

The Importance of the Morphodynamic Approach to Integrated Coastal Zone Management

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Abstract:

The Morphodynamic Approach is a modern approach that emerged in the late 1970s. This approach focuses on the complex mutual co-adjustment of the processes and forms in the coastal area. Its importance in coastal zone management is a necessity to avoid many problems and unfavorable impacts both on the natural environment and the human projects as a result of rapid change of coastal forms due to human interventions.

Naturally, the change in the form of the coast may not cause disruption to the morphodynamic system and may have limited disruption temporally and spatially if it occurs rapidly, as the natural environment can restore the environmental equilibrium. However, if this change is due to human interventions, because of the technological and structural capacity of the human being in recent decades, it causes great disruption to the morphodynamic system. Under such circumstances, the natural environment cannot adapt or make it difficult to restore equilibrium naturally, leading to risks and significant negative effects on the natural and human environment.

For the purpose of sustainable coastal zone management in the future, the vital and important role of the morphodynamic approach in the phases of the full assessment of coastal environmental impact should be highlighted to optimize coastal access procedures, especially for the preliminary environmental impact assessment, preliminary design and finally the EIA.

Keywords:

Morphodynamic approach – Coastal zone management – Natural factors – Human activities – Coastal evolution.