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Coastal management tools and instruments, databases

Coastal Spatial Data Infrastructures: So Far So Good?

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In recent years the development of tools and methods to assess and implement effective Integrated Coastal Zone Management (ICZM) have increased since the coastal zone is recognised as a complex process that need to involve various methodologies and stages to achieve results based on sharing knowledge and expertise between scientists, authorities and stakeholders. The important role of information and its management in all processes related to ICZM and coastal governance is widely recognised. In this framework, and despite significant initiatives such as the EU Directive INSPIRE, the Global GEOSS or the Protocol for ICZM in the Mediterranean of the Barcelona Convention of Mediterranean Action Plan, the need for integration in spatial data sourcing and the development of common rules to enable ICZM to develop effectively seem to remain somewhat unrelated to the main core of ICZM. With the aim to improve this situation, many nations and regions are attempting to implement Coastal Spatial Data Infrastructures (CSDI), and have been engaged in various SDI-related initiatives (e.g. FP7 PEGASO, FP7 MEDINA, ICAN, Envirogrids), with unconvincing results to date. In this scenario some issues arise considering the extra effort needed to be made by local or regional governments in CSDI development, in terms of implementation and maintenance. Further, there are critical views on the usefulness of these tools for coastal managers, since most times non-experts in cartography or information technologies are landed greatly technical and complex responsibilities. In addition, the sustainability of these initiatives at medium and long-term scale appears to be a key issue nowadays: what are the main requirements for CSDI components? How could various nations' approaches on CSDI implementation be linked?. In this contribution these issues have been analysed and reviewed systematically to assess the state of the art of CSDI as part of national SDI initiatives or in the frame of research projects, as well as their effectiveness in decision-making process in coastal management. Results show how the complex physical and institutional relationships behave and how Coastal SDI development are rarely considered in isolation from the broader National or regional initiatives, and also combined with Marine SDIs. Results also highlight the potential need for increased Capacity Building and educational programmes to improve technical expertise of those managing the coast (public administrations) and how this could be fitted in the

development and implementation of the SDI itself. Keywords: ICZM, SDI, spatial data, INPSIRE.