

APPLICATION OF STRUCTURED DECISION MAKING TO CLIMATE ADAPTATION PLANNING OF COASTAL CULTURAL RESOURCES: THE CASE OF BARRIER ISLAND CAPE LOOKOUT NATIONAL SEASHORE

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Cultural resources are vulnerable to climate change impacts, such as periodic submersion and long-term inundation of historically designated structures in low-lying coastal areas. As an initial step to explore the vulnerability and adaptation strategies of a specific type of cultural resource, we present the results from the first of two pilot workshops for climate change planning of the coastal historic villages (Portsmouth Village and Cape Lookout Village) at Cape Lookout National Seashore (CALO). We utilized a structured decision-making (SDM) approach, which has roots in decision analysis, as a process that promotes transparency, collaboration, and an integrated systems approach for supporting more informed and durable decisions. Applying SDM involves the following steps; structuring a problem statement, defining objectives and participants' values, identifying alternatives and evaluating their consequences, and choosing optimal decisions based on a clear understanding of uncertainties and tradeoffs. At the first multi-day workshop, we focused on developing a conceptual framework of cultural resource values (significance, association and integrity) of two historic villages on Cape Lookout National Seashore and an influence diagram of the causal relationships between actions, uncertainties and external factors that could lead to desired outcomes. To enhance the influence of diverse values and creativity in examining vulnerabilities and designing adaptation strategies, we engaged cultural resource and historic preservation specialists within and external to the National Park Service (NPS) as well as CALO park personnel involved in cultural resource management. We present a discussion of this process and the products derived, and we describe information needs (including the development of a cultural resources vulnerability index) and strategies for our second multi-day SDM workshop.