**Geospatial Technologies Applications in Seawall Feasibility Study**

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***ABSTRACT***

Geospatial technologies have revolutionized the way we approach the feasibility study of critical infrastructure projects such as seawalls. Seawalls are essential structures that protect coastal communities from erosion, storm surges, and rising sea levels. At present three coastal municipalities of Camarines Sur in the Philippines are at risk of being exposed to coastal erosion, occurrence of storm surge, coastal flooding and tsunami to name some problems. The objective of this paper is to highlight the benefits and relevance of geospatial technology applications in the different aspects of the seawall feasibility study. In the absence of geospatial technology, engineers and environmental scientists must rely on physical visits to the potential seawall construction sites, conducting a visual inspection of the coastline and noting key features. While a conventional feasibility study can provide insights, it will probably be less accurate and efficient than one conducted with geospatial technologies. With the use of GIS, remote sensing, simulation and modelling, project planners can make informed decisions about the most appropriate sites. The identification of the most suitable locations and priority areas for seawall construction help reduce cost of construction, resulting in 45 segments with an aggregate length of 21 km instead of the full 45 km coastline. It also helps in assessing environmental impacts, real-time monitoring using GPS and drones, and even in the assessment of seawall’s performance after construction. Parcellary survey and land valuation works is responsible for the acquisition of lots along the seawall footprint, identifying affected lots within the right of way limits and segregate them for the purpose of registering them in favor of the government. Global positioning system in real time kinematics mode is used for the conduct of parcellary survey. In conclusion, geospatial technologies are indispensable for seawall projects from site selection to construction, maintenance and monitoring.

**Keywords:** geospatial technology, right of way, seawall feasibility study