

**APAT's contribution to the activities of CADSEALAND project within the frame of PIC  
INTERREG III B "Central Adriatic Danubian South-Eastern European Space"**

In compliance with the recommendation (2002/413/CE) issued by the European Parliament and the European Council concerning the Integrated Coastal Zone Management and its implementation for the common space of the EU member states, the Italian Agency for Environmental Protection and Technical Services is drawing up the guidelines for a correct planning and a proper execution of all those works necessary for the coasts protection and the risk evaluation of these sea-land interacting zones.

In particular the aim of these guidelines for the Integrated Coastal Zone Management is to define appropriate interventions against coastal erosion, to elaborate and disseminate the best techniques of submarine sand location for littoral nourishment, to indicate criteria for the sediments sampling and to manage dredging sediment.

This activity is performed through a "Coastal Geographical Information System" gathering and processing many specific data related to coastal lines, harbours, sea waves and tide measurement network, sediment transportation, tidal currents in estuaries and inlets, pollution dispersion, beaches morphodynamics. The availability of a unique information system collecting all these relevant data allows easier elaborations and multiple applications.

Therefore, in order to support the Italian Ministry for Environment and Territory and the local authorities in charge of safeguarding the state of the coasts, APAT has been creating an Integrated Data System for studying, monitoring and evaluating natural and anthropogenic risks of the national coastal zones and their evolution. The basic element for all analyses aiming at the protection of coastal zones is the so called "coastal unit" defined as a coastal feature in which the movement of sediment is confined exclusively within its two extreme limits and such that along these limits the exchanges are to be considered null. All historical and experimental data referred to ICZM is taken from a coastal unit.

Moreover, studies on analyses methodologies concerning versants erosion have been carried out with particular reference to the present available models. The aim of these studies is to identify the most appropriate methodology for evaluating the erosion events in the CADSES area and consequently the quantity of accretion originated by the affluent catchments deposited at the rivers mouths. A catchment prototype ( the Pescara basin) has been identified for a surveying campaign in the downstream areas affected by erosion with the aim of estimating the real quantity of solid mass at its estuary. The comparison between the calculated quantity through models and the actually measured quantity will allow the proper evaluation of possible imbalances and also the determination of drivers and interventions necessary to control and to restore balanced conditions.