In the present study series of maps from Copernicus portal (http://copernicus-eo.eu) and EO are integrated to obtain added values products for coastal ecosystem analysis. Developing instruments and tools to allow modular variation of spatial and temporal scales of observation (i.e. from local to regional; from season- to inter annual) is mandatory for a valuable implementation of current management and conservation strategies (EU Marine Strategy Framework Directive & Integrated Coastal Zone Management) as well as the use of Copernicus portal services. 4 case study are presented.

**AREA 1**

**QUESTIONS FROM STAKEHOLDERS AND USERS:** 1) HOW CAN I IDENTIFY THE VEGETATION ALONG THE BEACHFRONT? 2) WHAT ARE THE LOCAL TIMES AND PATTERNS OF HABITAT REMODELING DUE TO THE ENERGY FLUVIAL REGIME? 3) WHICH IS THE BEST WAY TO MAP THE VERY SHALLOW BATHYMETRIES? 4) WHAT IS THE SCALE AT WHICH TO PROCESS THE TIMESLAPSE DATA?

**PRODUCTS FROM MYOCEAN can be used with a MULTIPARAMETER dataset from EO to obtain spatial and temporal distributions of BIOPHYSICAL PROPERTIES.**

**PRODUCTS FROM NACIS can be used with a MULTIPARAMETER dataset from EO to obtain spatial and temporal distributions of BIOPHYSICAL PROPERTIES.**

**PROCESSING CHAINS IMPLEMENTATION**

**DOWNSTREAMING SERVICES**

**USERS NEEDS**

**2012 SPOT SATELLITE OVER PASS during field surveys and multi temporal time series from LAMBDA and ESA free archive (1986-2011)**

**2012 SPOT SATELLITE OVER PASS for Spectral Mixing Analysis. HABITAT MAPS from COPERNICS LINKS and FIELD SPECTRAL LIBRARIES are integrated in a processing chain to obtain detailed habitat maps.**

**AREA 2**

**QUESTIONS FROM STAKEHOLDERS AND USERS:** 1) HOW ARE THE VEGETATION AND THE VEGETATION COVER CHANGES DUE TO THE PRESENCE OF INVASIVE SPECIES? 2) WHAT IS THE ROLE OF INVASIVE SPECIES IN THE Ecosystem Dynamics? 3) WHICH ARE THE REAL OPPORTUNITIES FROM SENTINELS FOR COASTAL ECOLOGICAL ASSESSMENT?

**AREA 3**

**QUESTIONS FROM STAKEHOLDERS AND USERS:** 1) HOW CAN I IDENTIFY THE VEGETATION ALONG THE BEACHFRONT? 2) WHAT ARE THE LOCAL TIMES AND PATTERNS OF HABITAT REMODELING DUE TO THE ENERGY FLUVIAL REGIME? 3) WHICH IS THE BEST WAY TO MAP THE VERY SHALLOW BATHYMETRIES? 4) WHAT IS THE SCALE AT WHICH TO PROCESS THE TIMESLAPSE DATA?

**AREA 4**

**QUESTIONS FROM STAKEHOLDERS AND USERS:** 1) HOW EARTH OBSERVATION PRODUCTS CAN DESCRIBE SPATIAL PATTERNS OF EVOLVING SALTMARSHES? 2) CAN I RELATE MULTITEMPORAL TIME SERIES OF BIOPHYSICAL PARAMETERS (HE: VEGETATION AND CHANNEL SPARITY) TO THE CLIMATE RELATED PARAMETERS OF AN INTERTIDAL ESTUARINE ECOSYSTEM? 3) WHAT ARE THE REAL OPPORTUNITIES FROM SPECTRAL MIXING TO MAP THE VERY SHALLOW BATHYMETRIES?

**The temporal distribution from 1986 to 2006 of EOF (Empirical Orthogonal functions) is clearly related to the mean sea level and % of inundation. The power laws showed how this relationship deviate in the case of larger patches and low-vegetation.”**

**“The historical evolution of the Scanno di Goro’s spits and of the Goro Lagoon is strictly connected with the development of the morphologic prominence of Po Delta of which they are part. This initiative is implemented by the ‘‘GIOP Lot2 User Uptake’’ project funded by the European Commission (DG – ENTERPRISES) Thanks to: Cat1: EOS for the provision of free ocean satellite data, it FP7/EU Marmad (Ocean for tomorrow) and FP7/EU Theos (Env. including Climate Change) research projects.**