

COST-BENEFIT ANALYSIS FOR FORECAST BASED FINANACING

WHY COST-BENEFIT ANALYSIS FOR FORECAST BASED FINANCING?

MEAL ROAD MAP

Monitoring

- Monitor whether activities are completed according to protocol when a trigger is activated.
- Mechanism to report bottlenecks/problems and corrective measures.
- Simulation exercises

Evaluation

- Theory of Change for each action
- Baseline survey based on Theory of Change
- Select “comparison” groups (counterfactual)
 - Develop preliminary CBA
- Household-level surveys after SOP activation
 - Semi-structured interviews/FDGs
 - Reporting

Accountability

- [Cost-Benefit Analysis](#)
- Feedback/complain mechanism

Learning

Lessons learnt workshops (preparation and activation phases)

Case studies

Policy papers

Research papers

FbF Manual

The steps of cost-benefit analysis (Boardman)

1. Specify the set of alternative projects
2. Decide whose benefits and costs count [standing]
3. Catalog the impacts and select measurement indicators
4. Predict the impacts quantitatively over the life of the project
5. Monetize all impacts
6. Discount costs and benefits to obtain present values
7. Compute the net present value of each alternative
8. Perform sensitivity analysis
9. Make a recommendation

Incommensurability

Some costs and benefits are hard to monetize.

- Willingness to pay [surveys]
- Willingness to insure
- Hedonic pricing [relevant markets]
- Estimation from broadly similar examples

Air conditioning



Indirect vs. Direct

What you see is all there is...

From Risk to Resilience

Working Paper 5

*Uttar Pradesh Drought
Cost-Benefit Analysis,
India*

TABLE 6 | Summary of costs and benefits of groundwater irrigation and insurance interventions

Categories of impacts	Irrigation	Insurance
Activity	Groundwater irrigation	Parametric micro-insurance
Costs to government	Construction of borehole	Premium subsidies
Costs to farmer	Costs of pumping water	Non-subsidized premium portion
Direct Benefits	Reduces hazard	Compensates direct losses
Indirect Benefits	<ul style="list-style-type: none">• Smooths food supply, consumption & income (farmer)• Reduces relief expenses (government)	<ul style="list-style-type: none">• Smooths consumption & income, reduces variability (farmer)• Reduces relief expenses (government)

Timescale

THE BLOG

The Cost Benefit Analysis of Climate Change Legislation: Future Generations Will Thank You

🕒 05/22/2014 10:24 am ET | Updated Jul 22, 2014



👍 Like 74



H. A. Goodman 

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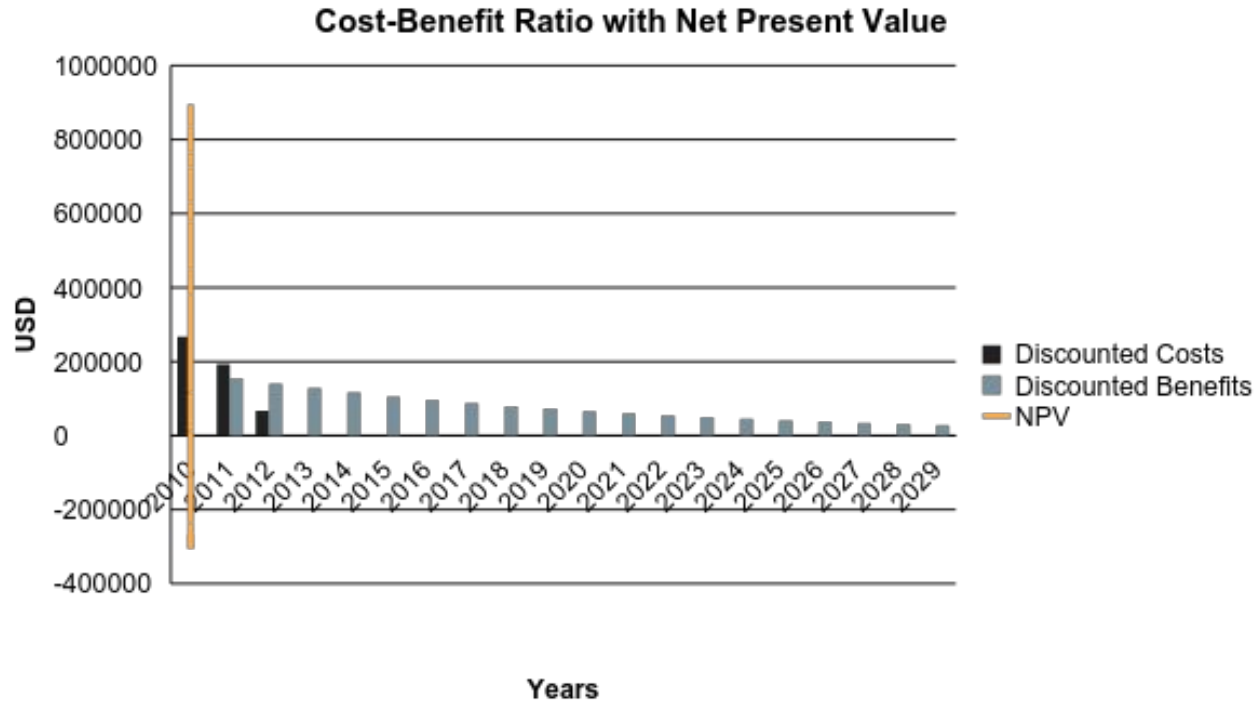
The latest talking point of climate change skeptics is the desire for a detailed cost benefit analysis. Sen. Marco Rubio recently claimed, [“There has to be a cost-benefit analysis... Is there anything government can do about it that will actually make a difference?”](#) During a *Meet the Press* debate with Bill Nye (The Science Guy), Rep. Marsha Blackburn [stated](#) that, “one of the things that we have to remember is cost/benefit analysis has to take place.” At the heart of

nest

Mystery solved.

Nest Cam Outdoor
Security on your phone 24/7

Timescale



Probability

RED CROSS/RED CRESCENT

CLIMATE CENTRE



International Federation
of Red Cross and Red Crescent Societies

The Netherlands **+** Red Cross



Probability

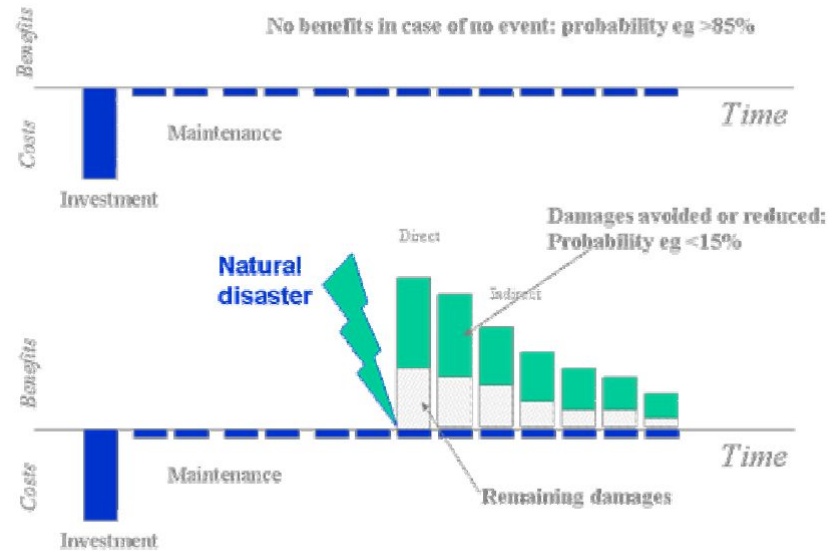


Fig. 2: Costs and benefits of a risk management project

Uncertainty

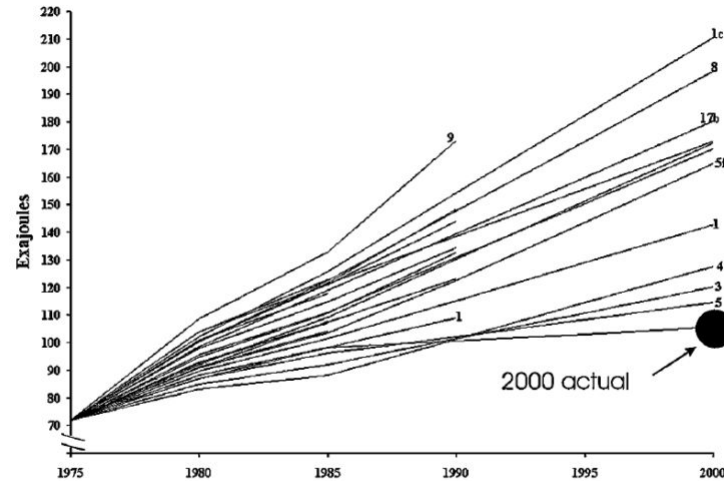


Figure 1: Scenario created in the 1970's for primary energy use in the US, and actual use in 2000
(Source: Craig et al., 2002).

Uncertainty

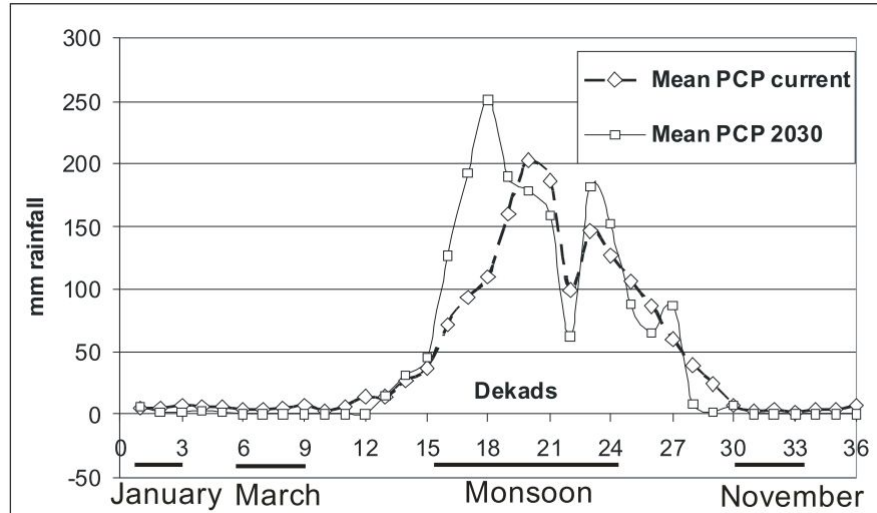


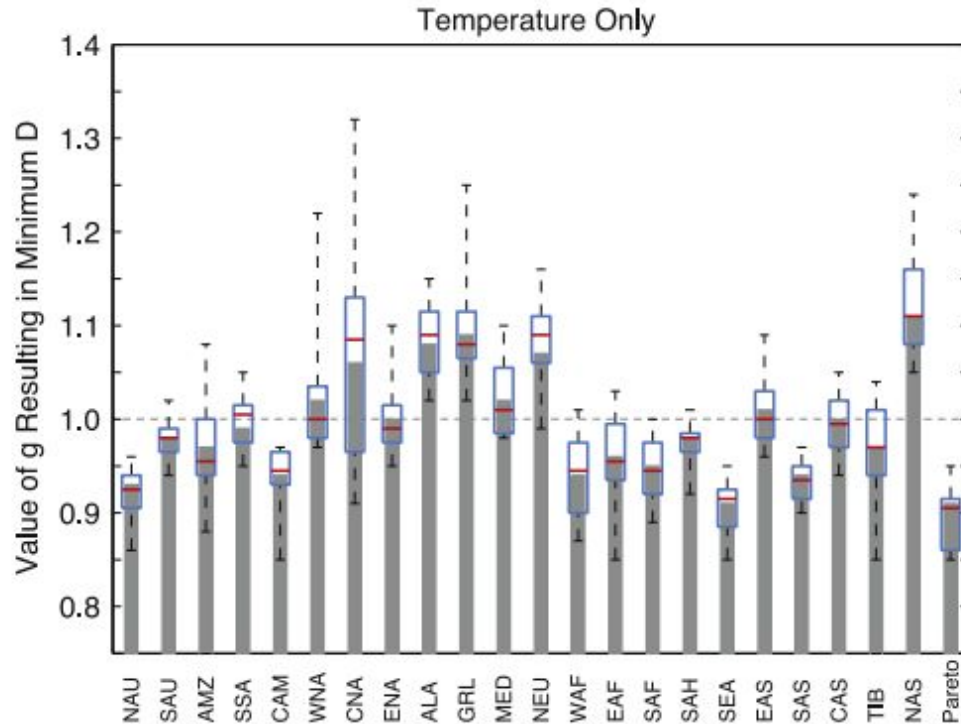
FIGURE 8: MEAN PRECIPITATION OF DEKADS BASED ON PAST DATA AND CLIMATE CHANGE PROJECTIONS FOR THE YEAR 2030

Uncertainty

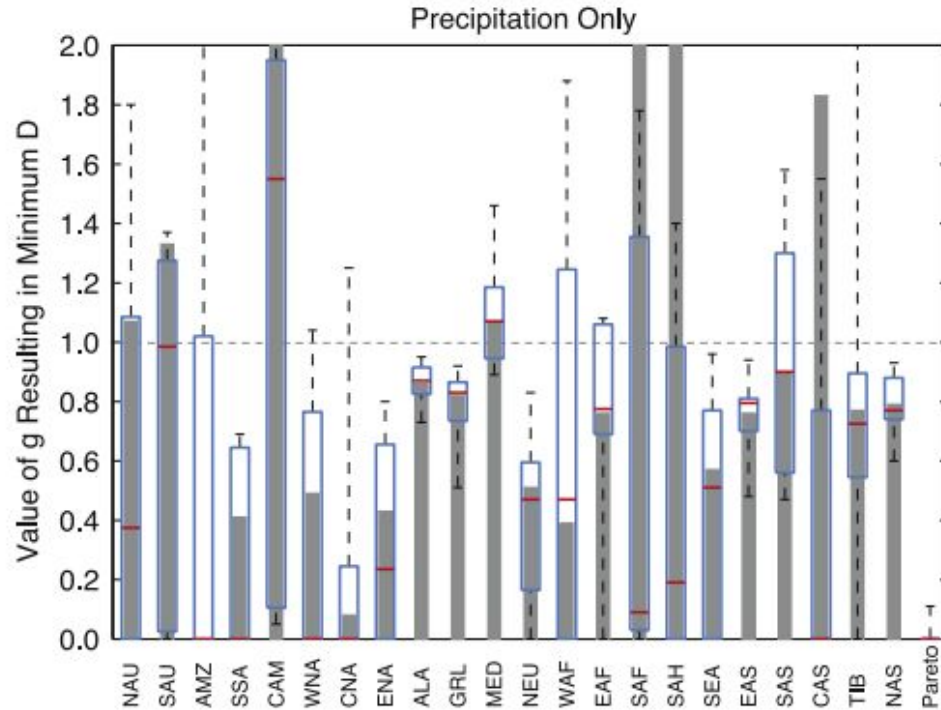
TABLE 9: SUMMARY OF B/C RATIOS CURRENT AND FUTURE (NUMBERS ABOVE 1 IN BOLD)

DRR Measure	Scenario	Mud		Brick		Retired Mud		Retired Brick	
		Discount Rate		Discount Rate		Discount Rate		Discount Rate	
		5%	12%	5%	12%	5%	12%	5%	12%
Replace with a Mud building raised on a plinth	Current	1.42	1.8	n/a	n/a	0.94	5.6	n/a	n/a
	A2	2.9	1.7	n/a	n/a	20	11	n/a	n/a
Replace with a Brick building raised on a plinth	Current	0.23	0.13	0.18	0.1	0.21	0.12	11	6.2
	A2	0.4	0.3	0.4	0.3	0.4	0.22	25	13

Pareto efficiency



Pareto efficiency



Kahneman?



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Underestimating Costs in Public Works Projects: Error or Lie?

Bent Flyvbjerg , Mette Skamris Holm & Soren Buhl

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BANGLADESH CASE STUDY

Forecast-based Action: cash transfers

“We believe forecast-based financing (FbF) in this region would have an impact of at least 3 times the value of the initial investment – every dollar invested in the program would save 3 dollars in beneficiary losses. This represents a reduction in losses of about 30% for the vulnerable population”

SCENARIOS:

A: floods happen with no humanitarian response

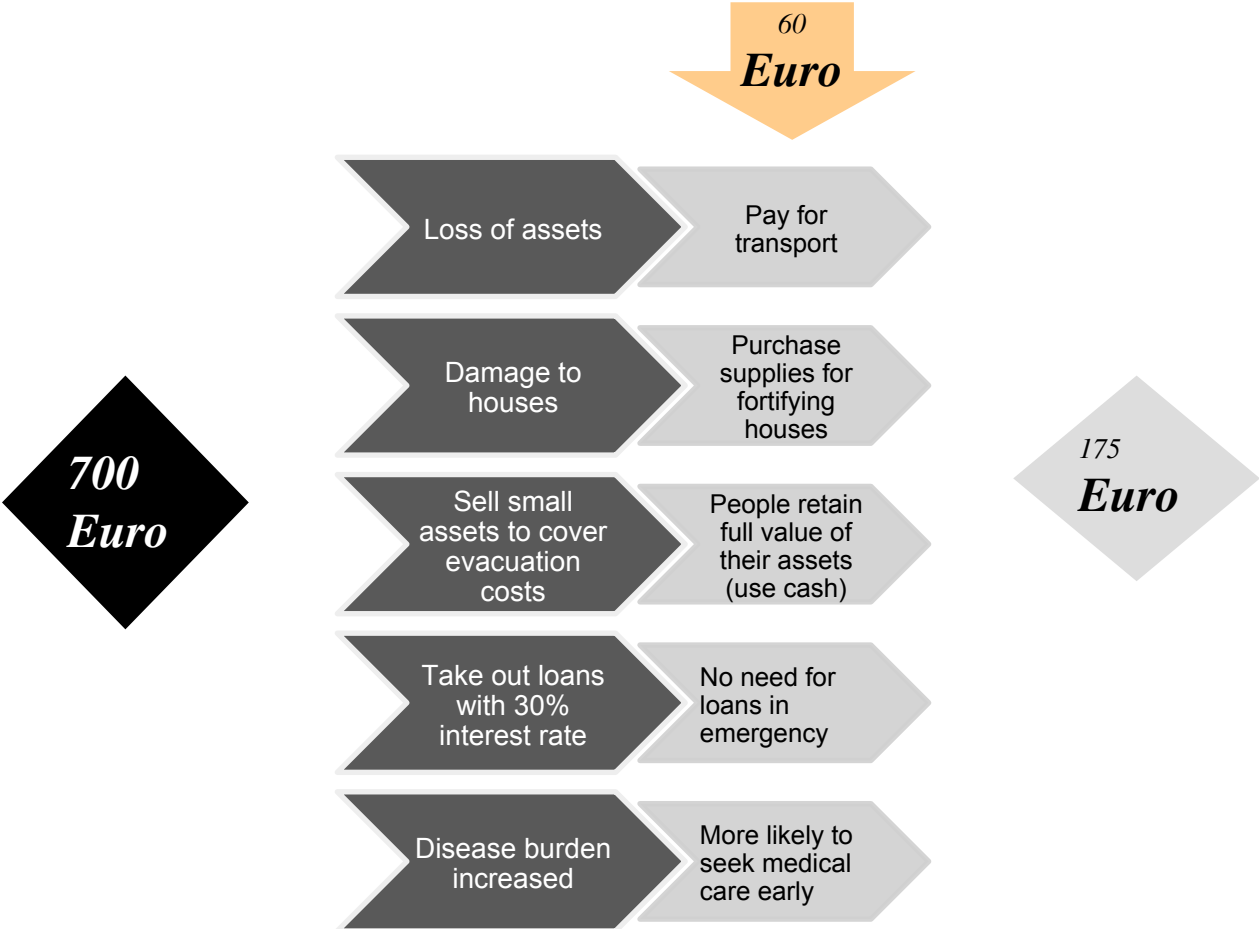
*B: floods happen and are followed by
post-disaster cash transfers*

*C: cash is transferred based on flood forecasts
before a potential disaster*

ASSUMPTIONS

1. that the amount of cash given would equal about 10 per cent of the losses incurred
2. that the lack of funds is a substantial cause of negative coping-strategies and that the cash intervention would not cause serious inflation
3. that the bulk of the cash will be spent before or immediately after the disaster and not saved

Benefits = Avoided Losses



REFLECTIONS

