

USACE Economic Analysis

Balancing Coastal Storm Damage Reduction and Project Construction Costs

USACE uses a set of effect categories to evaluate and compare the impacts and effects of planning alternatives. The categories under consideration in the New Jersey Back Bays Feasibility study include: National Economic Development, Regional Economic Development, Environmental Quality, and Other Social Effects. Proposed construction projects must maximize National Economic Benefits, and Costs are evaluated for all relevant measures (Perimeter, Storm Surge Barrier, Nonstructural) over a projected 50-year period of analysis to find the NED plan.

National Economic Development (NED)

- The National Economic Development criteria examines the return per dollar spent and optimizes the balance between construction and implementation cost and coastal storm damages reduced. (See figure to right)

Regional Economic Development (RED)

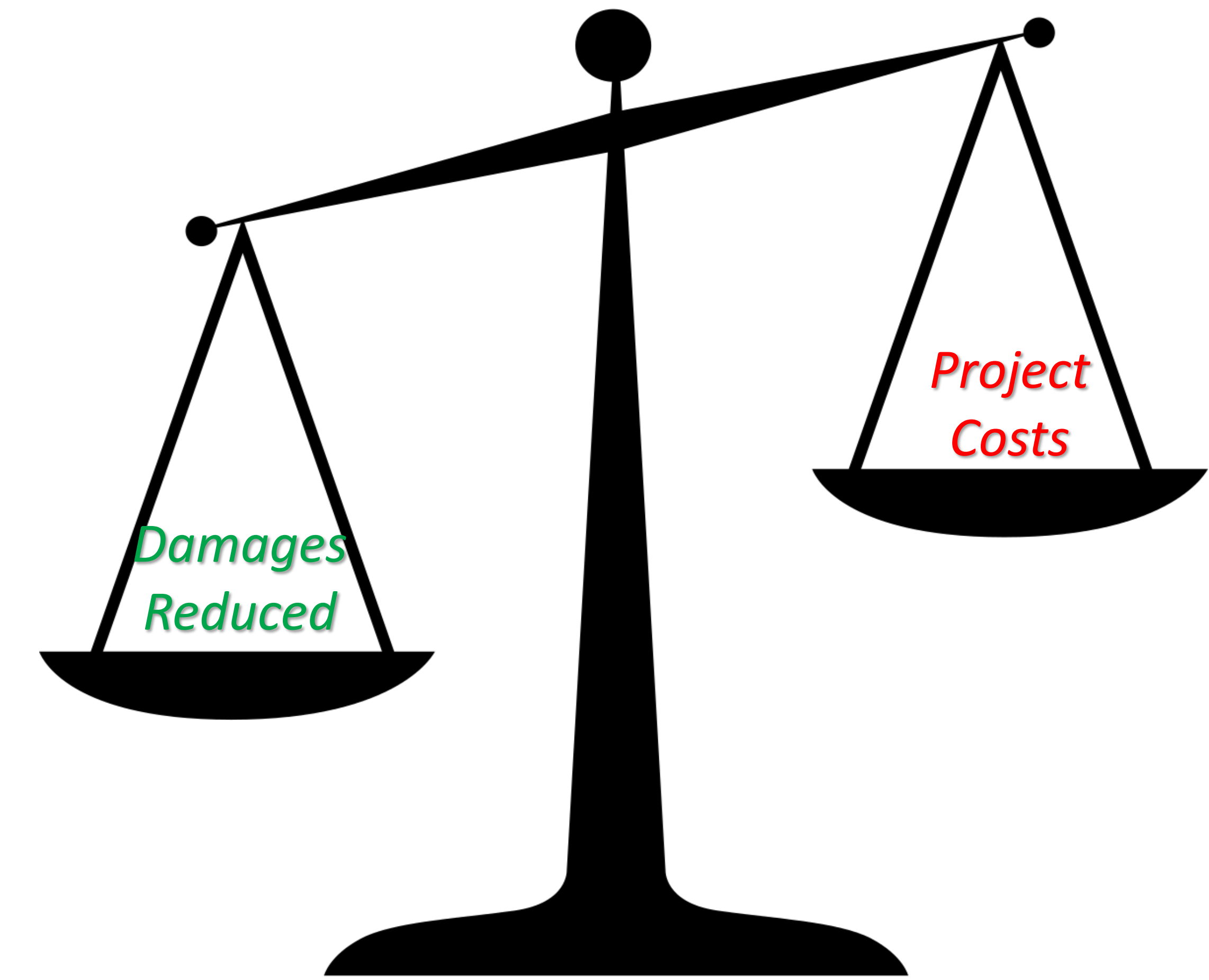
- Regional Economic Development considers the changes in regional economic activity that result from each alternative plan.
- Regional income and regional employment are two factors that are included in regional economic development

Environmental Quality (EQ)

- Environmental Quality criteria includes both beneficial and adverse changes in the ecological, aesthetic, and cultural attributes of natural and cultural resources

Other Social Effects

- Other social effects include urban and community impacts; life, health, and safety factors; displacement; long-term productivity; and energy requirements and energy conservation.
- Other criteria can be added to this category based on feedback from stakeholders.



NED Benefit Categories:

- Structural Damage Reduction
- Content Damage Reduction
- Infrastructure Damage Reduction
- Vehicle Damage Reduction
- Land Value Loss Reduction
- Income Loss Reduction
- Emergency Cost Reduction
 - Temporary Emergency Evacuation
 - Flood Fighting Efforts
 - Public Clean-up Costs
 - Emergency Erosion Control
 - Miscellaneous Costs
- Transportation Delay Cost Reduction
- Recreation Loss Reduction
- Benefits During Construction

NED Cost Categories:

- Project Costs
 - Construction
 - Real Estate
 - Environmental Mitigation
- OMRR&R
 - Operation
 - Maintenance
 - Repair
 - Replacement
 - Rehabilitation
- Interest During Construction
- Additional Associated Costs

