



The Center for
Behavioral and Experimental
Agri-Environmental Research

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Corpus Christi, Texas

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JOHNS HOPKINS
UNIVERSITY

Thank you and Outline

- Thank you
 - Mike Brown, Executive Director of NASCA
- Outline
 1. Emphasis on evidence-based policy and behavioral Science.
 2. What is CBEAR?
 3. Success stories.
 4. How to collaborate.



New Executive Order

(September 15, 2015)

- White House Social and Behavioral Sciences Team. Government Services Administration. Launched officially in January 2014.
 - Goal of the team is to “help Federal agencies identify low-cost behavioral science insights that improve outcomes and efficiency.”
- President Obama’s Executive Order – **“Using Behavioral Science Insights to Better Serve the American People”** (9/15/2015)
 - www.whitehouse.gov/the-press-office/2015/09/15/executive-order-using-behavioral-science-insights-better-serve-american
- “To more fully realize the benefits of behavioral insights and deliver better results at a lower cost for the American people, the Federal Government should design its policies and programs to reflect our best understanding of how people engage with, participate in, use, and respond to those policies and programs.”
- Behaviorists Show the U.S. How to Improve Government Operations (NY Times, 9/30/15))
 - www.nytimes.com/2015/09/30/business/behaviorists-show-the-us-how-to-improve-government-operations.html?_r=1

Evidence-Based Policy

White House's Evidence and Innovation Agenda

- “... strengthening agencies’ abilities to continually improve **program performance** by applying existing evidence about what works, generating new knowledge, and **using experimentation and innovation to test new approaches to program delivery**. ... This is especially important given current fiscal challenges, as our nation recovers from a deep recession and agencies face tough choices about how to meet **increased demand for services in a constrained resource environment**.” (Memorandum to the head of departments and agencies, 2013)
- The administration continues to make investments in evidence-based policy. Guidance to agencies ahead of fiscal year **2017 budget** submissions has asked for, for the first time, specific information from agencies on how evidence is being used to guide policy.



Center for Behavioral and Experimental Agri-Environmental Research (CBEAR)



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Ohio State U / Tufts University / U of Tennessee / Colorado State U
Albany State U / Williams College / U Rhode Island*

What does CBEAR do?

- CBEAR was selected through a national competition and was funded by USDA's Economic Research in October 2014.
- CBEAR applies behavioral science and tests with experimental design to understand the values and decision-making process of farmers, ranchers, and landowners (**USDA's customers**).
- CBEAR works with agri-environmental program administrators to improve program design and environmental outcomes
... all while reducing program costs.



Agriculture's Long History of Applying Scientific Principles

- In agriculture, we apply scientific principles to study the specifics of crop management techniques.
 - Collect data on control plots, control for confounding factors, etc.
- Scientific investigations related to agriculture should not stop when human behavior enter the picture.
- Recent reports indicate that USDA is behind other agencies in applying behavioral science to improve program performance.



Advantages of Applying Behavioral Science



1. **Non-political.** Goal is helping programs work better, better serve their customers, and being cost-effective with taxpayer money.
2. **Nudges work.** Many of the things related to behavioral science are relatively small adjustments and are within the control of a program administrator.
 - Do not require additional funds or new legislation to be passed.
 - Works well with **voluntary programs**.
3. **Testing is embedded** within the programs.
 - Data from experimental designs are easier to analyze.
 - Research permit the telling of simple stories to external audiences.
 - **Strong external validity.**



“Test, Learn, Adapt”

- Haynes et al., argue strongly for the use of randomized control trials (RCTs) for the analysis and evaluation of public programs and policies.
 - Testing new interventions against status quo or against alternative interventions (including variations in existing interventions).
 - RCTs help eliminate rival explanations.
- RCTs are very similar to crop trials in agriculture.
- RCT have been used since the 1950s in the private sector (drug trials) and in areas of education and criminal justice.



Importance of Counterfactuals

Before the Program
(Pre-Treatment Period)

After the Program
(Post-Treatment Period)

Treated Units
(participant farms)

A: Pre-Treatment Outcome

C: Post-Treatment Outcome when Treated

D: Post-Treatment Outcome when Not Treated

Untreated Units
(nonparticipant farms)

B: Pre-Treatment Outcome

E: Post-Treatment Outcome when Treated

F: Post-Treatment Outcome when Not Treated

Use what you can observe (A or F) to stand in for what you cannot observe (D)

Shaded Boxes are
Observable

Unshaded Boxes are
Unobservable



Importance of Counterfactuals

- Consider the **Scared Straight** program meant to deter juvenile delinquents from further crime.
 - Juvenile delinquents interactions with serious criminals in prison who would describe how horrible prison really is.
- Early studies without control groups suggested participants were less likely to commit crimes after the experience. These studies compared behavior of participants before and after the intervention.
- Several well-controlled RCT studies were conducted. Evidence was fairly clear that “Scared Straight” led to increases in criminal behavior, compared to no intervention.
 - Programs were expensive to run and, even worse, they led to further costs by increasing crime.

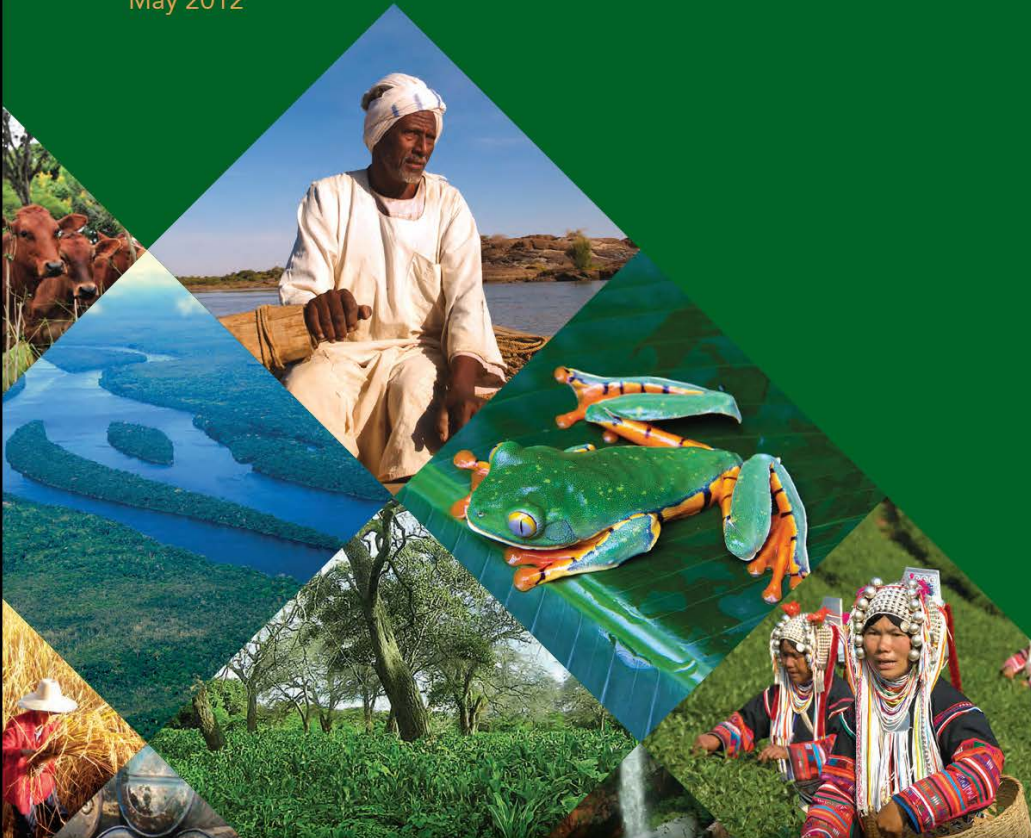


Experimental Project Designs in the Global Environment Facility

Designing projects to create evidence and catalyze
investments to secure global environmental benefits

A STAP advisory document

Paul J. Ferraro
May 2012



Scientific and Technical Advisory Panel

An independent group of scientists which advises the Global Environment Facility

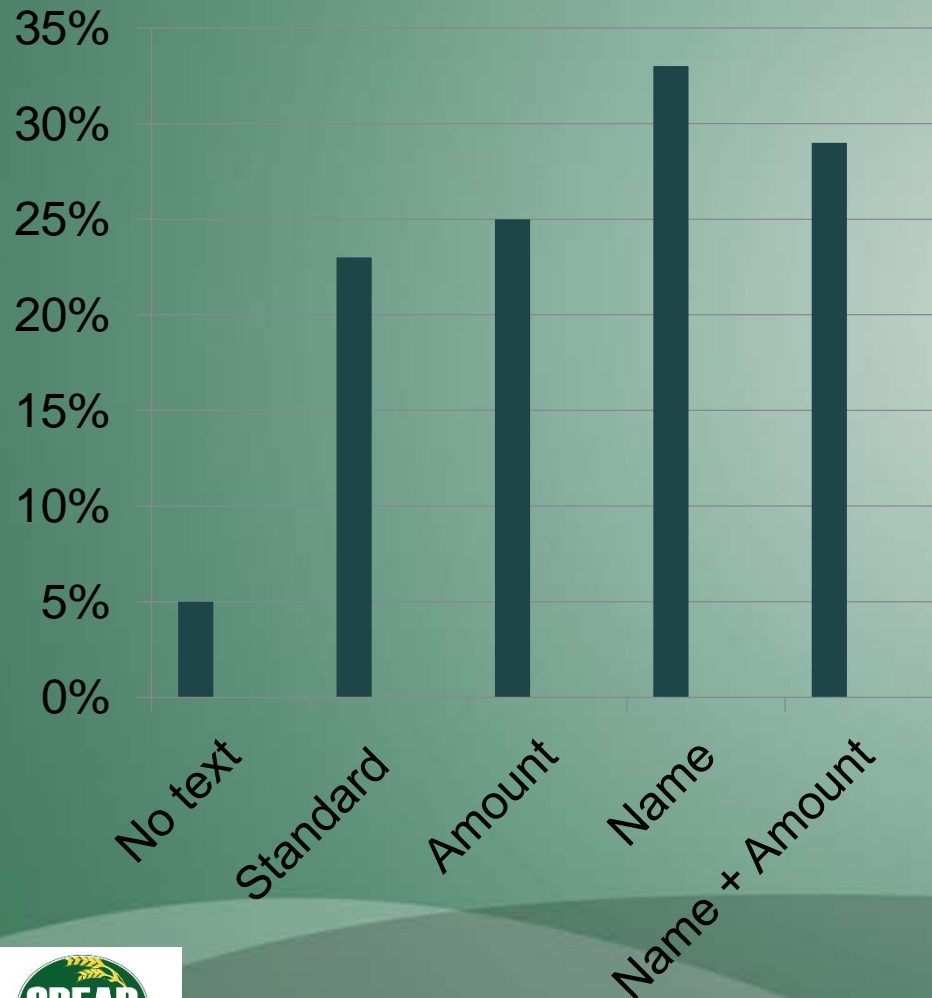


Collecting Court Fines

- Problem: people in England too often fail to pay their court fines. End up sending a bailiff or police officer to their homes to collect.
- How to collect fines in more cost-effective manner?
 - Use new approach – send text messages (low cost).
- People randomly assigned to one of five groups:
 1. No text message (control group)
 2. Standard text message
 3. Text including amount owed
 4. Text including name
 5. Text including amount AND name



Results



People were more likely to pay their late fines after receiving texts with their names.

Average value of payments increased over 30%.

If this method was used nationally, fine payments would increase by over £3 million annually.

Reduce need for police to make home visits!



Nudging People to Pay Taxes

- In UK experiment, sent letters to late taxpayers that indicated a social norm.
 - i.e., that “9 out of 10 people in Britain paid their taxes on time”.
- Resulted in a 15% increase in response rates over a three-month period
 - £30 million of extra annual revenue.



Nudging People to Attend College

- In a US experiment, providing streamlined personal assistance on the FAFSA form to low or moderate income individuals.
 - e.g., pre-populating forms using tax return data and following up with a personal call
- Resulted in a 29% greater likelihood of their attending college for two consecutive years.



Examples of Success

- Cass Sunstein's editorial in NY Times (9/19/15) cited a CBEAR-related project.
 - www.nytimes.com/2015/09/20/opinion/sunday/cass-sunstein-making-government-logical.html?_r=0

“An outreach letter to farmers, designed to promote awareness of a loan program, produced a 22 percent increase in the proportion of farmers who ultimately obtained loans.”



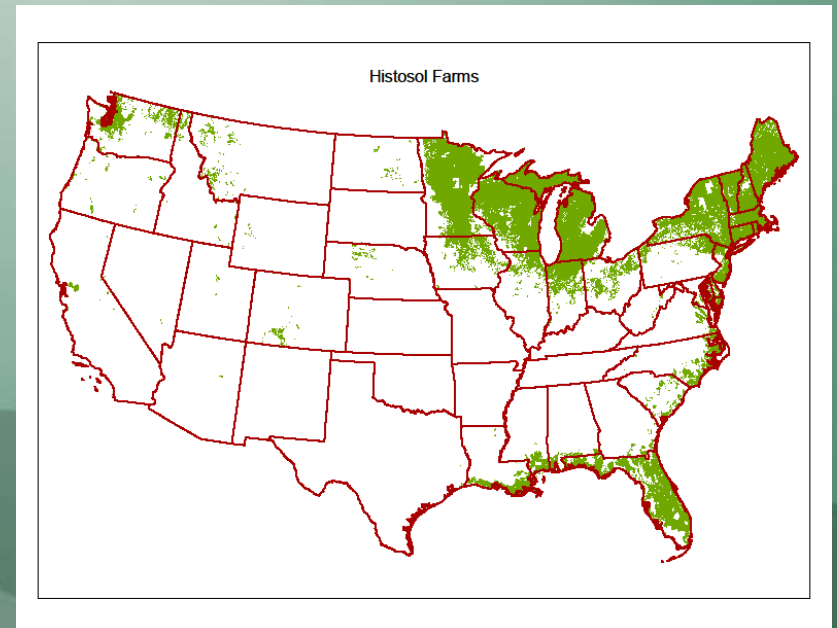
Ongoing CBEAR projects

2. Cost-share in nutrient management programs in Delaware and Texas
 - Defaults increased the cost share that farmer's were willing to pay by 9 percentage points.
 - Social comparisons increased the likelihood of submitting a bid by 40.4%.
3. Developing cost-effective framing and nudges for voluntary water use reporting in Georgia.



Ongoing CBEAR projects

4. Working with FSA and NRCS on a national effort to enroll farmers with histosol soils (high GHG emissions) in conservation programs.
5. Use of 'reverse' auctions and other cost-effective techniques to deliver more conservation for the same cost in county, state, and federal programs.



Ongoing CBEAR projects

6. Letters and social comparison to farmers encouraging CRP renewal.
 - If best message sent to all eligible farmers with expiring CRP contracts, an **additional 187,300 acres would enroll** in the CRP at a **cost of \$0.15 per additional acre**.
7. How to effectively display water quality information to improve agri-environmental outcomes in Vermont, Rhode Island, and Delaware.
8. Benefits and challenge of using food labels related to agri-environmental production processes.
9. Increasing consumer demand in response to food products that have positive environmental externalities in the Chesapeake and Delaware Bays.



How Can CBEAR Help You?

- What problems are you facing?
 - Low program participation?
 - Need to reach out to new constituents?
 - Resistance to a new program or initiative?
 - Challenges with program application process?
 - Adding an innovative evaluation piece for a RCPP proposal.
 - What technical assistance techniques work best.
 - OMB's call for "Evidence of Success" – Leonard Jordan
- We can work together to improve program design and measure the impacts.



How Much Does CBEAR Cost?

- USDA ERS already has provided financial support for the time for CBEAR to develop designs.
 - I'm currently on part-time leave from UD to serve as Senior Scholar and advisor on behavioral science for USDA.
- Projects are developed in coordination with existing programs, thus program covers the payments to landowners as part of its normal operations.
- CBEAR gives priority to promising projects that have the necessary internal support, and data available to make the project come to fruition.



Learn More and Get Involved

- Outreach
- CBEAR Behavioral Insight Briefs
- Lunch and Learn sessions
- Podcasts - “Nudges in the Right Direction” hosted by Michael McGrath.
- CBEAR workshop: October 28th at the National Press Club in Washington, DC
 - www.centerbear.org/workshop
- Call for collaborations
- Talk with me (302-831-1316)



The Center for
Behavioral & Experimental
Agri-Environmental Research

For more information go to:
www.centerbear.org

Contact Kent Messer
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About



Our Mission: Applying behavioral insights and experimental design to improve programs related to agriculture and the environment. CBEAR is a consortium of major research universities that will...

[Read more](#)

What We Do



Upcoming Workshops: June 27-28, 2015:
NAREA & CAES Joint Annual Pre-Meeting
Workshop "The Northeastern Agricultural
and Resource Economics Association
(NAREA) is hosting the 2015 Workshop..."

[Read more](#)

In the News



"Despite Resolutions, People Buy More
Food After New Year" | University of
Vermont: University Communications CBEAR
Co-PI David Just's research on quantities of
food purchased..."

[Read more](#)