Ecosystem service valuation in coastal & marine spatial planning

Project goals and objectives:

1. To assess and integrate social science information into a geographic modeling framework developed by the USGS that can support effective CMSP.
2. To contribute to comprehensive spatial planning in the Gulf of Mexico.
3. To help determine how social perceptions, knowledge, and values of ecosystem systems drive individual and collective decisions and actions that affect Gulf of Mexico coastal economies and resiliency.
4. To map the social values attributed to ecosystem services by important stakeholder subgroups, when are differentiated according to their attributes, human uses, and resource uses in a coastal ecosystem, along with insight into stakeholder representation in the region.
5. To facilitate participatory GIS workshops with the goal of creating the data required for application in SolVES.
6. To incorporate and analyze the data using SolVES.
7. To final products that will generate information that can be incorporated into regional spatial decision frameworks by coastal and marine resource managers.

Methods:

1. Developing principles: To respond to management needs by developing a set of simple informative tools for collecting and evaluating the social aspects of ecosystem services.
2. Explicit data collection: Analysis, and feedback to management needs and actions for immediate use.
3. Three phase process: 1) Using a Delphi method to develop a comprehensive social values and resource uses in a coastal ecosystem, along with insight into stakeholder representation in the region; 2) Facilitated participatory GIS workshops whose goal is to create the data required for application in SolVES; 3) Incorporation and analysis of the data using SolVES.

Timeline:

1. Users identify values and valuation.
2. 3. Use GIS capabilities and value map a value index representing the ecosystem service.
4. 4. Conduct stakeholder workshops to identify and value indicators of ecosystem service (income, satisfaction, and perceived values) by using groups of workshop participants to produce information.
5. 5. From these values can be incorporated into a policy map analyzed with regards to the social benefits of the region.

The SolVES tool for non-monetary valuation of ecosystem services.

Incorporating knowledge of ecosystem services in CMSP for the Gulf of Mexico.

Coastal faceoff, as we see ecosystems and the rights of affected communities unequally affected, to some extent, on their vulnerability and resilience to future changes. With a few, there is clear evidence that the health of our ecosystems is key to addressing climate change and protecting the environments on which we depend. The planning and management of coastal and marine environments is a means of evaluating critical factors in coastal systems. Research incorporating social values information in the context of comprehensive coastal ecosystem services assessments is essential to developing a comprehensive understanding of natural and social interactions in coastal regions.