Some quantitative methods have been built into software tools that facilitate the risk assessment. Some of these tools have been developed specifically by USACE.

For example, Beach-fx (http://hera.cdmsmith.com/beachfx/default.aspx) is a shore protection engineering economic software tool developed by USACE that consists of a Monte Carlo simulation model for estimating shore protection project performance and benefits. It can be used to perform economic evaluations of federal hurricane and storm damage reduction projects under a risk and uncertainty framework.

The Corps' IWR Planning Suite MCDA Module (http://www.pmcl.com/iwrplan/MCDAUsersGuideSep10.pdf) allows the comparison of alternatives according to weighted criteria and supports conducting multi-criteria decision analysis and exploring multiple dimensions of a planning decision.

In other cases, there are commercial off-the-shelf (COTS) software tools available that use these quantitative methods. For example, @risk (http://www.palisade.com/risk/) is a Microsoft Excel add-in tool from Palisade that performs risk analysis (http://www.palisade.com/risk/risk_analysis.asp) using Monte Carlo simulation (http://www.palisade.com/risk/monte_carlo_simulation.asp) methods, and provides outputs of probabilities and risks associated with different scenarios. In Chapter 8 of this module is an example analysis demonstration using @risk.

Criterium Decision Plus (http://infoharvest.com/ihroot/index.asp) is a software tool from Infoharvest® for multi-criteria ranking of alternatives.
Figure 5. Criterium Decision Plus