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5.5. Consideration of environmental context including ecosystem, natural heritage and natural resources; 5.6. Synthesis of > decision; Chapter 6. Investigation of environmental conditions; 6.1. Bathymetry and topography including seasonal and long-term variations; 6.2. Geology including characterization of surface layers (sediments); 6.3. Water level variations; 6.4. Wave statistics; 6.5. Current statistics including tidal, bathymetric and wave generated currents, residual large-scale currents; 6.6. Wind statistics, solar exposure and precipitation
6.7. Sediment transport by waves and wind; 6.8. Sediment characteristics; 6.9. Hydrographic parameters including water quality; 6.10. Ecological conditions (ecosystem, habitat and species); Chapter 7. Conceptual/pre-design alternatives; 7.1. Proposals for lay-out and cross sections of potential LCS schemes; 7.2. Preliminary estimation of morphological impact by the use of empirical diagrams, formulae or experience; 7.3. Structural safety of predesign; 7.4. Identification of environmental conditions for predesign
7.5. Structural design of LCSs based on material supply possibilities, formulae for stability, and semi-empirical information on scour; 7.6. Assessment of environmental impacts (EIA) at local and regional scale; 7.7. Evaluation of the schemes based on economical optimisation; 7.8. Socio-economic evaluation of the schemes; 7.9. Integration of technical, ecological and economic evaluation for selection of the sustainable scheme; Chapter 8. Detailed design of preferred scheme; 8.1. Optimization of lay-out and cross sections of LCSs based on short-term and long-term morphodynamic simulations; 8.2. Structural design by the use of formulae and model tests

Sommario/riassunto

The effect of manmade activities is primarily local but can extend far away from the location of intervention. This underlines the importance of establishing coastal zone management plans covering large stretches of coastlines.In recent years, interest in Low Crested Structures (coastal defense structures with a low-crest) has been growing together with awareness of the sensitivity to environmental impacts produced by coastal defenses.The relation between wave climate, beach erosion, beach defence means, habitat changes and beach value, which clearly exists based on EC research