

Towards The Use of Geographic Information Systems for Effective Monitoring and Evaluation of Land and Marine Resources in Small Island Developing States

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ABSTRACT

The rationale for the effective management of natural resources in SIDS has been a subject of discussion in many fora in the last decade. The relatively fixed quantity and exposure of these resources to natural and human degradation are major concerns to the population at large. In an attempt to manage these resources in rational and sustainable ways, efforts have rightly been focussed on the development of legislative and policy instruments. These instruments have shown little-known results and their impact is sometimes difficult to assess. Improvements in information technology, in the last decade, have tremendously improved the capability of geoinformatics as a data acquisition, data analysis and data management tool. The introduction of high-resolution satellite imagery and high-precision Global Positioning Systems along with increased data processing power of GIS has provided efficient tools for resource management. This paper will review technological advancements that could improve the management of natural resources. Particular attention would be paid to the use of Geographic Information Systems (GIS) as a data analysis and modelling tool for a variety of spatial analyses and management. The paper concludes by proposing a strategic development plan for the effective use of GIS in land and marine management in SIDS.

Keywords: GIS, Land and Marine Resources Management, Caribbean