



*Autorità di Bacino Distrettuale
dell'Appennino Meridionale*

LAND-SEA PROJECT

“Sustainability of the Land-sea System for Ecotourism Strategies”

1st STUDY VISIT

27th April 2017

PREPARATION PAPER

*Termoli
Italy*





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INTRODUCTION

The Basin Authority of the rivers Liri – Garigliano and Volturno, recently joined under the Southern Apennines Basin District (pursuant to Legislative Decree 221/15 and DM 25/10/2016), within its institutional tasks, is always engaged in the elaboration and sharing of the best territorial planning practices for the management of coastal areas and their related environmental and economic systems.

The project LAND-SEA -Sustainability Of The Landsea System For Ecotourism Strategies (overall duration of 60 months and total budget of € 1.040.750/00 by ERDF) see the participation of the Basin Authority of the rivers Liri – Garigliano and Volturno/ Southern Apennines Basin District acting as Leader partner, the Molise Region (Italy), the Regional Administration Varna (Bulgaria), the Free and Hanseatic City of Hamburg – Senate Chancellery (Germany), the General Government of Catalonia and the Barcelona Urban Ecology Agency (Spain).

The **main objective** of the project is to favour a more inclusive, effective and efficient processes of regional governance so to increase and to encourage the creation of institutional competences and skills for the development of a sustainable coastal system, able to preserve natural habitats and contextually to support the development of regional ecotourism strategies.

For **coastal areas**, we mean a complex system identified not only with the coastline itself but also with its various subsystems and with its linked river basins. In fact, the EU coastal areas represent fragile and vulnerable systems in physical, territorial, anthropic, social and economic terms. Consequences are found in the emergencies of environmental degradation, scarcity of water, hydrogeological risks, loss of biodiversity and the effects related to the climate change. From here the need to cooperate for mutually learning how to conjugate the need to preserve and the need to develop a coastal territory.

The first phase of the project - **interregional learning** - involves the identification and evaluation of regional policies in relation to the overall project objectives. Therefore, the workshop that will be held in Caserta and Termoli from Wednesday 26 to Friday 28 April 2017, will be the first meeting of partners (*kickoff meeting*) and will introduce the knowledge and analysis of Molise's coastal areas to its Regional Operational Program 2014/2020.

Molise (Figure 1) is characterized by the presence of important natural resources and a variety of environmental elements, creating optimal condition for the ecotourism development in the region. The Molise coast is characterized by the presence of coastal areas of great naturalistic value and is one of the most important sandy coastal ecosystems in the Italian Adriatic Sea for its biodiversity. The **36 km** long Molise coast behaves altogether as a low coast system, because the cliffs limiting the high coast to the sea are located, except for the promontory of Termoli, at variable distance from the shoreline. From 1954 to 2007, the general shoreline retreat caused a total loss of ca. 1.000.000 m² of coastal area. About 19 km of beaches (53% of total coastline) are actually under erosion risks. Coastal defence strategies have traditionally relied on the construction of hard coastal defence structures (breakwaters, groins, etc.). On the one hand, they have protected coastal areas, but on the other hand, they have simply shifted the coastal

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erosion problem closer to the works themselves, thus creating a domino effect. Moreover, the building of hard defence works during starting from the late '70s, has been already proved to have a heavy impact on landscape and on water quality.



Figure 1 - Helicopter view of Molise Region

The inner portion of littoral coastal area has a strong agricultural vocation with an incidence of rural areas covering approximate 85% of the territory. Several portion of the region have been included in the European Nature 2000 Network. In particular, all of the southern coast and much of the northern one have been classified as Site of Community Importance (SIC). The entire Molisian coast is extremely rich in foredune and hind dunes and therefore has a high naturalistic value at national level.

The coastal areas of Molise represent only a small part of the whole Italian coastal system (7500 km) and of the Southern Apennines River Basin District (2200 km). Nonetheless, thanks to its peculiarities, it can be considered a small-scale "**laboratory**" able to provide good land-sea management practices in order to promote sustainable development. The good success of the LAND-SEA project, as well as the implementation of the associated operational actions through the presence of the Southern Apennines River Basin District, will allow easier export of the "modus operandi" to other regional programming tools.

Among the various new programmatic and financial instruments of the Molise Region, the Regional Operational Programme "POR FESR FSE 2014-2020" is of particular importance. The programme has been approved by European Commission C(2015) no. 4999 of 14th July 2015, and it has a total budget of € 153.607.454 (ERDF: € 105.900.993 and ESF: € 47.706.460). Within the so called "**POR Molise**" programme, the Priority Axis 5 allocates 13% of the ERDF resources. In particular, Action 5.1.1 foresees interventions in protected areas both in land and sea environments for promoting and sustaining process of growth (Figure 2). The action sustains integrated plans of interventions and it's addressed to the private & public bodies responsible of the protected areas (municipalities, consortia, associations,

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etc). Interventions can concern the mapping of emergencies, the realization of control/monitoring systems, the environmental restoration of sites, the improvement of infrastructures and services for the development of the eco-tourism sector.

Expected positive effects are based on the strengthening and growth of the state of knowledge and the provision of planning tools of the landsea ecosystem.

LAND-SEA project activities may be aimed at preparing an action plan for coastal areas, able to provide a proper development strategy for the implementation of the tourism-recreational purposes with the environmental objectives imposed at national and EU level.

In particular, on the basis of the state of health of environment and socio-economic issues, it will be possible to proceed to define an instrument for supporting the evaluation and decision-making phases of the most critical aspects affecting the coastal area (e.g. coastal erosion, Silting-up of harbours, natural coastal zone protection, immature agritourism and gastro-tourism activities).

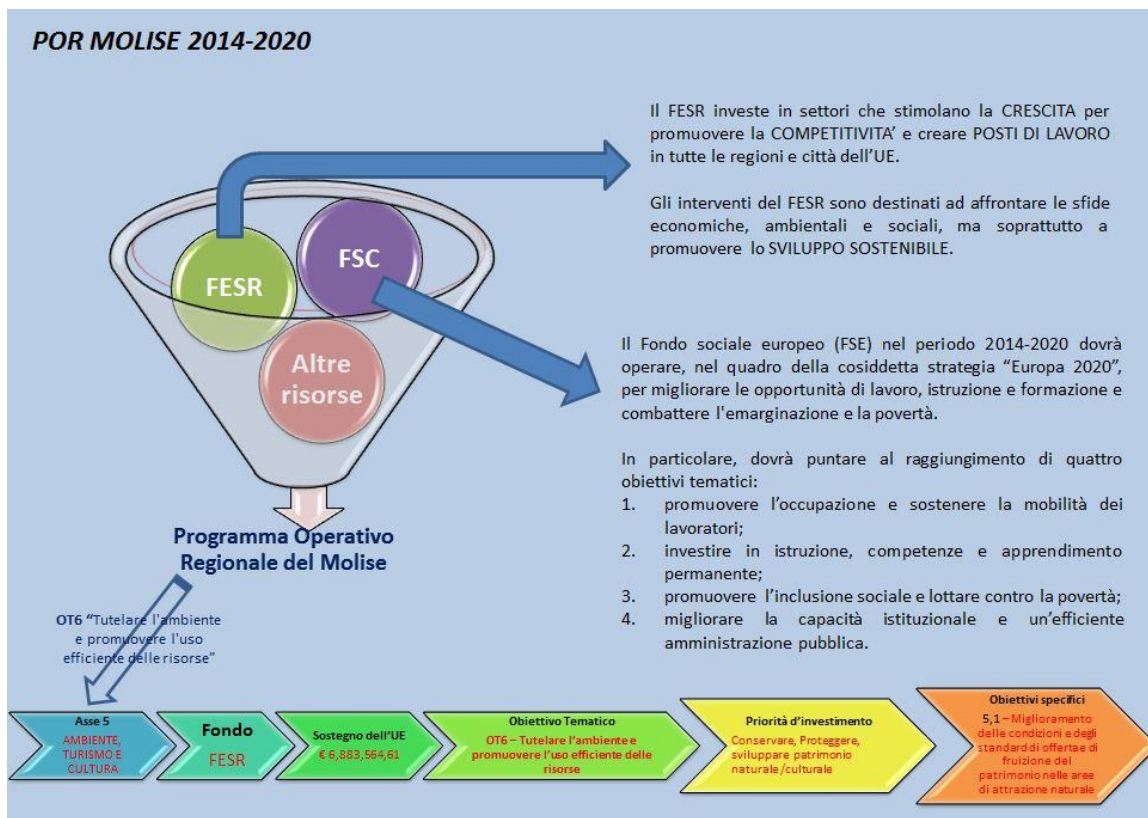


Figure 2 –Operational Programme for Molise Region 2014/2020 – Specific Objective 5.1



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STUDY VISIT

Port of Termoli

The Port of Termoli spreads over a total surface area of 45,000 square metres, employs about a thousand workers. Termoli harbour is divided into two distinct areas:

- 1) the oldest area, characterized by an internal basin for about 120 fishing boats, a passenger pier and a **shipyard**. The main flux of passengers is over 240'000 unit per year and more than 1200 tonnes of fish are handled every year.
- 2) the new “**Marina di San Pietro**” area, built under the ramparts of the historic center and open to the public since September 2009. It is considered the ideal base to reach the top destinations for yachtsmen in the Adriatic south center. Tremiti Islands, Gargano Promontory, Lastovo, Vis are the closer destinations and easy to be reached through an ancient route that leads boats from Termoli to Dubrovnik, passing through the most beautiful islands in the Adriatic Sea. “Marina di San Pietro” can accommodate up to a maximum of 300 vessels from 8 to 30 meters.

The commercial port area (passengers and fishing) has been involved in the realisation of two important projects. The first one was devoted to increase the depth of the seabed of the outer harbour from 4.5 to 6 metres. The works, which were completed in May 2003, made navigation within the harbour safer, and facilitated access for ferries connecting Termoli to the Tremiti Islands and the Croatian coast. The total cost of the intervention, funded by resources of the Molise Regional Operational Programme (ROP), was about 1.3 million Euros. The project was supervised by the Province of Campobasso. The second intervention, which will be completed by the end of 2003, involves the building of a road and junctions connecting the port to the State Road no. 16 (the “Adriatica”). The project also involves a covered section, above which cycle paths and pedestrian areas will be created. The goal of the intervention is to improve the safe circulation of both vehicles and pedestrians accessing the port area. The secondary effect is the elimination of traffic from the town centre and the subsequent improvement in air quality and decrease in noise pollution. The total cost of the intervention, supervised by the Commune of Termoli, is about 5.7 million Euros, funded through the Molise Regional Operational Programme (ROP).

The port is subject to silting up, depending on their location, the length of the piers and direction of coastal solid sediment transport. The materials silting up in the vicinity of the port entrances are mostly made up of beach sand drifting along the coast transported by coastal currents. In a coastline, such as that of Molise, the opening of an underwater canal to facilitate access of vessels to the port translates into a change in the morphology of the seabed, which inevitably is short-lived, since the wave motion lifts and drifts the underwater sand, thus silting up the canal and restoring the initial sea bottom situation. The best way to dispose of sand silting up the canal is to use it for the nourishment of eroding beaches not far from the port entrance, provided that it is not polluted.

That approach it seems a promising solution, but an integrated coastal management for the whole coastline is required. The planning instrument should, therefore, include dragage operation for the others two ports located along the Molisian coasts:

- 1) “Marina sveva”, in locality Marina di Montenegro (Montenero di Bisaccia);

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2) "Marina di Santa Cristina", in locality Campomarino.



Figure 3 - Port of Termoli



Figure 4 – Northern part of Termoli's beach



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Marina di Petacciato

The beach of the small municipality of Petacciato (Fig.5), represents a significant stretch of untouched natural ecosystems of the Molise coast. The clear sand, together with the extensive dune area rich in vegetation and the thick pinewood, are the main features of this highly representative Mediterranean littoral area. In fact, the area include an important Site of Community Interest, called Foce Trigno - Marina di Petacciat, in turn involving the "Marine Reserve of Petacciato", with an overall extension of 747 hectares and a maximum altitude of 50 m.



Figure 5 – View of Marina di Petacciato's beach

Sustainable Agriculture

Agriculture, mainly served by the irrigated catchments of the reclamation consortia, consists mainly of cereals (hay areas) and vegetables (plain areas); Particularly important is the system of winegrowing companies which, especially in recent years, have taken on considerable importance in the local economic system. The D.O.C. MOLISE played a decisive role in this new market. Production is concentrated in the hilly area close to the coast, especially that of Campomarino. The cultivation of the olive sees among the most common varieties in the Molise region of Leccino, Gentile of Larino, Moraiolo. By quantity, the Molise Region is the second oil producer in Italy. In recent years, across the Molisian coast, many farms applying traditional or non-intensive cultivation practices (such as organic food) to ensure sustainable land use, have been developed. This holistic production management system promotes and enhances agro-ecosystem health, including biodiversity, biological cycles, and soil biological activity. It emphasises the use of management practices in preference to the use of off-farm inputs, taking into account that regional conditions require locally adapted systems.