

## 1. INTRODUCTION

The complexities of shoreline response to sea level rise are contingent upon a very wide range of inter-relationships between physical/ecological factors. The focus of resource analysis for the present purpose must ultimately be on predictive capability, since we are principally dealing with the question of how shorelines and shore environment will change with future sea level rise. Prediction in turn requires an understanding of process fundamentals and adequate data. Therefore, much of what follows pertains to these aspects, which in many cases have more to do with the basics of resource response to hydrodynamic and meteorologic forcing than to sea level rise. If this can be elucidated, then imposing and evaluating the effect of sea level rise becomes a far less difficult task.

Organization of basic knowledge is intertwined with the question of resolution of spatial and temporal scales. The desired resolution for the evaluation of a resource is set by criteria which are dependent upon many non-technical factors. At a built-up shoreline, a 10 m recession could severely damage a structure, while at a natural shoreline the concerns will be less stringent. Then again, in low lying areas such as the Florida Everglades, just a few centimeter rise in sea level would prove to be disastrous to water management, and would cause extensive ecological changes associated with salinity intrusion. A rapidly rising sea level can generate a materially different response than a slow one, an example being the fragile barrier island shoreline. Finally, there is the question of absolute sea level rise and the associated shoreline scenarios. By keeping the issues focussed on the coastal processes themselves, we have in the most part stayed clear of centering on specific temporal and spatial scales explicitly, even though such considerations are inherent in evaluating the degree of uncertainty in the state-of-the-art knowledge and in future research needs.

The interactive nature of coastal processes renders it difficult to isolate resource issues and place them under well-defined "umbrellas" for descriptive purposes. We have selected ten headings (sections 2 through 11) within which a range of topics has been referenced. The first of these - Estimates of Eustatic Sea Level Rise - does not deal with process description in a general way, but highlights a fundamental issue, namely the quality of