



ISSUES IDENTIFIED BY THE INTERNATIONAL PANEL EVALUATING THE FORTE DEI MARMI FORUM, SEPTEMBER 2014

The Municipality of Forte dei Marmi, in collaboration with the Department of National Civil Protection, the Universities of Pisa and Ferrara and local stakeholders, held the first of three annual meetings of The Forte dei Marmi International Forum of the Sea and the Coast. This series of events addresses issues related to the management, development, and preservation of beaches in areas under pressure from tourism, where erosion processes have an immediate impact on the local economic and social structure. The forum provides the opportunity for national and international experts to focus discussion on issues of importance to the Apuo-Versiliese coastal system, while also using the region as a laboratory for discussion of coastal erosion problems facing scientists and managers in other locations throughout the world. This report provides an evaluation of the outcomes of the first year (held 25-27 September 2014), which identified the dynamic processes of erosion and accretion and ways of monitoring and evaluating shoreline change. The second year (2015) will address shore protection designs, including hard structures and beach (re)nourishment. The third year (2016) will examine how the many facets of the coastal environment can be best managed in integrated programs. This initiative is especially timely because of the change in administrative structure required by transferal of activities from the provinces to the region and a consortium of municipalities.

Presentations at the initial meeting revealed that the local management issues are those commonly faced by many managers elsewhere, including (1) diminution of sediment resources because of reduced river inputs and trapping by shore protection and port facilities; (2) fragmentation of responsibilities and resources between government departments; and (3)

competing stakeholder interests and perceptions about use of resources and appropriate strategies, especially for locations suffering from beach erosion. Sediment transport alongshore creates littoral cells comprising sediment sources and sinks. Attempts to address erosion in one location can have a profound effect on another, requiring solutions for sediment sharing that address the needs of all municipalities. The local focus of the forum is the shoreline south of the Magra River, but consideration of the regional sediment transport system requires evaluation of the shoreline south to the mouth of the Arno River.

An international panel was invited to provide perspective on the presentations at the meeting and the discussion periods following the presentations. Attention was focused on identifying the stakeholder concerns and information gaps that should be addressed in subsequent meetings. Recommendations were made in the five general areas summarized below.

Governance:

- It is evident that there is too much fragmentation of competences among and within the provinces in this region. With the upcoming passing of the new regional law, opportunity exists to reduce this fragmentation. We recommend the involvement of an expert on governance to discuss these issues with the stakeholders in the next forum.
- We also recommend that the Regional Authority creates an office dedicated to databasing the data (historical shorelines, sand deposits, etc) collected through the years by the provinces. This database should be placed in a public WebGIS system.

Coastal management

- We recommend that the Regional Authority draw up an integrated coastal management plan for the entire littoral cell from the Boca di Magra to the mouth of the Arno, including the catchments and the inner shelf. In this management plan, the coastal Risks (who runs the risk of coastal flooding



and erosion), the Rewards (who reaps the rewards of coastal works), Resources (who owns the sand, who has the knowledge and tools, who has the data) and Responsibilities (who has accountability for action) need to be identified and defined.

- This coastal management plan needs to be developed with involvement of stakeholders including beach concessionaires and citizens associations, through participatory workshops. These workshops can be modelled on the "Coastal Ateliers" (Workshops) which were held in the Netherlands which will help stakeholders visualise the effects and efficiency of coastal interventions.

Additional expertise:

- For the next meeting, we stress the importance of involving all sectors of governance, including the regional authorities and mayors of the coastal communes in the littoral cell. Representatives of adjacent regions (Liguria and Lazio) could provide alternative perspectives and help identify best practices.

- Representation at the meeting is also recommended from the tourism industry, economists and representatives of the Chamber of Commerce (to provide alternative productive uses of the coast beyond beach tourism); River Basin Authorities and Port Authorities (to help address sediment delivery issues); environmental departments of government agencies (to identify administrative constraints of future plans); and environmental interest groups and citizen associations (to identify and help resolve potential stakeholder conflicts).

Coastal risk assessment:

- Little attention is paid at present to coastal risk evaluations as required by the EU Flood Directive, especially concerning coastal storms. We recommend this topic is taken up as soon as possible.

- More involvement is needed for these assessments by the public community and commercial operators.

- There is a need to carry out cost-benefit

analyses for different kinds of coastal works. This involves insight into the value of the hinterland to be protected and future trends.

Technical

- Assessments of shore protection projects to be addressed in the next meeting should include more use of sediment procurement through back-passing, re-use of dredged material, and consideration of offshore mining in addition to the advantages and constraints of building new structures, modifying existing structures to achieve new goals and creating sand dunes.