SCACR19

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THE 970 KM LONG APULIA COASTLINE: STRENGTHS AND WEAKNESS

REGIONE PUGLIA

UNIVERSITÀ DEL SALENTO

Politecnico di Bari

AIOM ASSOCIAZIONE DI INGEGNERIA OFFSHORE E MARINA

Fondazione Puglia

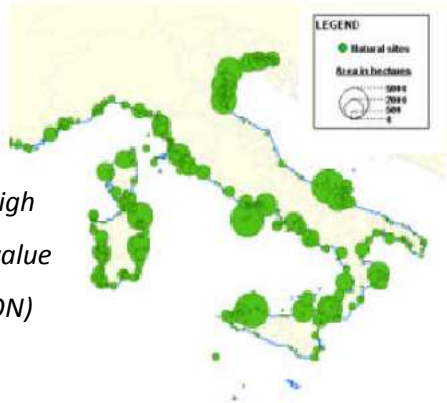
cmcc Centro Euro-Mediterraneo sui Cambiamenti Climatici

UNIVERSITÀ DEGLI STUDI DE L'AQUILA

Introduction

Over the last ten years, thanks also to regional investments, tourism has become a major factor in the socio-economic development of Apulia.

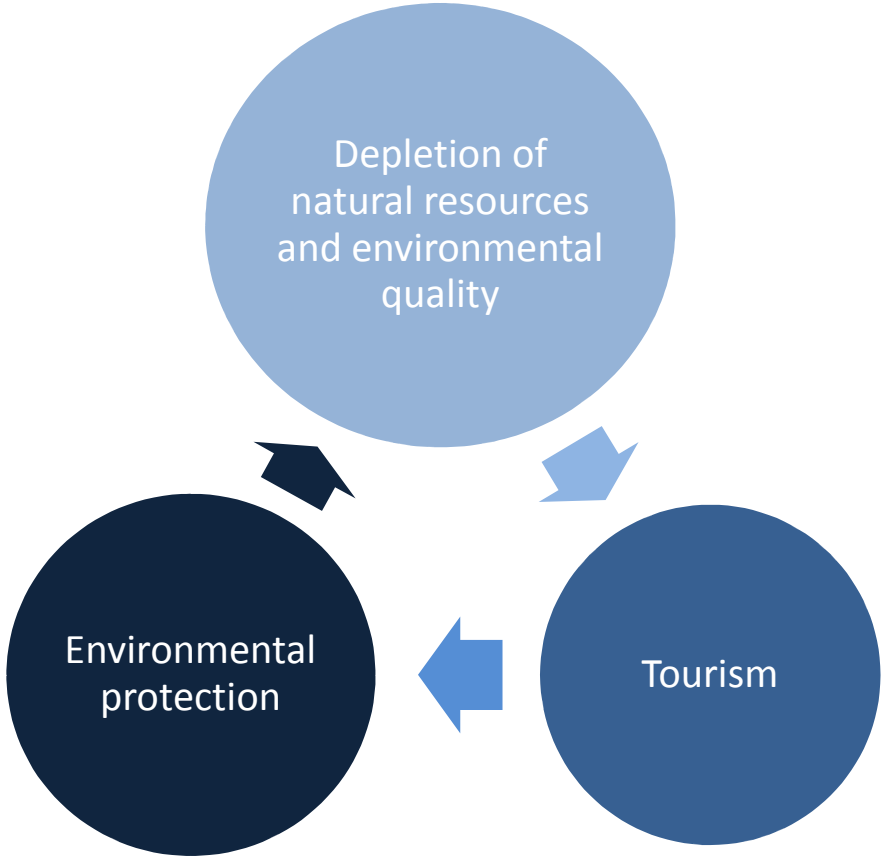
Areas of high ecological value (EUROSION)



Progressive deterioration in terms of stability and environmental quality due to increasing human pressure

Priority objectives of regional policy

- enhancing natural, cultural and landscape resources
- developing infrastructure and territorial service

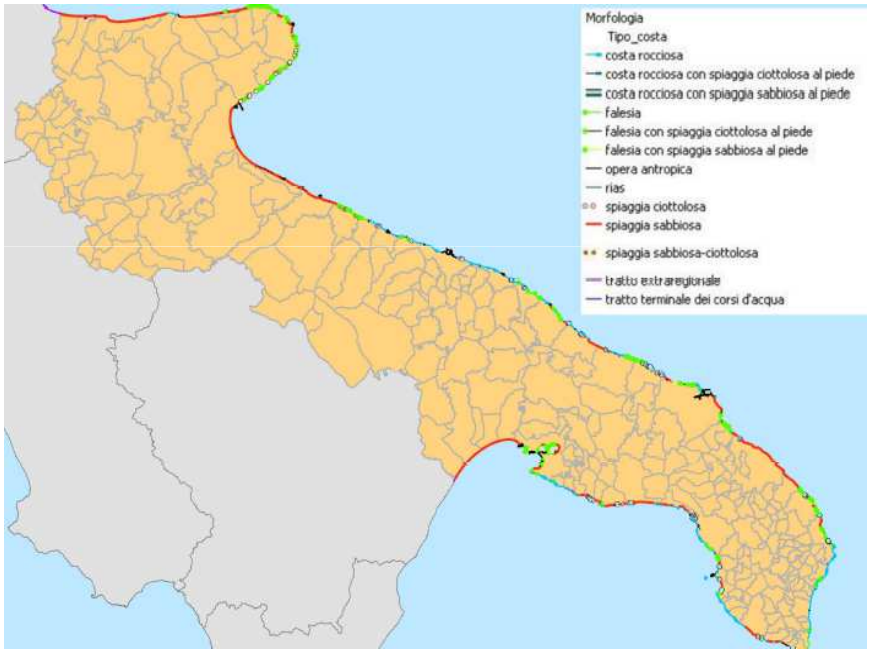


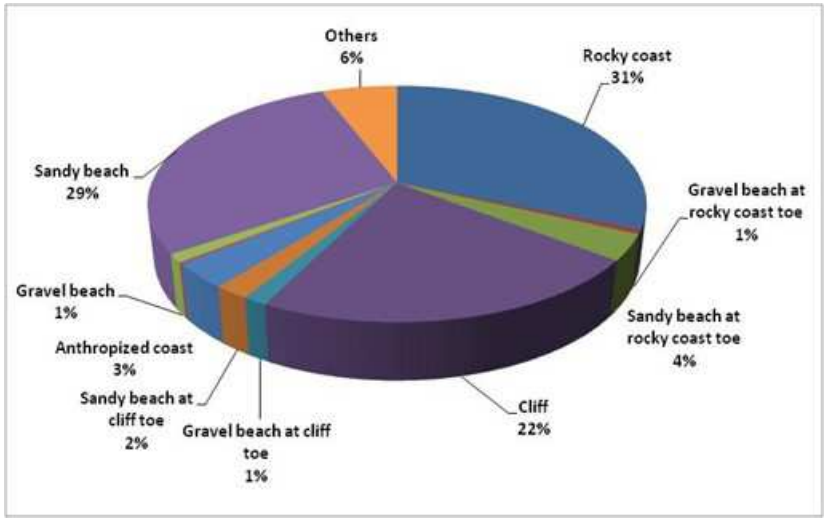
Coastal risk map

Priority management of coastal interventions

Regional coastline

Coastline length:970 km





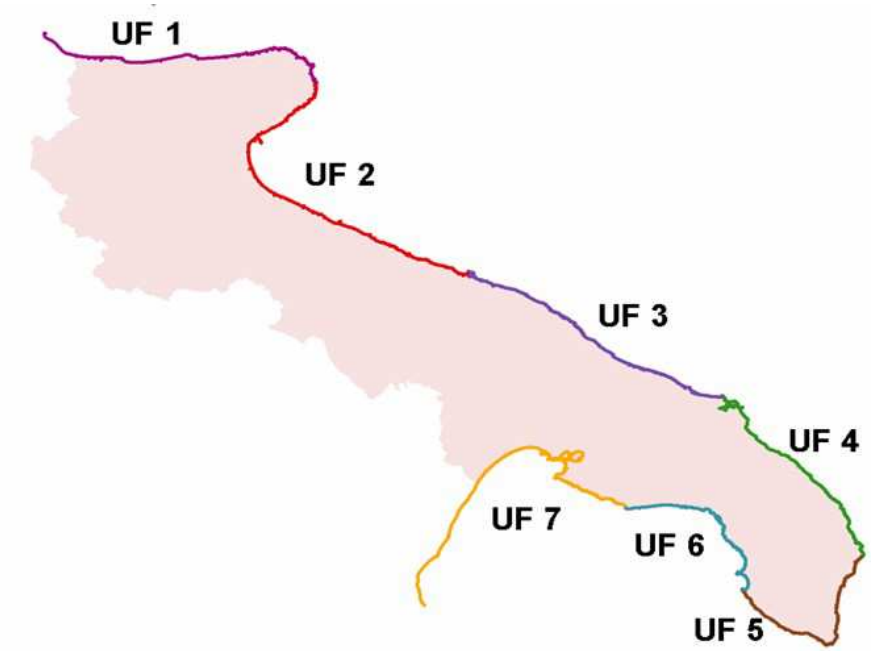
Due to the extent of its coastal territory and to the erosion of its beaches, Apulia Region has always been careful about coastal issues. In fact, in order to deepen the knowledge that must underlie all planning and design actions, in the past years a wide monitoring program of coastal area has been performed.

Regional Coastal Plan (RCP)

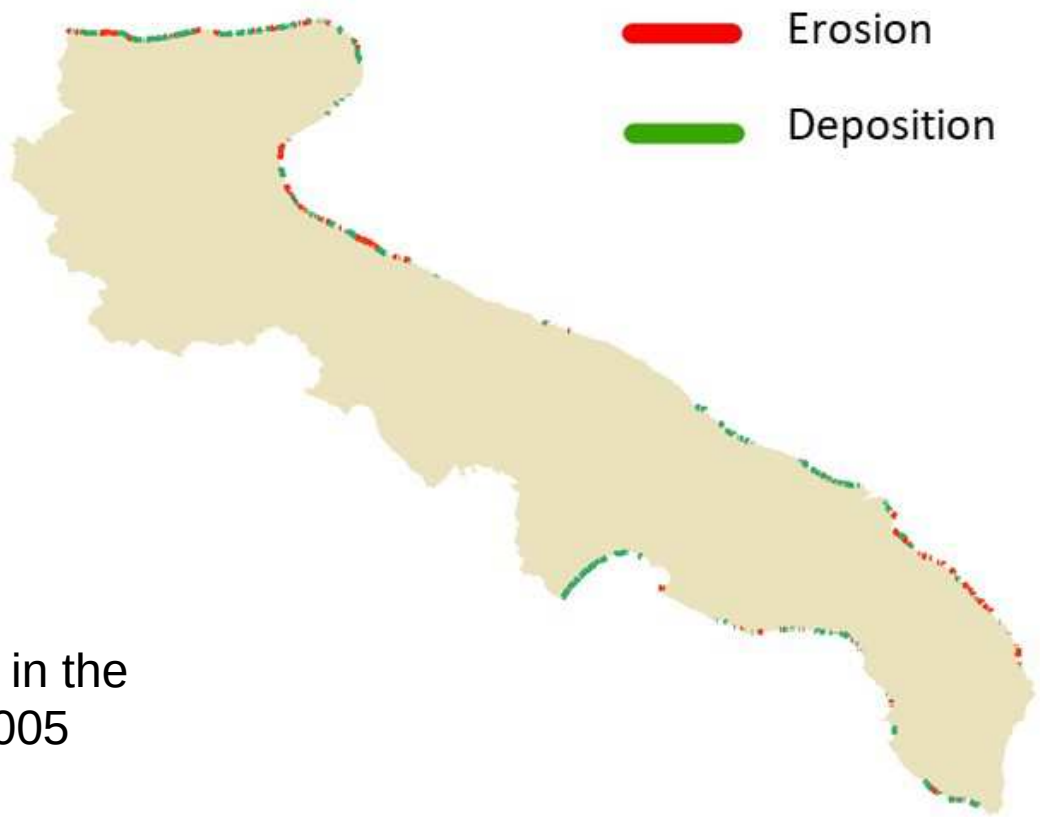
All informations acquired through these monitoring programme have been used as a basis for drawing up the Regional Coastal Plan.

In the RCP, a detailed analysis of the regional coastline has been carried out also detecting geological and hydrological risks, instabilities and weaknesses.

Main littoral cells boundaries

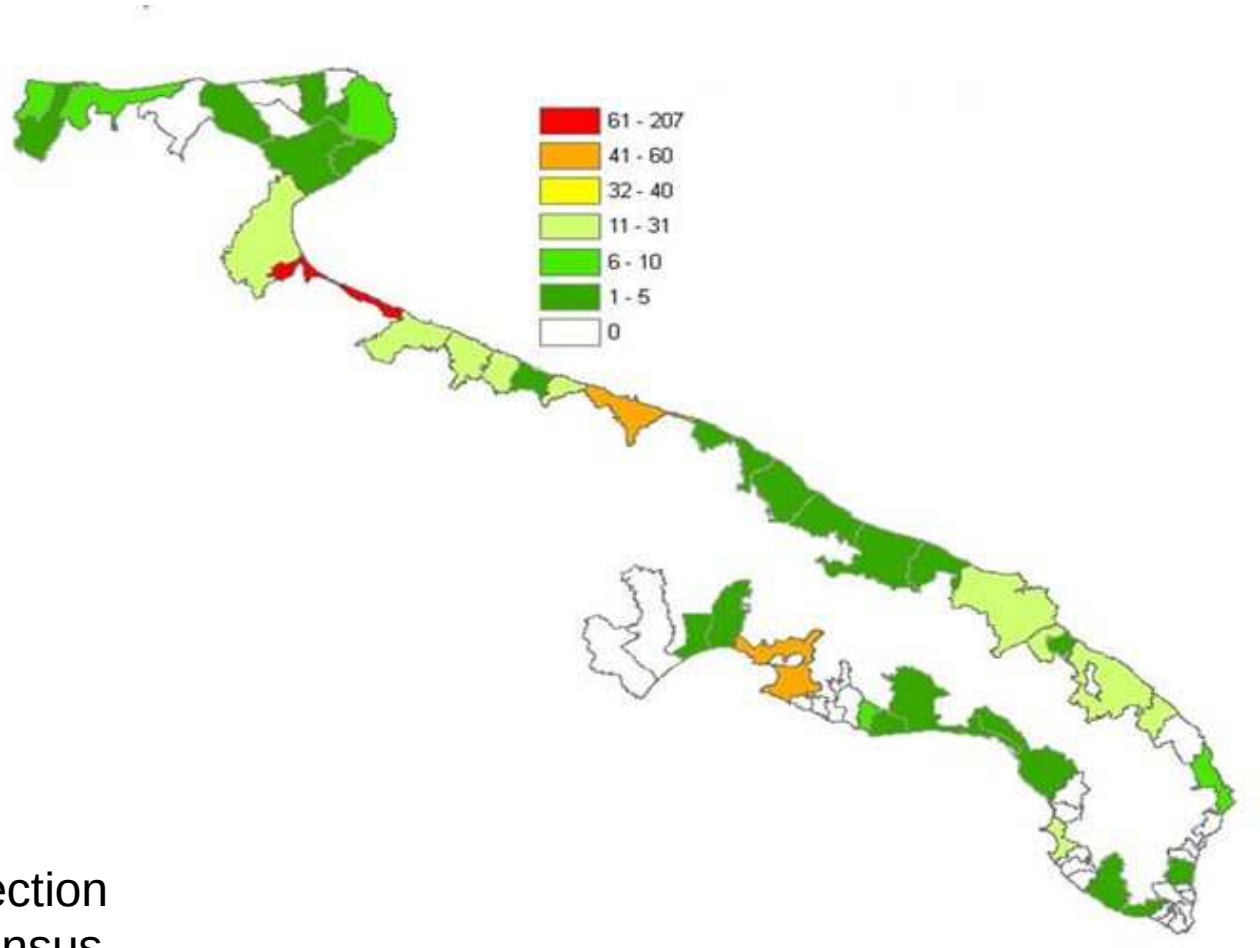


Coastline evolution (updated to 2005)



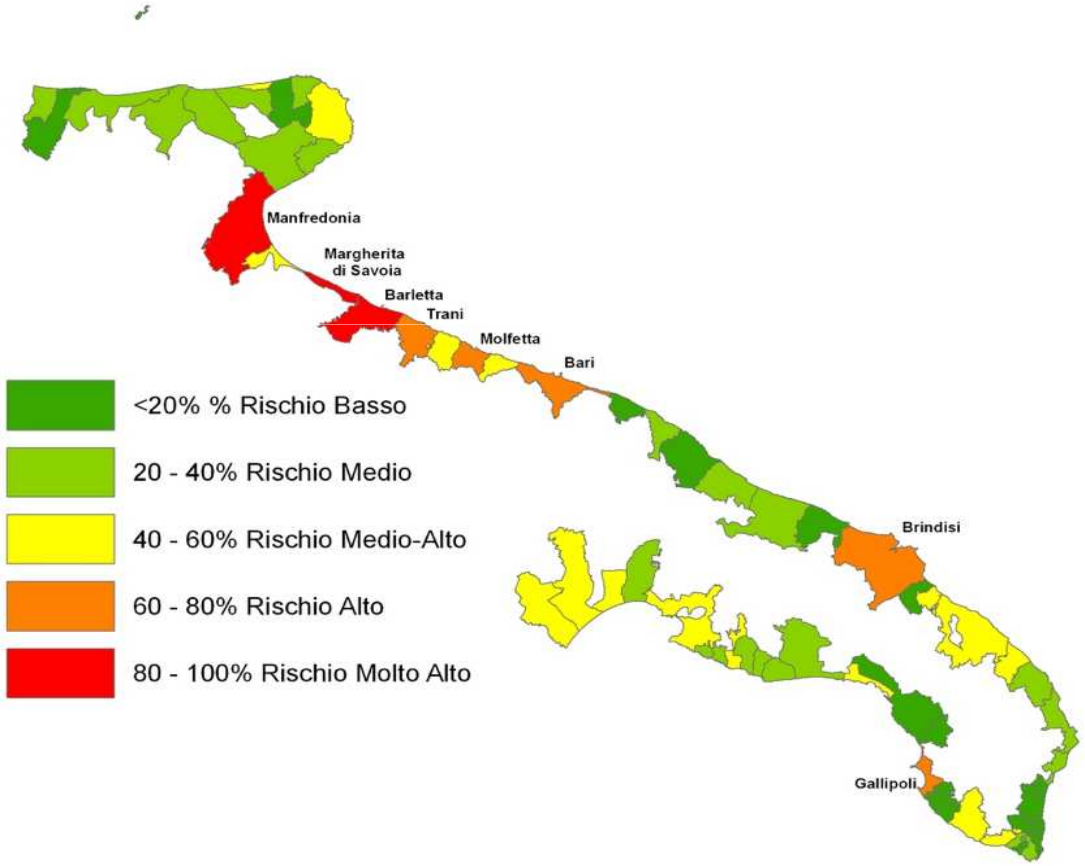
Eroded shoreline in the period 1992-2005

Coastline protection (updated to 2005)



Coastal protection structures census

Coastal risk map



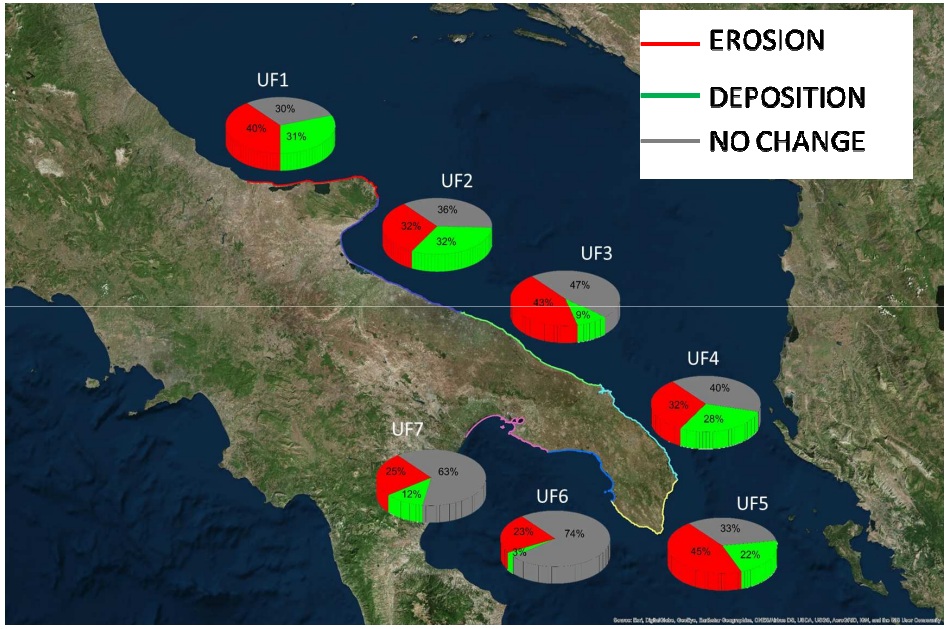
Coastal Defense Plan (CDP)

The RCP contains information about the coastal protection structures, but it does not address specifically this issue, which has been rather addressed in the CDP.

The results of the study, regarding risk mitigation for each physiographic unit and conventional and unconventional structures for coastal protection, have been adopted by regional government as guidelines for all future actions on the littoral stretch.

Coastal evolution 2005-2017

Coastal evolution 2005-2017



Eroded shoreline in the period 2005-2017

Comparison of eroded shoreline in the period 1992-2005 and 2005-2017

	Erosion % 1992-2005	Erosion % 2005-2017
UF1	22.31	39.59
UF2	27.95	31.93
UF3	3.21	43.19
UF4	23.92	31.92
UF5	16.15	45.25
UF6	4.33	22.95
UF7	2.26	25.30
Regional coastline	**16.23**	**33.18**

IN PROGRESS

Programmatic framework for addressing coastal erosion

Actors

- Apulia Region Administration
- DICATECH- Politecnico di Bari.

IN PROGRESS

➢ REGIONAL COASTAL PLAN UPDATING

The ongoing evolution processes require a new coastline analysis and reclassification.

IN PROGRESS

- **EXPERIMENTAL FIELD TESTING OF INNOVATIVE COASTAL PROTECTION STRUCTURES**

- **CONTINUOUS MONITORING OF COASTAL AREAS FOR RISK ASSESSMENT AND INTEGRATED COASTAL ZONE MANAGEMENT**

IN PROGRESS

STIMARE
Strategie Innovative per il Monitoraggio ed Analisi del Rischio Erosione

Research project STIMARE (Innovative strategies, monitoring and analysis of the coastal erosion risk), financed by the Italian Ministry of the Environment and the Sea (MATTM):

- data acquisition
- numerical modelling
- laboratory tests
- physical and ecological monitoring.

All the information and results will be discussed with the local stackholders, in order to provide a cohomprensive strategy of coastal protection, following the European marine strategy framework.

IN PROGRESS

Research project INNODUNECOST (Innovative methodology to increase the resistance of natural or artificial dunes) financed by the Regione Puglia:

- data acquisition
- numerical modelling
- laboratory tests
- field test.

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www.innodunecost.it

All the information and results will be used in order to obtain an innovative and robust methodology for preserving the dunes from the wind and wave induced erosion.