



The supply of and demand for carbon cycle science in the USDA's Agricultural Research Service: Perspectives from the supply side

Nat Logar

ARS Global Change National Program: mission

“Develop and provide adaptation, mitigation, and management strategies to the individual farm, ranch, and rural community, and to natural resource decision-makers to allow them to derive optimal benefit from the positive aspects of global change and deal effectively with the detrimental effects.”

Criteria for an effective program

- Is the information targeted to users on all scales?
- Is the information relevant to dealing with global change?
 - Wasted effort
 - Mischaracterization

Global Change National Program

- Began in 1998/1999
- \$17.8 million in 2004 (<1% of USGCRP)
- 85 projects in 45 locations
 - Carbon Cycle
 - Trace Gas
 - Changes in Weather and the Water Cycle at Farm, Ranch, and Regional Scales
 - Agricultural Ecosystem Impacts

National Program Planning

- Workshops, every five-years
- Producers and industry invited
- Desired products/deliverables
- Different for Global Change?

Interaction beyond the planning workshop

- Irregular contact with Congress/ Executive Branch/ other agencies
- Informal contact with individual farmers, groups
 - On-farm data runs, user feedback
 - Farmer as the judge of success
- Not on the “radar screen” (Follett, Jawson)
- “this is not one [issue] that is of a higher priority than the ones that they’re dealing with.” (Follett)
- “Global climate change is a Washington D.C. policy maker issue. It’s not a farm issue.” (Follett)

Minnesota Corn Growers

- ARS initiates contact
- Description of ARS projects
- National Program Planning Workshops
- “clear connection to production problems”
- Kimble et al. 2003. “win-win”

Reconciling Supply and Demand

Does the decision maker need information about global change/ carbon cycle?

Does the agency target its agenda to the information needs of the decision maker?

	YES	NO
YES	Sophisticated-user	Missed opportunity
NO	Missed opportunity	Non-user

RSD: Carbon Management

Does the producer need information on carbon management strategies?

Does the agency target its carbon management agenda to the information needs of the producer?

	YES	NO
YES	Sophisticated user	Missed opportunity
NO	Missed opportunity	Non-user

GRACEnet and CQESTR

- National-level directives
 - President's Directive of 2002
 - Kyoto/State Department/Natural Resource Conservation Service
- Producers as beneficiaries
- Benefit dependent on policy change

RSD: Carbon Sequestration for Global Change

Does the producer need information on carbon management strategies for global change reasons?

Does the agency target its global change agenda to the information needs of the producer?

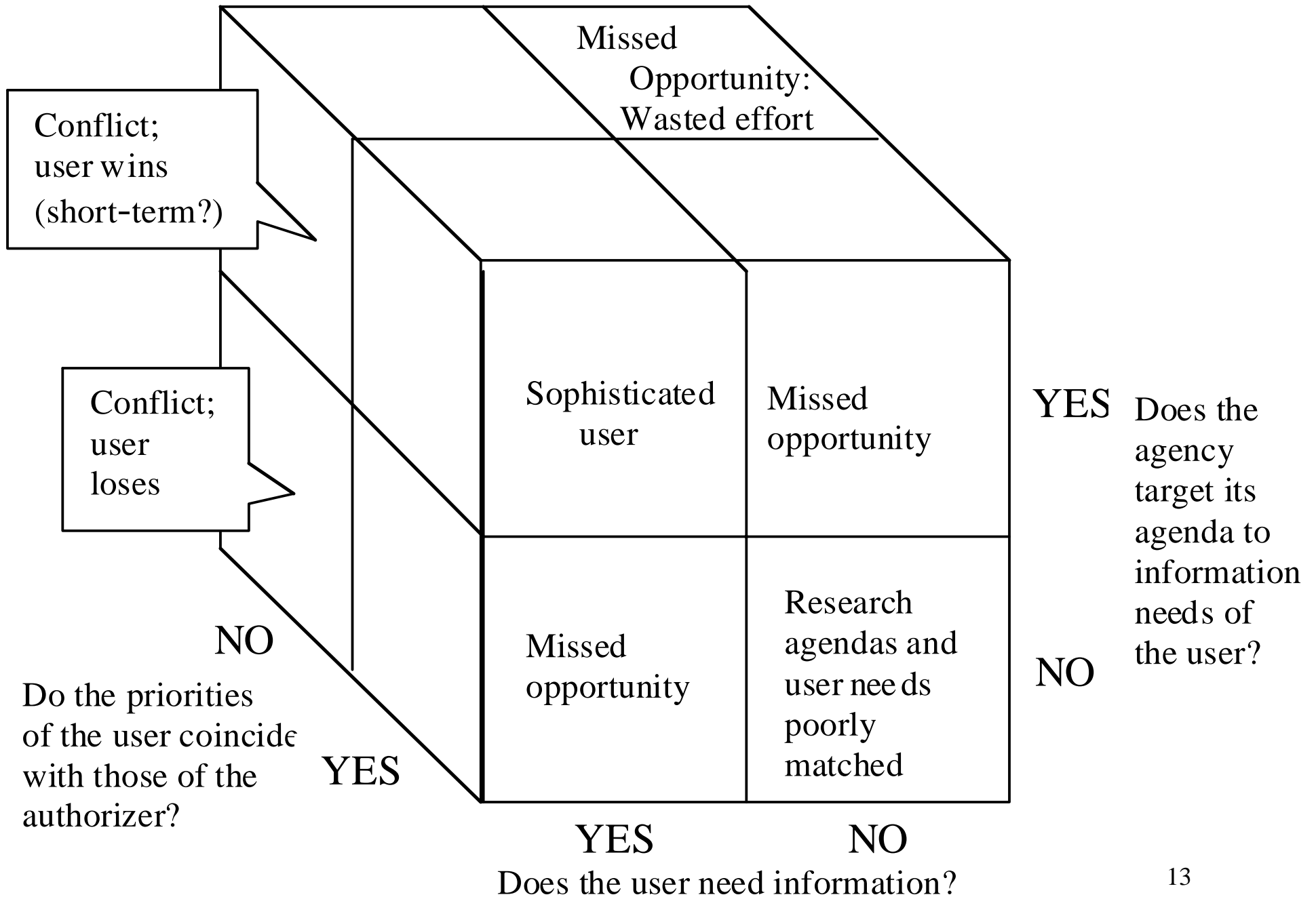
	Policy change on payment for carbon (YES)	No policy change (NO)
YES	Sophisticated user	Missed opportunity
NO	Missed opportunity	Research agenda s/ user needs poorly matched

RSD: Predictive Global Change Research

Does the producer need information on global change impacts/effects?

Does the agency target its global change agenda to the information needs of the producer?

	YES	NO
YES	Sophisticated user	Missed opportunity
NO	Missed opportunity	Non-user



Questions

- Adaptation is a stated goal. How well is it integrated?
- The only formal mechanism for stakeholder input is within the national program. Should/could there be a mechanism for evaluation of user needs on a higher level? For example, what National Programs are most important to different groups of users?
- How do you weigh potential demand versus actual demand? Should the ARS be concentrating effort where they know there is demand, instead of where there might be a demand with policy change?
- In cases of future demand, how do you weigh the opinions of experts versus those of current stakeholders?



Kimble, J.M., L.R. Everett., R. F. Follett., and R. Lal., Carbon Sequestration and the integration of Science, Farming, and Policy. In *Agricultural Practices and Policies for Carbon Sequestration*. Kimble, J.M., R. Lal, and R. Follett., eds. Lewis Publishers; Boca Raton.

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U.S. Global Change Research Program (GCRP), 1990-2005. *Our Changing Planet: the FY 2002 Research Plan*. USGCRP, Committee on Earth Sciences (1990-1992), Committee on Earth and Environmental Sciences (1993-2005).

The White House, 2002. Global Climate Change Policy Book. February.

Interviews with Stephan Albrecht, John Baker, James Bunce, Ronald Follett, Alan Franzluebbbers, Jerry Hatfield, Michael Jawson, Vangimalla Reddy

<http://ars.usda.gov>

- “And they [the invited stakeholders] sat in a little workshop before we really got down to nuts and bolts, and they told us what was helping them, what their needs were. They were trying to be forward looking, and this included farmers. They left us with their list of needs and then we sat down and we tried to interpret those into products that we might deliver, anything from computer models to equipment, such as sensors to information and so forth. And then we work-shopped that and we’d list the product and we’d list what it would take to deliver that product. . . and then we listed the ARS locations that could work together to work towards delivering that product.”

Producer Priorities

- The bottom line
- Global change
 - “not high on the radar screen” (Follett)
 - “not high on the list of priorities” (Jawson)

