

## **Scientific knowledge toward local planning: focusing bottlenecks starting from a case study in Molise littoral - Southern Italy (LITTORISK - OCR NOE' Project)**

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### **ABSTRACT**

The work refers about the results achieved inside a research project aimed to create a wide feedback between researches results on coastal erosion and land planning at regional level. Inside LITTORISK sub-project (Patrimoine et Prévention de Risques Naturels: Habitats et Sites Littoraux), module of INTERREG NOE' programme, coastal erosion phenomenon has been analysed, to be compared with littoral use evolution and littoral goods (cultural and environmental). The LITTORISK project aims to improve the European awareness on innovative and integrated methodologies to plan the coastal risks, and in particular to protect coastal patrimony from natural disasters. Inside this Project, Molise littoral (Southern Italy Adriatic Sea side) is a case study where Environment Department from ENEA is charged to set up and apply a new methodology (GI based and shared among Project partners\*) to assess the coastal erosion risk for littoral patrimony.

The human intervention in the seafront and in the inner land has been considered to highlight relationships and impacts with short-medium term coastal evolution. Many data have been produced in this project or collected among past available knowledge to know the complex history of the littoral environment evolution. Moreover, the comparison between all "potential knowledge" and the planning procedures, highlights a great conflict between local government officials and the possibility to really apply available knowledge and technology in land planning.

In the coastal areas, the sustainability concept is very difficult to apply, mainly in the Mediterranean areas, where the economic value of beaches and coastal environment is exceptionally high. Moreover the morphological features of Mediterranean littorals induce a particular vulnerability that needs a special attention in applying the sustainability concept in coastal land planning and risk mitigation. The capability to well know cause-effect relationships between coastal endeavour and expected natural or man induced changes is based on the availability of good data and models to simulate possible scenarios.

Starting from some local instances, and comparing the past and future coastal evolution with local planning strategies, we highlighted many relevant disconnections between the "mirage" of data availability and real practice on the ground.

At present the planning in Molise Region is determined on the basis of on paper documents. When these documents are compared to the realty endeavour, it can happen that it does not correspond anymore to the actual land features. Molise has about 35 km of sandy beaches faced on the Adriatic Sea between Puglia and Abruzzo regions. Coastal dunes covered by pinewoods border the beaches having (at nowadays) 40 metres as average width. River mouths expand wetland areas recognised as Communitarian Relevance Sites (SIC) for their eco biological significance. In the littoral area more

than 23,5 km<sup>2</sup> of SIC still there are. These frail coastal environments are, at nowadays, largely lost on account of erosion phenomena that affects this littoral from '60ties with an incessant, and growing tendency. Land planning maps that can't to be compared with the real coastal state, largely affect the efficaciousness of a good environmental policy. Many studies from research world (mainly doing with GIS) depicting coastal evolution and erosion causes, producing scientific papers as well, seem have no impact with planning needs and potential. The fact suggests that GIS diffusion emphasised as way to solve the lack between knowledge production and use is not so proper.

For all these reasons the Project aim is not only to weigh up the coastal erosion risk for littoral patrimony assessing but it is also to individuate what and where damages could happen. The project aims to solicit that results have to be useful for local planners, transferable to them, sharable each other. To reinforce this purpose, the project involves the local regional council (having planning responsibilities just in the case study area) as main partners: the scientists work in the Project by means of regional councils entrustment. The reported results demonstrate that INTERREG Projects could be a good tool to explore and reduce the gap between research results and planners at local (Regional level). Finally some new initiative to create a stable reference point in which these two worlds can constantly work together is the goal to be achieved.