



## **A Cost-Benefit Analysis of the New Orleans Flood Protection System**

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In the early stages of rebuilding New Orleans, a decision has to be made on the level of flood protection the city should implement. Such decisions are usually based on cost-benefit analyses. But in such an analysis, the results are contingent on a number of underlying assumptions and varying these assumptions can lead to different recommendations. Indeed, though a standard first-order analysis rules out category 5 hurricane protection, taking into account climate change and other human-related disruptions of environment, second-order impacts of large-scale disasters, possible changes in the discount rate, risk aversion and damage heterogeneity may make such a hurricane protection a rational investment, even if countervailing risks and moral hazard issues are included in the analysis. These results stress the high sensitivity of the CBA recommendation to several uncertain assumptions, highlight the importance of second-order costs and damage heterogeneity in welfare losses, and show how climate change creates an additional layer of uncertainty in infrastructure design that increases the probability of either under-adaptation (and increased risk) or over-adaptation (and sunk costs).