Cocheco case-study

Background

Dover, NH is home to the Cocheco River, which requires dredging to keep it functional as a navigable waterway (Linkov, Satterstrom et al. 2006). Economically, this functionality is important for Dover's revival as an inland port (2006). As was discussed with the New York / New Jersey Harbor case, the fact that the dredged sediments are contaminated poses a problem for the subsequent disposal. Such disposal involves many stakeholders, including the public, environmental groups, shipping interests, etc. in realms ranging from environmental health to human health to economic costs. We assume that dredging is desirable and conditioned on this decision to dredge we focuses on the alternatives for dredging (Linkov, Satterstrom et al. 2006).

Criteria Identification

Stakeholder input and involvement figured heavily into the structuring of this problem. A "semi-structured reflective interview" was conducted to identify the decision criteria (Linkov, Satterstrom et al. 2006). The answers to these questions were used to identify "themes" of stakeholder concerns—economics, environmental quality, human habitat, and ecological habitat (Linkov, Satterstrom et al. 2006), which are then also used as the four criteria against which the alternatives are to be judged.

Formulation of Alternatives

This study was conducted after a decision had been made by the city to dispose of the contaminated sediments at a riparian area formerly used for such operations; stakeholder involvement was somewhat limited (Linkov, Satterstrom et al. 2006). The Center for Contaminated Sediments Research at the University of New Hampshire identified three alternatives—cement manufacture, immobilization in flowable cementatious fill, and wetlands construction—in addition to the strategy actually implemented (Linkov, Satterstrom et al. 2006).

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