

General Principles to inform a follow-up framework

LAND-SEA PARTNER	
<i>Partner name in original language</i>	Regione Molise
<i>Partner name in English</i>	Molise Region

A robust, effective and transparent follow-up and review framework is critical for ensuring implementation of the ambitious LAND-SEA project objectives. Such a framework could help track progress and identify achievements, challenges and critical factors in implementing the second semester agenda.

The Follow-up paper will present a summary of the responses received during the first partnership meeting in Italy (i.e the Steering Committee meeting, the study visit and, primarily, the Interregional thematic seminars).

In order to map of the local economic-environmental-social emergencies (as previously presented during the Interregional thematic seminars and partially considered in the “application form” of the project) and to highlight the institutional competences for the development of ecotourism strategies based on a sustainable land-sea system, we ask you to answer to the following questions. For each answer use max 5000 characters, providing figures and schemes when necessary.

1) What are the hottest topics for the “sustainable development” of your territory (with particular reference to a sustainable development of tourism) and what are the problems you think to solve with an Action Plan?

The Molise coast is addressed by important erosion phenomena that in the last fifty years (1954 -2007) have produced a net loss of approximately 1 million square meters of beach. Nowadays, 19 km of coastline (equal to 53% of the total) currently are interested by erosion.

In addition to this issue, which was tackled with the stiffening of the coast (barriers) without success in the past, there is a deterioration of the quality of the waters of bathing and furthermore the sand covers up the harbour areas.

Termoli's port is affected by important flooding phenomena, intensified by an unfavorable concomitance of dominant solid transport in the NW-SE direction and wavering phenomena sometimes coming from the opposite direction, pushing the material right into the basin. The material is mostly made up of the sediment of erosion beaches set in the north section, now drifting along the coast and transported by coastal currents.

Although most of this stretch is now defended by rigid infrastructures, in particular by overwhelming or little emerging barriers, sediment transport has not decreased. Indeed, in the years 1992-2003 there has been an acceleration of the erosion phenomenon, with losses of 350,000 square meters of beach.

The erosive phenomena can be attributed to the particular disposition of the barriers, which have in fact created a preferential marine channel, where subshaped longshore currents intensify their intensity and duration at concomitant congestion, paradoxically leading to effects that are contrary to those for which they were built. The best way to dispose of this sedimentary accumulation is of course to use it for the controlled overflow of adjoining beaches, after verifying environmental compatibility (geological, ecotoxicological and pollution examinations).

Nevertheless, we will have to consider that the management of such sediments requires a careful activity of coordination, that foresees a local context wider than the port's perimeter or its nearby areas, and an integrated management approach of the coast in a regional scale.

The preparation of an Action Plan for the coastal areas of the Molise Region allows a proper development of a strategy for the implementation of the tourism-recreational compartment consistent with the environmental objectives imposed by the Community and national regulatory provisions.

Particularly, based on the available information regarding the state of play of the environment and the economic activities, it can be elaborated a supporting tool for the evaluative and decisional phases concerning the critical aspects that interest the coastal area such as the coastal erosion or the silting process of the port seabed or the in-land areas next to the coasts in relation to the development of tourist-receptive sector linked to the important agricultural vocation of the territory.

2) For such issues, has a well-documented and user-friendly (accessible to non-experts) state-of-art summary been carried out?

Environmental planning actions, vigilance, study and monitoring of environmental matrices in coastal areas find about shared choices, communication and dissemination of analytical results or, more generally, environmental information, indispensable elements which oriented the choices that are being implemented over the last few years.

In particular, as regards sanitary hygiene information such as bathing water quality, in accordance with the provisions of Community Directive 2006/7 /EC, a web portal has been prepared, where they are reported in a timely manner and in an understandable form to all users (including foreigners) information on "conformity" of bathing waters, bathing regulations, environmental emergencies, etc ...

The same information is also available through the use of applications that work with smartphones or tablets.

In general, environmental information are directly available on the institutional sites of the corporate body parties (Municipalities, ARPA Molise, Provinces, Region, ASREM, Port Authority – Coast Guard etc.) and the technical reports are always accompanied by "Non-technical relations" easy to understand.

However, taking note of what has already been said, it is necessary to observe that, overall, the system that ensures accessibility to environmental information is a critical factor in the dissemination of data on the different web portals.

3) For one or more possible solutions to these issues, what are the most important technical aspects and what are the major environmental concerns?

The technical aspects causing the most important environmental concerns are related to the management of port sediments, to the coastal erosion defense or coasts overflowing and to the management of urban and industrial areas waste water purifiers. In particular, with regard to the management of port sediments, the main environmental critical issues are the modality of fluid handling and the subsequent phase of discharge during the immersion in the sea, within well-defined areas.

For the purpose of proper fluid handling of port sediments, it is necessary to verify their compatibility (chemical-physical, ecotoxicological, granulometric and chromatic compatibility,) with those available in the landfill areas.

On the other hand, regarding to coastal erosion phenomena, with particular reference to coastal stretches used for tourism-recreational purposes, interventions implemented in the past consisted essentially of the installation of breakwater cliffs parallel to the coast line. These measures, on one side, does not seem to have produced the expected outcomes, on the other side, they have contributed to accentuating certain environmental issues associated with the quality of bathing water.

In particular, the reduced circulation of marine waters between the coast line and the breakwater cliffs does not allow an optimal dilution / dispersion of pollutants from the river mouths, favoring increased bacterial proliferation leading to a fall in the bathing water quality class.

Lastly, with regard to the criticalities associated with water purification, especially during the summer months, there are frequent crisis moments of sewage plants, both due to the increased number of users served and the implant obsolescence.

4) Did the proposed technical solutions be evaluated by comparison with other case studies?

The technical solutions that were adopted to prevent or mitigate coastal erosion phenomena, dating from the 1970s, have been extensively used throughout the Adriatic coast.

The same applies to the management of port sediments; on average, every 10 to 12 years, a dredging and dive operation of sediments accumulated in the inner port area and along the access channels is necessary.

In the last few years, environmental planning tools have been prepared and adopted (in particular the Water Protection Plan and the Nitrates Plan of the Molise Region - DGR No. 599/2016), which, in order to meet the regulatory requirements hold by Community Directives Sector (Directives 2000/60/ce, 2006/118/ce, 91/271/cee, 91/676/cee, 2006/7/ce, 2008/56/ce, etc...) as transposed into national law by Legislative Decree 152/2006, Legislative Decree 30/2009, Legislative Decree 116/2008 and Legislative Decree no. 190/2010, concerning the general environmental quality objectives, include actions and measures aimed to restore or maintain the good state of the waters and the ecosystems connected to them.

Among the main actions envisaged there are those aimed at streamlining water collection and sewerage systems, ensuring adequate environmental monitoring aimed at safeguarding marine-coastal water bodies also through proper management of recreational activities.

Specific measures are planned to mitigate the effects of alterations in the natural sedimentary dynamics that characterize the morphogenetic and evolutionary patterns of the coast line and river mouths.

5) Have possible social contraindications (adverse effects on the social context) been detected?

The detection of adverse or undesirable effects on the social context was ensured in the context of the Strategic Environmental Assessment procedure that accompanied the preparation of the planning tools mentioned previously.

Moreover, the same procedure of participation and involvement of the various stakeholders was also followed for the preparation of ROP ERDF-ESF Molise 2014-2020.

However, it is considered that for the preparation of the Action Plan measures should be taken to verify possible conflicts of interest that may arise following the definition of certain specific measures set out in Action 5.1.1 of the ROP ERDF-ESF Molise 2014- 2020 which provides for interventions in protected areas both in terrestrial and marine areas to promote sustainable growth processes.

This action supports integrated projects and is aimed at both public and private entities working on protected areas (municipalities, consortia, associations, etc.).

The interventions can cover the mapping of critical issues, the implementation of the control / monitoring system, the environmental restoration of the sites, the improvement of the infrastructure and services for the development of the tourism-ecological sector.

6) Are there non-technological barriers (lack of government policy, inadequate financing options, lack of adequate codes or standards, lack of stakeholders/community participation, inadequate workforce skills and training) to such solutions in the medium to long-term?

Among the various new programmatic and financial instruments of the Molise Region, the ROP ERDF ESF Molise 2014-2020 has a particular importance.

The ERDF ESF Molise Regional Operational Program 2014-2020, approved by European Commission Implementing Decision C (2015) no. 4999 of 14 July 2015 has a total budget of € 153.607.454 (ERDF: € 105.900.993 and ESF: € 47.706.460).

Within the ROP Molise, the Region allocated 13% of ERDF resources to Axis 5 "Environment, Tourism and Culture", totaling € 6,883,564.61.

However, for a full attainment of the goals to be achieved, it is likely to have to provide for additional financial resources.

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