



ENHANCING BENEFITS EVALUATION

Towards a More Comprehensive Approach for Nature-Based Solutions:

Living with Comprehensive Benefits Analysis at the US Army Corps of Engineers

Gerald E. Galloway, Jr., PE, PhD
Emeritus Research Professor of
Engineering
University of Maryland

Implementing a Water Project Pre-1936

- Individual projects
 - Project Definition and Development
 - Costs and Benefits
 - **Mission** Accomplishment
 - Congressional (Modification and Approval –Mission from Congressional Perspective)
 - Construction
- 308 Basin Reports (1927)– 176 Reports on Feasibility
 - Broad Costs and Benefits
 - Local Input
 - Congressional Decisions

DECLARATION OF POLICY

SECTION 1. It is hereby recognized that destructive floods upon the rivers of the United States, upsetting orderly processes and causing loss of life and property, including the erosion of lands, and impairing and obstructing navigation, highways, railroads, and other channels of commerce between the

States, constitute a menace to national welfare; that it is the sense of Congress that flood control on navigable waters or their tributaries is a proper activity of the Federal Government in cooperation with States, their political subdivisions, and localities thereof; that investigations and improvements of rivers and other waterways, including watersheds thereof, for flood-control purposes are in the interest of the general welfare; that the Federal Government should improve or participate in the improvement of navigable waters or their tributaries, including watersheds thereof, for flood-control purposes if the benefits to whomsoever they may accrue are in excess of the estimated costs, and if the lives and social security of people are otherwise adversely affected.

THE FLOOD CONTROL ACT OF 1936

Implementing a Water Project

Post-1936

- Increased Administration Review (BOB/OMB)
- 1936-1960 Economics Focus - Green Book (1950); Circular A-47 (1952)
- Age of Aquarius - Environmental and Social Awareness
- 1960s Multi-Objectives/Balance - Kennedy, Senate Doc 97, Water Resources Planning Act (1965) – WRC, P&S, NEPA
- 1970's P&S, Odum Brothers, Carter Hit List, P&S Revision; Non-structural



...benefit and cost measurements, which would meet a professional economist's test of professional validity, have little influence on public choice except when they legitimize previously developed positions of participants in the decision process.

PRICING THE PRICELESS: COST-BENEFIT ANALYSIS OF ENVIRONMENTAL PROTECTION



Tug Fork WV

Consistency: Thy Name is OMB



Fox in the Henhouse

**Keep it to Numbers
Higher NED Numbers Win**

POST 1981

1983 - Water resources principles and guidelines (P&G) –Focus on National Economic Development

2007 – WRDA – Revise/broaden P&G by 2009

2014 –Administration Revision to P&G (Congressional Override for USACE)

2020 – WRDA: Execute WRDA 2007 – Be Broad

**Today There Are Multiple Federal Approaches to
Benefits Analysis**

Bottom Line

- US Army Corps of Engineers has worked to develop effective and realistic benefit analyses but has been restrained by living with the “possible”
- OMB and Administrations have been too nervous (or pressured) to embrace modern analysis techniques across multi-objective developments.
- Elements of Congress, operating in stovepipes, have created inconsistency in legislative approaches to analysis
- Analyses must tie benefits to multiple objectives and not be constrained to counting decimal places in single categories