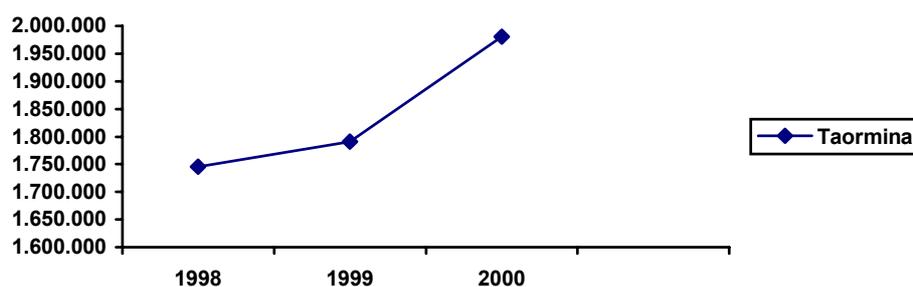
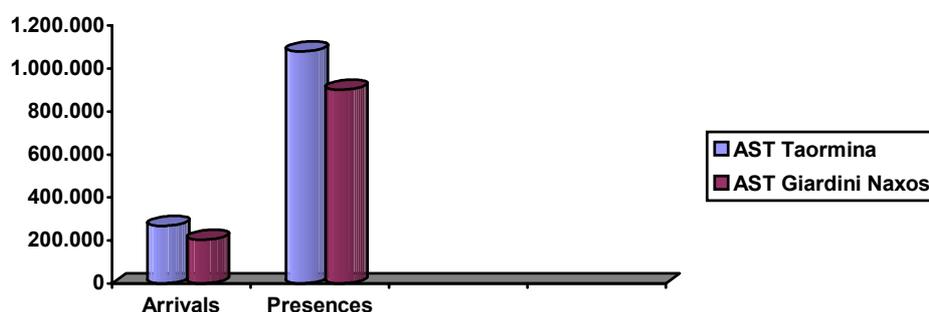


Figure 2: Arrivals and Presences in the Tourist District of Taormina, year 2000



Source: www.regionesicilia.it/turismo - Total Tourists Flow. Data concerning the territories having an AST, our elaboration

All this, if on the one hand has allowed a remarkable economical development of the area of Taormina, on the other has caused serious problems to the coastal ecosystem. The most damaging factors can be considered the unrulid building along the beach and the permanent or transitory mass tourism that pours into this segment of coast, especially in Summer.

In order to evaluate the anthropic load in this coast, a rough analysis of the tourist presences (Figures 1 and 2) can be indicative; in fact, since the trend of the presences has been growing during the years it is difficult to predict a sustainable development in the future.

For its peculiar features, among which the highest volcano in Europe, thus showing an extraordinary climatic and vegetative stratification, the closeness to the church, the presence of the grate metropolitan area of Catania, the Etnean region constitutes a distinct territorial unit, one of the most articulated in the South of Italy.

From the first decades of the nineteenth century, in the Etnean region there were socio-economic conditions which could support the tourist development of this segment of coast. Such a tourist growth would cause a change in the urban structure and damaging consequences in the coastal ecosystem. Indeed, one of the first relevant marks of these change appeared with the building of small houses for the holidays, along the Ciclopi coast (Ciaccio 1980). The same occurred along the coast opposite the Gulf of Ognina, with the building of one-family houses, starting the expansion of the luxurious building industry which would have characterised the urban development of Catania between the two wars (Ciaccio 1983).

The post-war reconstruction and the economic boom of the Sixties will definitely spoil the coast of Catania, mainly to the north. The building of the railway, along the coast, in the XIX century, which was then interred during the following century and the building of the seafront road in the second post-war period, made the land of this part of Catania coast attractive, also thanks to Piccinato planning scheme. His scheme confirmed a high building density in the area, therefore he approved not only of the destruction of the pre-existing fishing villages identity, that is Ognina and S. Giovanni Li Cuti but above all of the property speculation which, in less than a decade, would change the coast identity. Indeed, the coast had an undeniable tourist vocation due to the beauty of the landscape and the peculiarity of its lava rocks. Hence the necessity of an ambitious “Requalification project” which re-designs this lava coast (Porto 2002).

The project to requalify the coast starts from the port of Ognina. It aims at preventing car traffic in order to leave the seafront to the pedestrians and leisure activities. A series of squares, green spots with facilities and restored “empty spaces” would alternate as far as the old port and the so-called “Marina’s Arches”, where water should lap on the inhabited area (Cirelli 2002). This will become the connecting node with the port area and with the south area project. Such project, through the Territorial Agreement for Employment called “South Catania” (whose interventions haven’t finished yet) will try to improve the quality of urban life and consolidate the territorial aggregation according to the principles of the sustainable-development (Cirelli 2001).

It is important to underline that the coast south of Catania, though untouched by the town expansion, has been spoiled by the building of “second houses”.

This segment of coast, characterised by straight sandy beaches, was damaged by the Piccinato plan of 1963, which aiming at industrialization didn’t take into consideration the infrastructural resources of this territory, like the airport or the State Road 114. These infrastructures could have been exploited for the tourism development (Cirelli 1999). So this green area, from the seventies, turned into one of the areas most spoiled by residential and tourist unauthorized building. The result was the destruction of one of the most attractive natural heritage in Sicily, the break of the coast balance where the aquatic game stayed during migration, protected by the thick vegetation and the marshes near the banks of the Simeto river (Di Bella 1983).

This damage is amplified by the expansion of the second house tourism which is typically permanent and therefore didn’t bring an economic advantage in terms of development for the smaller centres situated near the coast.

Such considerations make us believe that Territorial Agreement for Employment is a suitable instrument to solve this problem and achieve a real development for the area south of Catania.

This area, extending at the borders of town historical centre, is a mixture of sandy beaches, natural reserves, citrus orchards, woods, marshes, industries, sea resorts, unauthorized building and dumpings.

The interventions included in the Territorial Agreement for Employment “South Catania” concern exclusively the territory of Catania. Its implementation, which is entrusted to a Local Intermediation Body, the agency “Investi a Catania”, and is still in progress, has led to the

requalification of the first segment of Catania south coast and to the creation of over five hundred new jobs.

However, the agreement partners, in accordance with the principle of resources concentration, have defined a sub-area which come first in the list of priorities, that is the segment of coast between the Simeto reserve and the port of Catania.

This area is made up of parts which are still unaltered and others which need to be reclaimed; it is indeed a precious area to be valued in order to become a place for qualifying, leisure activities, and accommodation facilities, an important gathering place for the whole metropolitan area.

The presence of the sea, the aesthetic value of the landscape, the leisure and accommodation potentialities of this coast make it a resource and a starting point for a new and lasting development stage for the metropolitan town of Catania, which extends over most of the provincial coast.

At this point we can make some considerations: the territorial agreements are undoubtedly very useful instruments because they allow the integrated development of the areas where they are made.

However, they are not the most suitable instrument to get the integrated management of coastal area, because their interventions don't take into consideration the problems concerning the protection of the beaches and, in general, of the sea ecosystem.

If the interventions of the Territorial Agreement for Employment (as well as other agreements aiming at economic development) are integrated with others aiming at the safeguard of the natural coastal environment, they could contribute to turn the coastline into an economic resource, which should be fully exploited.

In fact, the need to safeguard and protect the beaches, which are gradually eroded (mainly along the coast of Messina), has made it necessary to build breakwater barriers and panels, which have stopped the *local* erosion. Moreover, to the damages due to these interventions of local protection, we should add those caused by the building of tourist ports and piers, without respecting the elementary rules of the economic profit for these structures (which impose a distance of at least 20 miles each other) in the hope to attract the flows of pleasure boaters (Randazzo and Scrofani 1996; Cirelli *et alii* 2002).

The adoption of a policy of integrated management for the coasts can provide a solution to the above-mentioned problems. This policy can be summarised as a series of actions connected each other, aiming both at the reclamation of the coast ecosystem and, at the same time, at the promotion of a lasting economic development.

Moreover, we should consider that this is the best period to implement such a policy, considering the availability of the POR 2000/2006 Structural Funds. These funds, indeed, represent the last chance, in terms of EC aids, for the Sicilian Region in order to cancel the economic disadvantage on the international markets.

The strategy of intervention which has been devised by the Sicilian Region to reach the objectives of the POR, can be fully carried out through an integrated approach, in order to link

more efficaciously the sectorial policy to the peculiarities of the *local systems* and, consequently, to the *coast systems*.

Moreover, the need to achieve territorial integration has been pointed out by the documents provided by the partners to province authorities. Indeed, there is a widespread awareness of the necessity to use operative instruments which can stimulate original synergies in order to exploit the potentialities of the territorial contexts and the local communities.

Hence, the need to carry out the Territorial Integrated Schemes (TIS). These are the operating instruments to implement the POR, so as to allow a series of public and private actions – belonging to different measures of one or more axes – to be explicitly connected to each other and have a common objective. The Territorial Integrated Schemes, with their high efficacy and concentration of resources, can thus become a privileged instrument to implement the Structural Funds.

At a first stage, the Territorial Integrated Schemes will be given the public funds, according to the different provinces. These funds, which are about 1,400 millions of Euros, are related to the first three years of the planning (2000-2002). The resources will be assigned to the different provinces, according to their main socio-economical variables: population, extension of the territory, GDP per inhabitant, unemployment, infrastructural deficit (Tab. 1).

Table 1: % Distribution of the Territorial Integrated Scheme funds among the Sicilian Provinces

Province	% assignation axes I, II, III, IV, VI	% assignation axis V	% total assignation
Agrigento	11.02	8.45	10.86
Caltanissetta	6.67	5.56	6.60
Catania	20.81	22.85	20.94
Enna	6.95	1.36	6.59
Messina	12.22	11.80	12.20
Palermo	22.66	27.76	22.99
Raguse	4.81	5.48	4.85
Syracuse	6.92	6.29	6.88
Trapani	7.95	10.45	8.11
Total	100.00	100.00	100.00

Source: POR 2000/2006 Planning Complement; our elaboration

In order to avoid any confusion in all this reasoning, we have to specify that only some of the measures and axes of the POR can be directly or indirectly associated with a policy of integrated management of the coastal areas. The measures which are *directly* involved are as follows: 1.10 “Integrated management of the coast areas”; 1.11 “Highly naturalistic integrated territorial systems”; 1.13 “Entrepreneurial development of the ecologic network territory”; and 2.01 “Reclamation and fruition of the cultural and environmental heritage”; 6.02 “Improvement of the railway services”; 6.03 “Strengthening of the port infrastructures, services and logistics”.

Instead, the measures which are *indirectly* associated with the measures, are the following: 4.15 “Promotion of the adaptation and development of the rural areas”; 4.19 “Enhancement and re-qualification of the tourist offer”; 4.20 “Tourist infrastructures of regional interest”; 5.02 “Urban re-qualification and improvement of the life quality”; 5.4 “Enhancement of the public transport

system”; 6.01 “Completion, adaptation and modernization of the road network” and 6.04 “Re-qualification and creation of secondary airports”.

The north Ionian coast, and exactly the segment from Cape Peloro to the mouth of the Simeto river, is included on four Territorial Integrated Schemes; two of them, in particular concern the province of Messina (TIS n. 13 and n. 32) and two the province of Catania (TIS n. 24 and n. 35)⁸.

A deep analysis shows that, among the measures and interventions included in the Plannings, only one of them, more precisely TIS n. 13 (Tab. 2), can be considered the instrument to implement a policy of integrated management of the coast. While the others, even though they follow objectives aiming at the local development, cope with the problem of the coasts management only marginally and through few specific and sectorial interventions.

Table 2: Interventions included in TIS n. 13 concerning the coastal areas

Description	Place	Measure	Cost €
Integrated interventions to protect coast from erosion	Ali terme	1.10	1,160,000.00
Integrated interventions to protect coast from erosion	Santa Teresa di Riva	1.10	1,740,000.00
Integrated interventions to protect coast from erosion	Furci Siculo	1.10	710,000.00
Reclamation and re-qualification of the cultural and environmental heritage in Valle d'Agro	Santa Teresa di Riva	1.11	504,000.00
Environmental reclamation of torrent Agrò and creation of ecological spaces among protected areas	Santa Teresa di Riva	1.11	3,960,000.00
Environmental reclamation in Valle di Itala	Itala	1.11	590,000.00
Environmental audit to control and to manage reference frame	Santa Teresa di Riva	1.11	470,000.00
Architectural and functional reclamation of former spinning mill	Roccalumera	2.01	1,890,000.00
Reclamation and re-qualification of old town centre	Mandanici	2.01	500,000.00
Restoration of monumental complex (Church of Santa Maria degli Angeli) and old town centre	Ali Terme	2.01	555,000.00
New parking and standing areas	Letojanni	2.01	940,000.00
Re-qualification of pedestrian areas	Castelmola	2.01	220,000.00
Information, guideline to reduce unemployment	TIS Area	3.03	2,000,000.00
Intervention to develop vocational training in touristic small and medium concerns linked to TIS actions	TIS Area	3.09	1,200,000.00
Enhancement of farms	TIS Area	4.03	1,200,000.00
Developing of investments to diversify the agricultural activity	TIS Area	4.15	553,277.00
Enhancement of the accommodation and services offer in cultural, thermal, naturalistic and excursion tourism	TIS Area	4.19	1,659,832.00
Hermes project, a web to promote and market touristic cost	Taormina	4.19	505,000.00
Sea museum called Aquarium and touristic attractions	Giardini Naxos	4.20	2,210,000.00
Total			22,567,109.00

Source: TIS XIII – Province of Messina; our elaboration

TIS n. 13 concerns the coastal towns from Santa Teresa Riva to Taormina (Fig. 3 at the end of the paper). Focussing on the idea of creating a local system where the territorial identity and the exploitation of the local resources are shared values, its priority objectives are: the reclamation and re-qualification of the cultural and environmental heritage; the re-qualification and the enhancement of the accommodation offer, concerning not only traditional tourism but also the cultural, thermal, naturalistic and excursion ones; the promotion and diversification of local cultivations; the enhancement of farms; and, lastly, the formation of professionals through university training.

Therefore, during the planning stage, most of the required funds (about 22,500,000 Euros) were destined to those interventions concerning the coast re-qualification, and in particular, to those

interventions against the coast erosion and for the reclamation of the natural environment (measures n. 1.10 and 1.11, for over 9,000,000 Euros). The remaining part was distributed among all the other interventions. In particular, about 4,000,000 Euros were destined to measure 2.01 (restoration of the cultural and architectonic heritage); about 3,000,000 Euros to measures 3.03 and 3.09; and, lastly, about 6,000,000 Euros to measures 4.03 and 4.15 concerning the promotion of rural areas.

Without going deep in the single projects' details, it is clear that there is a specific political intention to pursue a better management of the coast, which takes sustainability into due consideration.

Therefore, we can state that, as to this specific question, there is already one fundamental element for the achievement of the coast integrated management: that is, the local community awareness of the fact that, in order to get lasting development, it is necessary to invest a considerable part of the available funds in the maintenance and restoration of the coast. Moreover, this will allow the community to accept restrictions and limitations over the coast use, even when these limits are imposed by central authorities.

3. The South coast: from the river Simeto to isle of Cape Passero

The Ionic coast, which we will analyse in this paragraph, extends from the mouth of the river Simeto to the green isle of Cape Passero. It has very complex characteristics which cannot be defined following only one specific pattern.

Although it is not possible to analyse in detail the peculiarities of such a wide coast, we will divide it into three sections:

- from the river Simeto to Augusta;
- from Augusta to Syracuse; and
- from Syracuse to the isle of Cape Passero.

3.1 From the river Simeto to Augusta

In the south of the river Simeto, we are in the administrative province of Syracuse, one of the nine provinces of Sicily (Fig. 3). The nature reserve "Simeto Reserve" is the attractive characteristic of the coast leading to Augusta.

With its 1859 hectares, it represents what's left of a vast and old marshy eco-system. During the forties, some scholars started to observe and record data about the fauna of this area. The results pointed out its richness in fauna, but also, during the following years, the slow disappearing of the present species variety. At the beginning of the seventies, the need of interventions to prevent the damages of unauthorized building and to protect the flora and fauna, started to spread. Only in

1984 was the Simeto Nature Reserve created and, in 1989, 54 unauthorized buildings were demolished.

Photo 1: The “Simeto Reserve” and the unauthorized buildings surrounding it



Unauthorized building, which has been present along the east coast of the island for decades, has reached an unbearable level in this area: nowadays, there are over than 500 unauthorized houses all around the reserve (Photo 1).

But today the building, after the repressive interventions and the information and educational activities, seems to have stopped, although there is still a certain anthropic pressure, especially due to the uncontrolled use of the wide sandy coast which is part of the reserve. The phenomenon of second houses is typical of this segment of coast, where we can find lots of small villas, built on uncontrolled private initiative. The houses, which often show lack of taste and respect, have moved closer and closer to the sea. Near them, residential complex, called villages, have been created. They are often built on calcareous ridges, in the south part of the area considered (Rizzo 1983). The area vocation is strictly seasonal.

3.2 From Augusta to Syracuse

The segment of coast extending from Augusta to Syracuse (30 km.) is characterised by the presence of many industrial plants (Photo 2). The phenomenon of industrialization (which started in this area in 1949, with the building of the first plant of the Rasiom refinery⁹) on the one hand has provided with the opportunity for eastern Sicily to overcome the problems of the post-war period and to develop its economy and infrastructures which were obsolete in comparison to the north of Italy ones; but on the other hand it has spoiled, probably forever, the natural beauty of the

area, which was once a source of inspiration for poets, writers and travellers from all over the world.

Photo 2: Concentration of petrochemical industries in the Gulf of Augusta



According to many people the spread of industrial plants in the south of Italy has in fact resulted from ambiguous and contradictory compromises between the politicians' need to face the problem of underdevelopment and the companies' need to find a strategic position for their plants (Cristaudo 1981). In this industrial area, which has become, in a few years, the most important one in Sicily and one of the most important ones in Italy, the plants, at first confined to the coastal belt, have later "invaded" even the inland areas, thus forming the so-called industrial triangle Augusta - Melilli - Syracuse. The immediate results of this huge, though not planned, industrial boom have been the environmental modification, the change in the lifestyle of the people involved in the phenomenon, and the demographic increase of the surrounding areas. As a consequence of this, the migration of the new workers and employees from the hills and the mountains has caused the decline of the primary sector. The new industrial pole has favoured the permanent movement of workers and their families to the industries area, generating also a widespread commuting from the near provinces. The highest demographic increase has taken place in Priolo Gargallo (known as *Priolo*), a small town between Augusta and Syracuse, which has become the core of the industrialization process¹⁰. During the period 1951-1981, in Priolo there was an unsustainable increase in population of the 139% (Barilaro 1992).

We shouldn't forget that industrialization represented one of the most relevant economic phenomena of the post-war period for the south of Italy. Unfortunately, the industrial growth, lacking planning and respect of local peculiarities, has introduced elements of rupture that the areas couldn't bare. The industrial area is today accused for contributing to the creation of the so-called "rubbish society", because of the degradation of the natural environment, the pollution (of

water, land and air), unrulid urbanization. In other words, because of a general deterioration of the quality of life (Barilaro 1992).

Even if there are some beautiful spots and beaches, the view of the chimneys, the smelly air coming from the plants, and the water pollution prevent any kind of fruition of the coast.

Therefore, the coastal belt which includes the Sicilian industrial pole has a small potential for tourism. On the contrary, the internal areas are rather interesting thanks to their baroque style, necropolis, naturalistic sites and typical products. In this respect, the areas closer to the coast could represent a starting point for cultural and oeno-gastronomic itineraries.

3.3 From Syracuse to the isle of Cape Passero

The typology of the coast is rather complex: in the central part steep cliffs often emerge from the sea. Their best example can be found near Cape S. Panagia, immediately north of Syracuse, and Cape Murro di Porco, just south of Syracuse. In the south part, the coast is characterised by ample sandy parts alternating with rare rocky ones. Along the coast, near the most depressed areas, there are frequent marshy zones, which in the past were often transformed in salinas. From a geomorphological point of view, we should point out the peculiar conformation and articulation of the coastline, which is endowed with small peninsular formation (such as Augusta, Tapsos and Ortigia), fascinating fiords, landingplaces and brilliant uncontaminated beaches (Photo 3).

The coastal area considered, until the sixties was characterised by widespread agriculture (especially concerning citrus fruits, almonds and vines). Later, some vocational changes took places, not because of industrialization like in the segment Augusta - Syracuse, but because of the intense coastal urbanization (second house phenomenon and unauthorized building) and of noteworthy agricultural changes. As to the first aspect, the lack of territorial planning has caused a spontaneous use of the coastal soil, often accompanied by great speculation (Polto 1983).

Photo 3: The uncontaminated coast of Portopalo di Capo Passero (known as "Portopalo") and the isle of Cape Passero



If we leave this rather complex, partly uncontaminated and partly ruined coast and move towards the inland area, we find a belt of land rich in water, thanks to a network of rivers which, going through ancient and sinuous “caves”, reach the most internal points of the Hyblaeian mountains’ plateaus. These particular natural gifts can account for ancient settlements and permanence of human aggregations.

Seaside resorts like Ognina, Eloro, Vendicari, Marzamemi, Portopalo and the isle of Cape Passero represent real “pearls”, as they are still uncontaminated sites, with clear waters and suggestive landscapes. Such places still haven’t been discovered by mass tourism and probably they should never be: tourism, indeed should be sustainable and local operators are already moving towards this new paradigm and committing themselves to the exploitation of local resources.

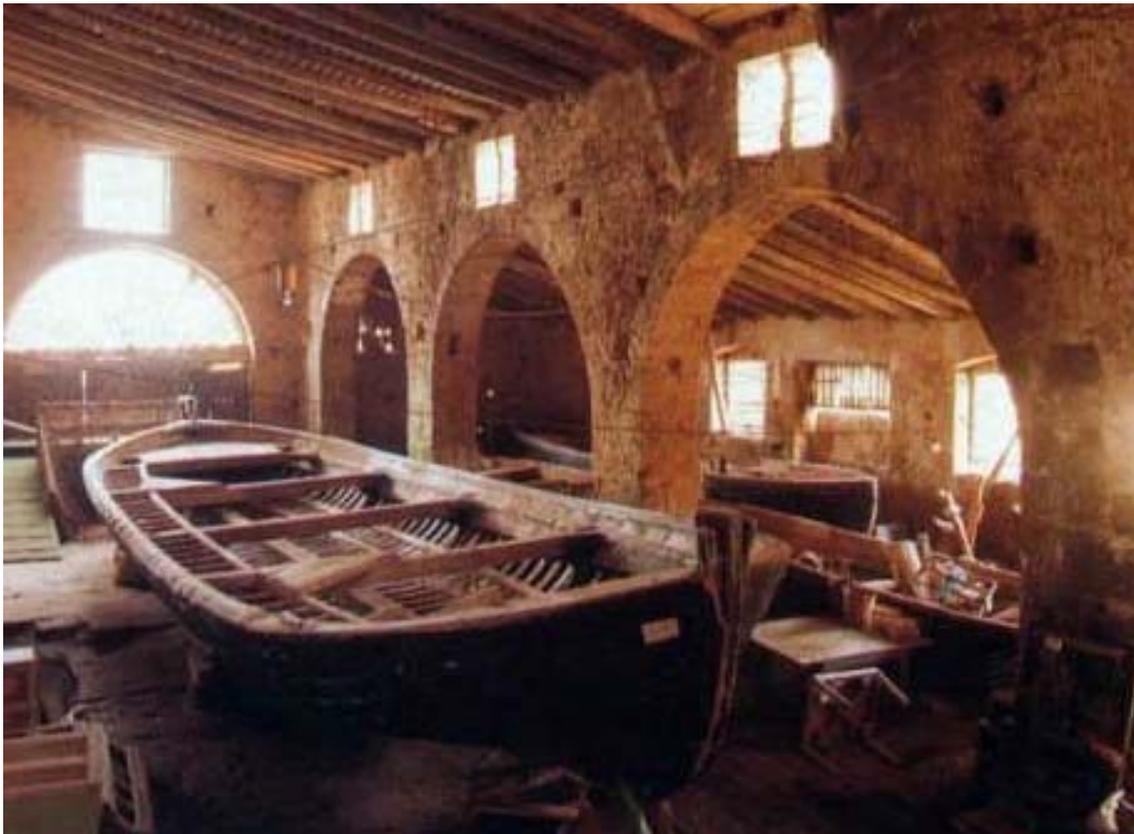
At present, the only tourist attractions in this area are the seaside resorts, which obviously work only in summer. This consideration should induce all the people involved in local development strategies to search for solutions and methods for the exploitation of the other resources (culture, landscape, nature) of the coast. For example there are five “tonnare”¹¹, along the south-eastern coast of the island which are abandoned. Sicily has a physical configuration which gives it a naturally strategic position as to the tuna fishes migratory flows, especially during their reproductive phase. The first Sicilian “tonnare” appeared during the Arab domination (beginning of the IX century, middle of XI century A.D.). The fishing techniques, used by the Sicilian fishermen were later exported to Spain, France and Sardinia (La Mantia 1901). The “tonnara”, which belongs to the Cultural Heritage, includes not only the inland stores, but also the fishermen’s houses, the tunny fishing nets, the boats, the tools and instruments used for the fish processing.

Therefore, the “tonnara” is not a just a decaying structure but a place of cultural value, which emanates emotions, memories and suggestions.

It suggests the great value of human work in the culture, economy and society of a territory. Indeed, it is an architectonic structure of relevant cultural value. The “mattanza” (the last stage of the fishing process, when the tuna-fish, caught in the nets, is harpooned and taken to the “tonnara” to be processed with very old techniques), which is in a certain way similar to the Spanish bullfight, could be a very fascinating folkloristic attraction, since it was preceded and accompanied by songs, prayers, and cries. Nowadays, the tuna fishes flow has decreased because of the industrial plants in the Gulf of Augusta and the consequent sea-pollution. Therefore, it is no longer possible to live on this activity, since it lasts many days and requires more than 60 fishermen.

However, this tradition should be revived with the European Community funds. Recent studies on the re-use of these structures suggest the building of residences for tourists, tuna fish-breeding areas (this is the proposal of some Japanese companies which are interested in the tuna fish of this area), and “sea museums” (Photo 4).

Photo 4: Internal of Marzamemi “tonnara”



Source: Lippi Guidi 1993

This last proposal doesn't find much consensus because it is generally considered a not very remunerative activity.

Historically, however, a museum has objectives and functions which are more qualitative than quantitative. Indeed, according to the definition of the International Council of Museums (ICOM) of 1986, “a museum is a non-profit making, permanent institution in the service of society and of its development, and open to the public, which acquires, conserves, researches, communicates and exhibits, for purposes of study, education and enjoyment, material evidence of people and their environment”. From this definition, we can easily understand that a museum has no economic purposes: it is a source of culture, history and values. Its functions are mainly educative and communicative; it improves immaterial values like culture.

Unfortunately, the administrations lack of interest in this area has resulted in the abandonment and bad conditions of these “tonnare” (Photo 5). Therefore, it is necessary to restore these structures in order to keep the socio-cultural identity of this area alive.

Today, the “district of the five tonnare” could represent a strategic instrument for the call of tourists to this coastal area during the whole year. It is necessary to point out the actions and the policies which can protect and value the “tonnara” as part of the cultural heritage: at the moment, there are no actual projects, but only declarations of intentions from the politicians. The main

objective should be the achievement of a permanent exchange among tradition, cultural heritage and the territory.

Photo 5: The XVII century “tonnara” of Marzamemi, abandoned in 1970



In the segment of coast considered, there are other important, not sea-related, protected areas. In the Province of Syracuse there are ten (Tab. 3), six of which (those in italics) are directly related to the coast or situated near it.

Table 3: Protected areas in the Province of Syracuse

NAME	PLACE	SURFACE (hectares)	CHARACTERISTIC	MANAGEMENT
<i>Cava Grande del Cassibile</i>	Avola, Syracuse, Noto	2696.49	River	Corps of Forest Rangers
<i>Speleological Complex Villasmundo-Sant'Alfio</i>	Melilli	71.66	Caves	University of Catania
<i>River Ciane and Salinas of Syracuse</i>	Syracuse	316.68	River and Salinas	Province of Syracuse
Grotto Monello	Syracuse	59.16	Cave	University of Catania
Grotto Palombara	Melilli	11.25	Cave	University of Catania
<i>Isola delle Correnti</i>	Portopalo	64.37	Uninhabited isles	World Wildlife Fund
<i>Isola di Capo Passero</i>	Portopalo	35.63	Uninhabited isles	Sicilian Fauna Body
<i>Vendicari Fauna Reserve</i>	Noto	1,512.00	Lakes complex	Corps of Forest Rangers
Pantalica and Anapo Valley	Sortino, Ferla, Cassara, Buscemi	3,712.07	Woods and River	Corps of Forest Rangers
<i>Salinas of Priolo</i>	Priolo	54.50	Salinas	Italian league for the protection of birds (LIPU)
TOTAL	Province of Syracuse	8,806.81		

Source: Corps of Forest Rangers, Syracuse, 2003; our elaboration

The presence of “tonnare” and nature reserves should suggest tour operators the creation of cultural and natural itineraries.

If we consider the morphology, infrastructures and attractions of these coasts, any strategy of tourism development should take into account the relations between the coast and the inland area.

In particular, we refer to the *Baroque District*, which is made up of eight towns¹² destroyed by the earthquake of 1693 and whose reconstruction began soon after. In 2002 (and thus late), such area was declared “heritage of humanity”, by UNESCO, which has provided the following reason: “these group of towns in south-eastern Sicily provides outstanding testimony to the exuberant genius of late Baroque art and architecture. The towns of Val di Noto represent the culmination and final flowering of Baroque art in Europe. The exceptional quality of the late Baroque art and architecture in the Val di Noto lies in its geographical and chronological homogeneity, as well as its quantity, the result of the 1693 earthquake in this region” (<http://whc.unesco.org/sites/1024rev.htm>).

The most important town of this district is Noto, which is between Syracuse and Cape Passero and a few kilometres far from the coast.

3.4 Eco-tourism and the proposal of the TIS “Eco-museum of the Mediterranean”

During the last years, the local administrations have tried to exploit the resources of the area considered, through the several instruments provided by the EC. Indeed, only recently, the strategic importance of the coast area has been understood; its exploitation can facilitate the local development and the increase in inland tourism.

In the last years, the new trends of tourism have shifted towards quality, tourist responsibility, and ecology. The year 2002 was declared “Ecotourism International Year” by UN. In the last decades, the damages caused by mass tourism have made people feel the necessity to protect the natural environment. Protecting the environment doesn’t certainly mean renouncing development but, on the contrary, exploiting the areas, integrating ecology with economy and protection with development. Therefore, ecotourism is connected to sustainable development: in exploiting the resources, man mustn’t destroy the natural heritage, so as to preserve the earth ecosystem forever.

At first, ecotourism was practised in the developing countries, as an instrument to attract foreign capitals. Later, it has also spread in the industrialized countries and especially in the protected areas.

A study by World Tourism Organization (WTO) points out that at present this new form of tourism represents the 2-4% of the whole world tourism, with a year-growth potential of about 20%.

Unfortunately, in Italy ecologic tourism can still be considered as an “oasis in the desert”, and this often mistaken for other forms of tourism, since the meaning of the term is still unclear. Like for the concept of sustainable development, there are different definitions of the term ecotourism.

We find the following one complete: “Ecotourism is environmentally responsible travel and visitation to relatively undisturbed natural areas, in order to enjoy and appreciate nature (and any accompanying cultural features - both past and present) that promotes conservation has low negative visitor impact and provides for beneficially active socio-economic involvement of local population” (Ceballos Lascurain 1996). Unlike other definitions, this one takes into account the

contact with the local people, their traditions, culture and relationship with the land. Therefore, the main feature of ecotourism is its double goal. Not only does it aim at creating an ecologic way of thinking and an interest in the protection of the natural wonders, but it can also represent a great economic opportunity, bringing wellness and development to the population involved.

If we consider the peculiarities of the coast we are analysing, with its naturalistic richness and landscape beauties but also with its weaknesses and limits, we can say that the policy aiming at the development of the ecotourism culture is the right solution to the above-mentioned problems.

The only actual initiative, which has been carried out in this area, is the Territorial Integrated Scheme called “Eco-museum of the Mediterranean”, which was approved by the Sicilian Region in relation to 2000 – 2006 Structural Funds Programming. It includes the creation of structures and infrastructures, with a total cost of 7,837,204 Euros, in the towns of the south part of Syracuse province (Avola, Noto, Pachino, Portopalo, Rosolini, Syracuse). The towns involved (Tab. 4) have altogether a population of 225,304 inhabitants, 56% of the whole province (401,805)¹³. The intervention priority areas included in the scheme are: environment and cultural resources, urban and architectonic resources, human resources, protection of the coasts.

Table 4: The towns involved in the Territorial Integrated Scheme “Eco-museum of the Mediterranean”

Town	Inhabitants	Provinces (%)
<i>Avola</i>	31,731	7.89
<i>Noto</i>	21,608	5.37
<i>Pachino</i>	21,732	5.41
<i>Portopalo</i>	3,465	0.86
<i>Rosolini</i>	21,095	5.25
<i>Syracuse</i>	125,673	31.28
Total	225,304	56.07

Source: TIS IX – Province of Syracuse, 2002

The total amount adds up to 44,696,382.69 Euros, 20,866,443.03 of which are destined, directly or indirectly, to the coast belt (Fig. 3). Such amount corresponds to eight of the twenty-one interventions included in the scheme (Tab. 5).

Table 5: Description of the measures concerning the coastal areas and their cost

Description	Place	Department	Measure	Cost €
Exploitation, restoration and protection of the coastal belt between Marzamemi and Portopalo	Pachino	Territory	1.11	2,659,753.03
Environment Requalification of Syracuse salinas area	Syracuse	Territory	1.11	1,000,000.00
Entrepreneurial development of the Ecologic Network territory	TIS	Territory	1.13	775,000.00
Innovative management and fruition of the cultural heritage	AREA	Cultural Heritage	2.03	3,687,750.00
Marzamemi: an industrial archaeology park	TIS	Cultural Heritage	2.01	3,098,736.00
Support for fishing and aquaculture, productive investments	Pachino	Fishing	4.16	1,395,000.00
Enhancement of local tourist offer	TIS	Tourism	4.19	7,837,204.00
Restoration of Avola sea round terrace	AREA	Public Works	5.02	413,000.00
Total	Avola			20,866,443.03

Source: TIS IX – Province of Syracuse, 2002; our elaboration

The basic idea of the scheme is the enhancement of the attractive potential of the whole area, starting from the most important towns which are internationally known (Syracuse and Noto), and through the exploitation of cultural and historical resources and the acknowledgement of the cultural aspect of the places, traditions and crafts. In other words, the scheme wants to exploit the whole of local resources through new forms of tourism organization. It also wants to create specialized districts (the Baroque district, the “tonnare” district, the nature reserves district...) and to enhance the international vocation of the territory and tourism-related economies. The management and implementation pattern of TIS “Eco-museum of the Mediterranean” is characterised by an innovative structure which is based on the following aspects and organizations:

- Partners Planning Council. It is the meeting point where all the involved players discuss the various issues and lay the basis for the TIS;
- System of the Sector Networks. They are “small work groups” of the Partners Planning Council; they are made up of the involved bodies and the trade associations. The institution of such networks represents a meaningful innovation because it favours a constructive and permanent dialogue among the subjects involved in the development of the TIS areas of intervention and the adoption of local development instruments which are strongly approved;
- Assembly of the Proposing Bodies: it is made up of the President of the Syracuse province and the mayors of the six proposing towns. It is the sovereign body as to the TIS development;
- Management Body. It is coordinated by a project manager and is made up of two departments: a Planning Department and an Administration Department. The first department is made up of companies that have acquired relevant experience in the management of local development schemes. Such companies deal with the following activities: information, training, animation, financing, technical assistance, monitoring, accounting, evaluating. The Administration Department, on the other hand, deals with the procedures coordination, the administrative coordination, the calling of service conferences, the administrative assistance; it also acts as Information Counter for all TIS-related activities; and
- Scientific Coordination and Supervision Committees. They are made up of the public bodies involved in the TIS, which are supported by technicians and experts. They deal with the strategic control and supervision of the whole TIS implementation process.

Conclusions

Nowadays, the new trends of tourism show a growing propensity for those areas where culture, nature and tradition mingle in harmony. Despite its worsening since the second post-war period,

Sicily is still one of these areas.

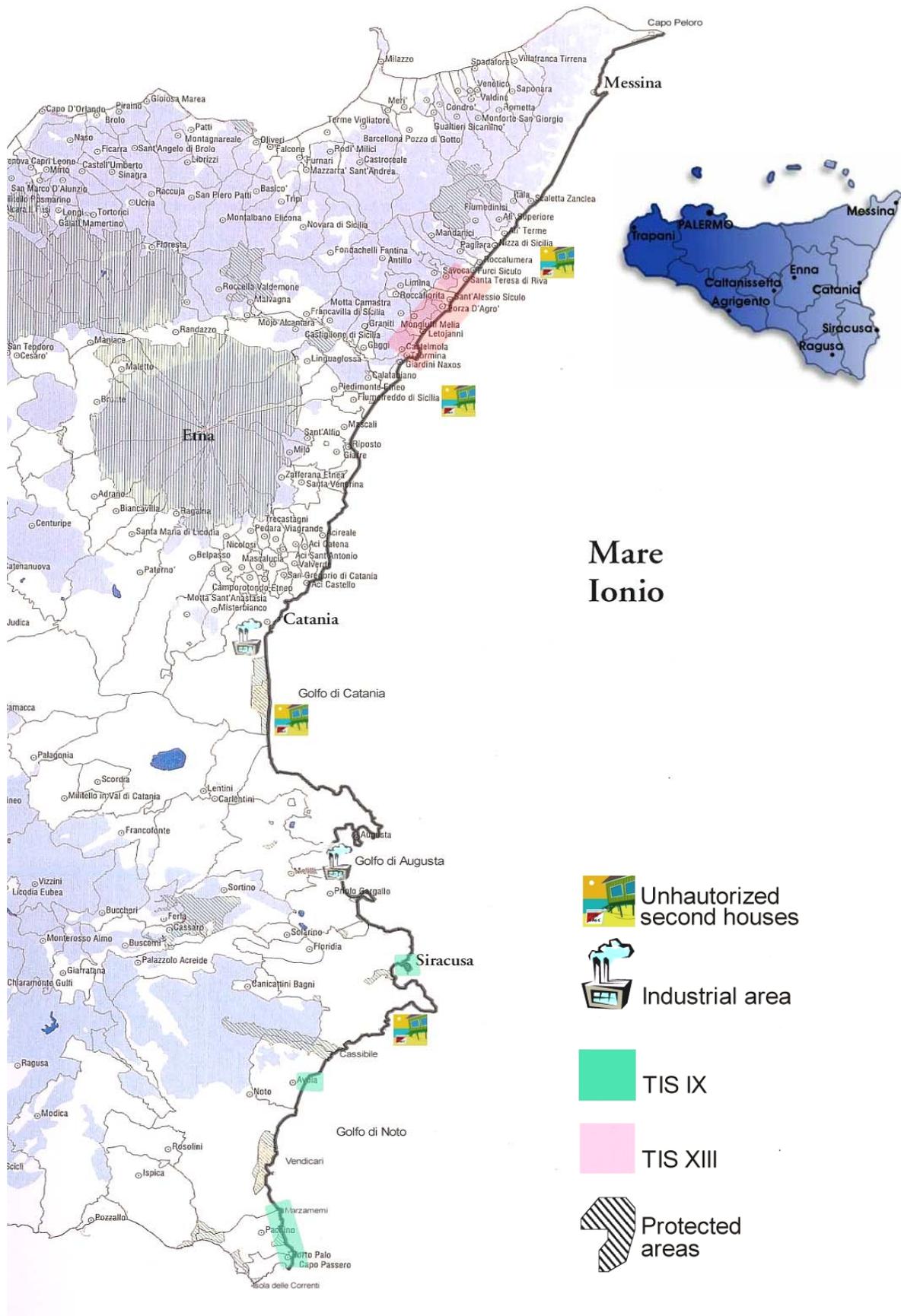
According to the first report on Sicilian Region Tourism for the year 2001, made by the Tourism Board, Sicily is going through a period of tourism development, with growth rates higher than the national ones. Thanks to the potentialities of the Internet and the media, even foreign tourists are rediscovering the South of Italy, its cultural values, local traditions, sea attractions. The same report points out that tourism in Sicily is entirely sea-tourism, and therefore seasonal.

The island has a great potential for other forms of tourism: sustainable tourism, ecotourism, oeno-gastronomic tourism, cultural tourism. The coasts of Eastern Sicily are full of towns which have always attracted tourists (Taormina and Syracuse), and others which play a strategic role in the economy of the Region and in the training of future experts of tourism (Catania, Messina, and their Universities). Such coast, which are sometimes spoiled by a kind of “wild” urbanisation, are still full of very beautiful spots that should be exploited and enjoyed by everyone in a sustainable way. One of the factors that could prevent the development of tourism (and therefore of economy) in Sicily is the above-mentioned phenomenon of the coasts’ “wild urbanisation”, that is the exploitation of coasts through the building of new villages and residences. This must be avoided because these coasts are full of cultural elements (the “tonnare”, the archaeological remains...), natural attractions (the protected areas, the reserves...) and traditions (salinas, fishing techniques, typical products...).

However, the risk of spoiling such beautiful coasts is a real one. Indeed, in the whole Mediterranean area, we can notice a constant increase in the accommodation structures and the development of tourism policies which don’t pay any attention to the environment.

The European Community, thanks to all the instruments provided by its members, is trying to promote a kind of coastal areas management which pays attention to the territory as a “significant” whole. This can be done through the adoption of a new approach considers all the cumulative and indirect effects: social and economic choices must be related with the protection of natural and cultural systems. Moreover, planning must always be gradual and contain long-term objectives, since its results are never immediate, but need strategies. Last but not least, every coastal area has a peculiarity which differentiates it from the others: the development of a coast cannot be achieved without paying attention to its characteristics and to the resident population’s vocation.

Fig. 3: Sicily east cost area and the nine Provinces of Sicily



Map edited by Leonardo Mercatanti and Carmelo Maria Porto

NOTES

- ¹ While the paper is the result of common reflections, Caterina Cirelli has written section 1 and conclusions, Carmelo Maria Porto has written section 2 and Leonardo Mercatanti has written section 3.
- ² Coast position is by nature subject to variations, because of sediment accumulation and erosion. Today coastal activities could in the future find themselves far from the coastline or be menaced by the destroying erosive power of the sea. During the planning stage, therefore, it is impossible to neglect this element of coast dynamics.
- ³ Coastal areas conflicts can result from: contrasting interests; traditions and cultural differences; controversial, inaccurate or hidden data; ignorance or lack of interest towards others' people needs; economic, social or structural inequalities; interest conflicts over specific procedures or problems; personality clash and struggle for power.
- ⁴ The formation of the gorges dates back to 2800 years ago when a huge lava flow invaded the bed of the river Alcantara. During the centuries, the peculiar splittings (synclasis) were generated by the magma contraction while turning from the liquid stage to the solid-crystalline one. The prisms (mainly hexagonal, but also pentagonal or quadrangular) were the result of these splittings. The river, with its erosive power, has done the rest, making other layers of rock come into view (Alibrandi 1988).
- ⁵ The river Alcantara, 52 km. long, springs at 1250 m. from the Saliciazza mount (Sierra di Flascio). Its main tributary is the river S.Paolo; for more details Cp. Alibrandi 1988.
- ⁶ This marshy area, a reservoir very rich in flora and fauna, was essential to the old civilizations which fed on it (Alibrandi 1988).
- ⁷ The elements that form a district are various, as well as the relations among the different actors, that is trading business, tertiary industry, high value- added service industry and public bodies; the tourist potentialities of a geographic area are the basic conditions to its development but they are not enough to form a tourist district and enjoy it. Indeed, a tourist space, apart from the landscape and the climatic and cultural attractions, should be endowed of several accommodation, leisure facilities, an efficacious network of communication and a welcoming population; in other words, in order to classify a tourist district and create the "Local tourist systems", as provided by the new outline law on tourism, a series of information should be related: the present resources, i.e. the infrastructures and the attractiveness of the territory; the data on the presence, variety and quality of the entrepreneurial system; the knowledge of the area and the wish to visit it among foreign people and its presence on the foreign intermediary channels; and, in the southern Italy regions, we should add the entrepreneurial projects, which can be identified through the requests presented to obtain the contributes as provided by the law 488 and also considering the investment expected by these initiatives (Cavalli 2002)
- ⁸ TIS n. 13 - "From traditional tourism to an Integrated local tourist system"; TIS n.32 - "Alcantara Valley"; TIS n. 24 - "Etna"; TIS n.35 - "Catania, Metropolitan Town"(www.euroinfoscilia.it).
- ⁹ See Famoso 1989.
- ¹⁰ Today the industrial area of Priolo is one of the 50 national sites which are included in the National scheme of reclamation, promoted by the Ministry for the environment. For the reclamation of Priolo, the Ministry has recently allocated about 23 millions Euros.
- ¹¹ They are "backwards" tunny fishing nets. Indeed, in the south-eastern coast of Sicily, tuna fishes used to conclude their migration, started in Messina, from east to west, hundreds of kilometres long.
- ¹² Caltagirone, Militello Val di Catania, Catania, Modica, Noto, Palazzolo Acreide, Raguse and Scicli.
- ¹³ ISTAT, 2001.

REFERENCES

- ALIBRANDI A., "Lungo il litorale: da Mascali all'Alcantara", in *Dal Simeto all'Alcantara, coste del catanese*, Catania, 1988.
- AMORE C., D'ALESSANDRO L., GIUFFRIDA E., LO GIUDICE A. and ZANINI A., *First data about shoreline evolution along the coasts of eastern Sicily*, Littoral 90, 9-13 July 1990, pp.284-292.
- AMORE C., D'ALESSANDRO L., GIUFFRIDA E., LO GIUDICE A. and ZANINI A., "Dinamica litorale tra Capo Peloro e Capo Passero (Sicilia orientale)", in *Bollettino dell'Accademia Gioenia Scienze Naturali*, vol. 25, 339, 1992, pp. 69-114.

- AMORE C., BLANCO M. E., GIUFFRIDA E., RANDAZZO G. and ZANINI A., *Dinamica della fascia costiera della Sicilia e delle isole minori*, Gruppo informale di sedimentologia, Catania, 10-14 october 1996.
- BARILARO C., “Problemi ambientali e sviluppo nell’area costiera megarese”, in *Atti del XXVI Congresso Geografico Italiano*, Genoa, 1992, tome I, pp. 788-799.
- BELFIORE S., “La manualistica sulla gestione integrata delle coste, sviluppi recenti”, in *Bollettino della Società Geografica Italiana*, XII, vol. VI, 1-2, 2001, pp. 245-250.
- BOSCARINO S., “Catania le fortificazioni alla fine del Seicento ed il piano di ricostruzione dopo il terremoto del 1693”, in *Quaderno IDAU*, University of Catania, 8, 1976, pp.69-102.
- CAFFO S., CAMMARATA L., CORRENTI S., MIGLIACCIO M. C., POSA M. G., RANNISI G. and SCIACCA L., *Dal Simeto all’Alcantara, coste del catanese*, Catania, 1988.
- CAMPIONE G. (ed.), “Il Mediterraneo”, *Geotema*, 12, Bologna, Pàtron, 1998.
- CAVALLI M., *Turismo, largo ai distretti*, in *Il Sole 24 ore*, 207, 31 July 2002, p. 13.
- CEBALLOS LASCURAIN H., *Tourism, Ecotourism and Protected Areas*, IUCN, 1996.
- CENSIS, *Rapporto sull’economia del mare. L’impatto socio-economico dell’attività di impresa marittima nello sviluppo del Paese*, Milan, FrancoAngeli, 1998.
- CIACCIO C., “L’aménagement touristique des littoraux de la province de Messine”, in *Cahiers Nantais*, 1980, 17, pp. 191-195.
- CIACCIO C., “Il ruolo del turismo nell’organizzazione delle fasce costiere siciliane”, in *Rassegna di studi turistici*, XV, Rome, 1980.
- CIACCIO C., “Il turismo fattore di trasformazione dello spazio costiero: Il caso delle ‘marine’ nella provincia di Messina”, in DI BLASI A. (ed.), *Atti del XXIII Congresso Geografico Italiano*, Vol. II, tome III, University of Catania, Catania, 1983, pp. 167-172.
- CIACCIO C., “Turismo e microinsularità, le isole minori della Sicilia”, in *Geografia ed organizzazione dello sviluppo territoriale*, 12, Bologna, Pàtron, 1984.
- CIRELLI C., “Il porto di Catania. Funzioni commerciali e prospettive di sviluppo”, in *Studi Marittimi*, XIII, 36, Naples, June 1990, pp.35-44.
- CIRELLI C., “Images and realities of a Mediterranean Reclaimed Landscape in Sicily” in MANZI E. and SCHMIDT of FRIEDBERG M. (eds), *Landscape and Sustainability, Mediterranean Historic Centres*, Milan, Guerrini, 1999, pp. 223-235.
- CIRELLI C., “Il recupero dei beni ambientali e culturali nello sviluppo sostenibile dell’ambiente urbano costiero”, in MENEGATTI B., TINACCI M. and ZERBI M.C. (eds), *Sviluppo Sostenibile a scala regionale*, Bologna, Pàtron, 2001, pp. 567-583.
- CIRELLI C., “Un nuovo rapporto con il mare elemento qualificante della forma e della vita urbana”, in *Atti del Convegno di studi “Turismo e territorio in Italia: problemi e politiche di sviluppo”*, Novara, 2001.
- CIRELLI C., MALAFARINA S. and PORTO C. M., “I porti turistici come opportunità di rilancio e valorizzazione del turismo costiero in Sicilia”, in G. SPINELLI (ed.), *Atti delle Giornate di Geografia del Turismo 2002: Politiche per un turismo duraturo*, Novara, 2002 (printing); also in *Annali della Facoltà di Economia*, Catania, XLVIII, 2002.
- CITARELLA F. (ed.) *“Turismo e diffusione Territoriale dello sviluppo sostenibile”*, Naples, Loffredo, 1995.
- CLARK J.R., *Coastal Zone Management Handbook*, New York, Lewis Publishers, 1996.
- CORI B. and LEMMI E., “Cambiamento globale, pressione umana e competizione nell’uso del suolo, per uno sviluppo sostenibile delle regioni costiere mediterranee”, in *Bollettino della Società Geografica Italiana*, XII, vol. V, 4, 2000, pp. 639-664.
- CRISTAUDO T., “Industrializzazione della Sicilia”, in *Annali della Facoltà di Economia e Commercio*, Messina, 1981.
- D’ARRIGO A., “Antichi toponimi marittimi”, in *Rivista Marittima*, 2, 1964, pp.65-69.
- DI BELLA S., “La regione costiera etnea e il suo sviluppo turistico a sud del capoluogo”, in *Annali del Mezzogiorno*, vol. XXII, Catania, 1982.
- DI BELLA S., “L’abusivismo edilizio ed il fenomeno della seconda casa lungo la costa meridionale della provincia di Catania. Esempio di errato intervento sul territorio”, in *Atti del XXIII Congresso Geografico Italiano*, vol. II, tome III, Catania, 1983, pp. 173-187.
- DUFOUR L., *Atlante Storico della Sicilia. Le città costiere nella cartografia manoscritta, 1500-1823*, Palermo, Arnaldo Lombardi, 1992.
- EUROPEAN COMMISSION, *Verso una strategia europea per la gestione integrata delle zone costiere (GIZC), Principi generali e opzioni politiche*, Direzioni generali Ambiente, sicurezza nucleare e protezione civile, Politica della pesca, Politica regionale e coesione, 1999.

- FAMOSO N., "L'area megarese dal paesaggio tradizionale allo sviluppo industriale", in *Atti del XXV Congresso Geografico Italiano*, Taormina, 1989, vol. II, pp. 387-400.
- FORMICA C., "Il Catanese", in *La casa Rurale nella Sicilia Orientale*, Florence, 1973.
- GRENON M. and BATISSE M., "Le Plan Bleu", in *Economica*, 1988.
- IACOBACCI A., MALATESTA A. and MARTELLI G., *Prime notizie sul nuovo rilevamento geologico dei Monti Peloritani*, 1956.
- LA MANTIA V., *Le tonnare in Sicilia*, Palermo, Giannitrapani, 1901.
- MANZI E., *Paesaggi come? Geografie, geo-fiction e altro*, Naples, Loffredo, 1997.
- MIGLIACCIO M. C., "Un paesaggio di lava movimentato da grotte", in *Dal Simeto all'Alcantara, coste del catanese*, Catania, 1988.
- POR Sicilia 2000-2006, Planning Complement, resolution n. 80 (18 march 2003) by Sicilian regional council.
- POLTO C., "recenti trasformazioni in un'area costiera della Sicilia sud-orientale: note geografiche", in *Atti del XXIII Congresso Geografico Italiano*, Catania, 1983, vol. II, tome III, pp. 250-261.
- PORTO C. M., "Riqualficazione urbana tra mitigazione del rischio e sostenibilità: il caso della borgata marinara di "Ognina" nel comune di Catania", in *Annali della Facoltà di Economia*, Catania, XLVIII, 2002.
- RANDAZZO G. and SCROFANI L., "Economic development and coastal environment in Sicily (Italy) in an Integrated Coastal Management policy", in *ICZM in Mediterranean & Black Sea*, Sarigerme, Erdal Ozhan editor, 1996.
- REGIONE SICILIA, *Primo rapporto sul turismo in Sicilia*, 2001.
- RIZZO C., "Insediamento e consumo costiero nel versante orientale della Sicilia", in *Atti del XXIII Congresso Geografico Italiano*, Catania, 1983, vol. II, tome III, pp. 262-273.
- RUGGIERO V., "I porti petroliferi della Sicilia e le loro aree di sviluppo industriale", in *Annali del Mezzogiorno*, Catania, 1971-1972.
- RUGGIERO V., "Problemi di pianificazione del turismo: un'analisi per due regioni del Mezzogiorno", in *Annali del Mezzogiorno*, Catania, 1979.
- RUGGIERO V., *L'Etna, la Piana di Catania e gli Iblei*, Milan, 1984.
- SCIUTO G., "Funzioni economiche e aree di gravitazione di un centro doppio della regione etnea: Giarre-Riposto", in *Bollettino della Società Geografica Italiana*, XI, vol. X, 1993, pp. 51-74.
- SIMONCINI G., "La Sicilia marittima tra il XV e il XIX secolo", in SIMONCINI G. (ed.), *Sopra i Porti di Mare, Sicilia e Malta*, vol. III, Florence, Olschki, 1997.
- VALLEGA A., "Governo del mare: complicazione e complessità", in CORI B. (ed.), *Innovazione tecnologica e organizzazione del territorio*, Milan, FrancoAngeli, 1990, pp. 131-150.
- VALLEGA A., "Il mare e le coste, l'evoluzione della ricerca geografica italiana", in CERRETI C. (ed.), *Genova, Colombo, il mare e l'emigrazione italiana nelle Americhe*, *Atti del XXVI Congresso Geografico Italiano*, Rome, Istituto della Enciclopedia Italiana, 1996, pp. 307-338.
- VALLEGA A., *Fundamentals of Integrated Coastal Management*, Dordrecht, Kluwer Academic Publishers, 1999.
- VALLEGA A., "Aree protette e gestione integrata delle aree costiere", in MOSCHINI R. (ed.), *La gestione integrata delle coste e il ruolo delle aree protette*, Ancona, Coste Italiane Protette, 2001, pp. 97-112.
- VALLEGA A., "Urban waterfront facing integrated coastal management", in *Ocean & Coastal Management*, 44, 2001, 5-6, pp. 379-410.

Also:

<http://whc.unesco.org/sites/1024rev.htm>

www.euroinfosicilia.it

www.regionesicilia.it/turismo