GEOSS Support for Decision-Making in the Coastal Zone: Managing and Mitigating the Impacts of Human Activities and Natural Hazards in the Coastal Zone

A series of regional GEO Workshops organized by the GEO Coastal Zone Community of Practice and the IGOS Coastal Theme in partnership with GOOS and GTOS

WORKSHOP 1

Observing System Requirements for Managing and Mitigating the Impacts of Human Activities and Coastal Inundation in the Mediterranean Region

June 9-13, 2008

Athens, Greece

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Observing System Requirements for Managing and Mitigating the Impacts of Human Activities and Coastal Inundation in the Mediterranean Region

Specific objectives of *this* Workshop

- Compare scientifically sound scenarios for time-space extent of coastal inundation and storm surge in the coastal zone and for impacts of coastal flooding on coastal
  - infrastructure,
  - human health risks (exposure to waterborne pathogens),
  - ecosystems (e.g., water quality, habitats, biodiversity), and
  - living resources (organisms and habitats).

- Assess current observing system capacities for providing the data and information required to assess changes in susceptibility (risk and resilience) both temporally (annual to decadal scales) and spatially (100 meter to 1 kilometer resolution).

- Increase awareness among coastal planners and managers of geospatial patterns of susceptibility and causes of changes in susceptibility, both short term (e.g., coastal engineering) and long term (e.g., changes in sea level).

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- **Build on and extend previous efforts and specify data and information requirements of the Integrated Coastal Area Management (ICAM) community in developing nations, particularly longer-term planners, policy makers, researchers and educators.**

- **Discuss and prioritize data and information gaps. Identify the challenges to filling these gaps, as well as the emerging decision-making approaches and model-based solutions.**

- **Facilitate linkage of space-based observations, and land and ocean in situ measurements and models with studies focusing on the impacts of human activities, coastal development and urbanization on susceptibility to coastal inundation, and human and ecosystem health.**

- **Initiate planning for a COastal Data Assimilation System pilot project (CODAS) and Integrated Coastal Decision Support System (ICoDSS) for data acquisition, analysis, modeling and integration**

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Deliverables:

- **Geospatial maps of risk and resilience with 1 km resolution for the Mediterranean region.**

- **Guidelines (best practices) for assessing risk and changes in risk for coastal planners and managers.**

- **Observing system requirements for the provision of data and information needed to quantify changes in susceptibility on appropriate time and space scales.**

- **Pilot project designs, implementation of which will increase operational capabilities for the sustained provision of data and information on environmental changes across the land-sea interface that affect risk.**