RAPID IMPACT EVALUATION
GEF workshop and webinar

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November 24 2015

What is RIE?

too expensive!

Under $25K

too intrusive

Normally no new data required

too hard

Uses surveys, facilitation, simple analysis

takes too long

Usually < 2 months

Very high standards

Valid and reliable results

OUTLINE

1. What is RIE for?
2. How is RIE used?
3. What does it take?
4. What can you get?
5. How does it work?
6. New methods developed for RIE
7. Summary

RIE Targets the Impact Gap

- Settings where impact evaluation is rarely applied
  - Ex ante settings as part of developmental or formative evaluations or for program design
  - Projects and smaller programs
  - Complex multi-system settings
- But they still need to know about impacts

Basic Premise of RIE

- Precision and rigor should match use
  - *Far better an approximate answer to the right question, which is often vague, than the exact answer to the wrong question, which can always be made precise* (Tukey, 1962)
- Evaluation needs methods that span the entire rigor-spectrum and taken together are useful to all programs
- Knowing impacts is of little utility if key stakeholders do not trust the information or if their key questions are not addressed

How is RIE Used?

- Compliments other intervention undertakings such as design, reflection and learning, and accountability
- Used alone or mixed with other methods
- For just impacts or the whole evaluation
- Ex post – project and program cycle (summative)
- Ex ante
  - Developmental
  - Formative

Applying RIE

- Programs, projects, some policies and strategies
- Natural resource management
- Environment and pollution
- Climate
- Public health
- Applied research programs
- Sustainable development

RIE needs

- Experienced evaluator
- Subject matter experts
- Participation of program stakeholders
- Surveys, workshop, interviews
- Descriptive statistical capacity

RIE does not need to

- Change the intervention (RCT)
- Have extensive data on participation or non-participants (quasi)
- Access participants
- Take field measurements or assessments in the natural systrem

What Can You Get?

- Assessment of the incremental contribution of the direct effects to impacts.
- Assessment of the change in direct effects and impact attributable to the intervention.
- Good prospects that the assessments will be valid and reliable.
- Expert advice on possible avenues for improvement.
- Evaluation processes and information gathering vehicles useful to address other questions and criteria.
- Good prospects that decision makers and key stakeholders will regard the evaluation as salient, legitimate and credible.

Some Illustrative Results from RIE Evaluations

- Six evaluations of collaborative decision making processes of complex natural resource management decisions in Oregon U.S.A.
  - Approximately 25% improvement in environmental results due to improved decisions and supplementary benefits added during negotiations
  - Modest improvements in cost effectiveness of the decision process, little change in costs of implementing but improved cost effectiveness due to improved environmental effects
  - Repeated use of collaborative decision processes led to significant cumulative process cost savings
  - In some cases significant gains in social capital including willingness to reconvene to revise decision when conditions altered

Some Illustrative Results from RIE Evaluations

- Evaluation of rules for off-road vehicle use in U.S. National Seashores (still ongoing)
  - Little gain in environmental effects (endangered species and habitat) since NPS already protecting
  - Significant decision process gains in efficiency over three renewals (saved 2.5 PY annually), reduced tension and ended violent opposition, improved compliance with rules
- Evaluation of use of collaborative decisions in U.S. EPA enforcement cases
  - Quality of remediation improved (10-30%)
  - Decision process costs average 20-50% lower but sometimes higher, time required for decision about the same

How Does RIE Make Evaluation Assessments?

RIE is designed as a use-inspired approach to promote prospects that the evaluation will be used for program improvement and to assess program impact.

- RIE assesses the change by comparing what happened under the program with what would likely have happened if a good alternative had been used.
- RIE triangulates assessments of effects using three distinct groups of experts including one group whose expertise is with the program.

RIE and Other Approaches to Evaluate Impacts

Approach	Cost	Intrusion	Duration	Data requirements (new and existing
Randomised designs				
Comparison groups				
Time series				
Case studies				
Expert groups				

Key	High/Long	Moderate	Modest	Low/Short

RIE and Other Approaches to Evaluate Impacts

Approach	Cost	Intrusion	Duration	Data requirements (new and existing
Randomised designs	High	High	Long	High
Comparison groups	Moderate	Moderate	Moderate	High
Time series	Modest	Low	High	Moderate
Case studies	Moderate	Modest	Modest	Modest
Expert groups	Low	Low	Short	Low

Key	High/Long	Moderate	Modest	Low/Short

RIE Triangulates Expert Assessments

Know intervention well

Know science of intervention well

- *Program stakeholders = interests that can influence success and interests that are affected*

New Methods Developed for RIE

- Scenario-based counterfactual
- Metrics to assess outcomes that have yet to occur or that are complex
- Interest-based computation
- Use-inspired approach
- All methods can be used and useful for other evaluation approaches.

Scenario-Based Counterfactual

- Scenario-Based Counterfactuals are alternatives to the program that are efficacious, plausible, legal, feasible and which the key stakeholders assess as very likely
  - When designing an intervention several options are usually considered
  - These often include some that have been applied elsewhere
- Stakeholders in the evaluation need to agree that the counterfactual is reasonable and plausible, even if not their top choice.

RIE Uses Comparison to an Alternative

Method	Compare to			
	Same population -only some receive the program	Similar population - do not get the program	Same population over time starting before the program	Same population with different program
Randomised designs	√			
Comparison groups		√		
Time series			√	
Case studies		√	√	
Expert Judgment			√	
RIE				√

First five approaches said by GAO to be suitable for impact evaluation

Developing and Using the Scenario-Based Counterfactual

Developing Scenario-Based Counterfactuals

- Developed early in the evaluation working with program stakeholder group
  - All key stakeholders have **agreed** that it is a plausible, legal and feasible option
  - Likely an alternative that was considered during program design or applied elsewhere
  - Counterfactual needs to be described carefully attending to issues such as scale and location

Using Scenario-Based Counterfactuals

- The three expert groups are each asked to "if instead of [*the intervention*] consider if the [*alternative intervention*] was applied" and assess the change in the outcomes under the alternative applying the same metrics used to assess these outcomes under the program.

Example of a SBC

U.S. Combined Sewer Overflow Policy (CSO)

Please assume that instead of the CSO Control Policy as agreed by the parties, EPA issued a policy requiring NPDES permittees with CSO discharges to undertake a set of best management practices similar to the nine minimum controls required in the CSO Control Policy, and to meet a performance-based standard for CSOs that would limit the number of overflows per year for combined sewer systems.

Compliance schedules in NPDES permits would be used where necessary to provide time for permittees to meet the performance standard. This alternative policy would have taken effect in 1999.

Example of a Natural Counterfactual Used as a Scenario-Based Counterfactual

Photo 1: Indian Ford Meadow (Deschutes Basin Land Trust)

Example of a Scenario-Based Counterfactual for a Sustainable Development Project

Sample Question Applying Simplified Assessment and Scenario-Based Counterfactuals

Actual intervention

For the first ten years (1998-2008) after the program was started what do you think the size and likelihood of the following outcomes have been in (location)?

- Each outcome listed and rated (-4 to +4 for size; 0 to +4 for probability where +4 is labeled "already occurred or certain"
- Question repeated for longer time period

Under the scenario-based counterfactual

What do you think the environmental effects would have been if EPA had issued a formal decision a remedy and a court had decided EPA's cost recovery claim against the PRPs rather than the parties reaching agreement through mediation? What then would have been the size of the effect and the probability that it would occur for the first ten years (1998-2008) after the alternative decision was finalized?

- Same question structure as for actual program or intervention

How RIE Simplifies Assessments?

- Many of the uses of RIE will involve assessing the future state of outcomes that have not yet fully emerged.
  - Especially true for questions such as sustainability and for outcomes in the natural system
- The main sources of variation for each outcome are:
  - Probability of it occurring (100% if already occurred)
  - Magnitude of the change

Calculating

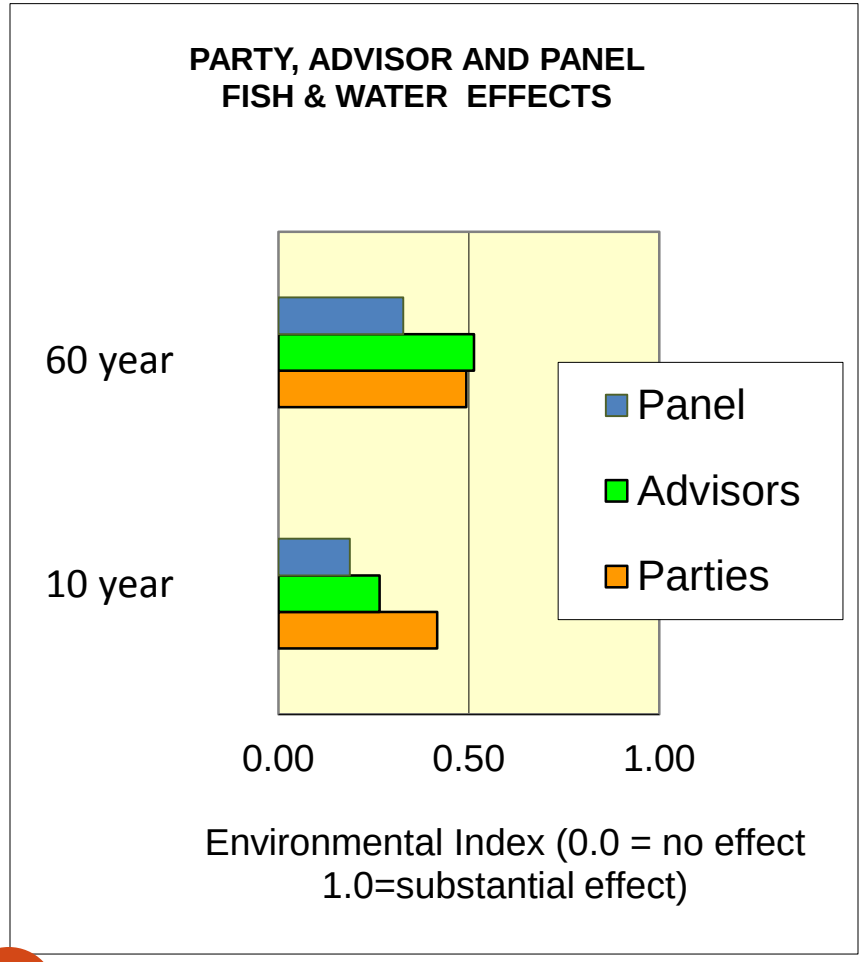
Respondent	Stakeholder group (by type)	*Program* Probability of outcome occurring (scale 0-4)	*Program* Magnitude of change in outcome (scale -4 to +4)	*Counterfactual* Probability of outcome occurring (scale 0-4)	*Counterfactual* Magnitude of change in outcome (scale -4 to +4)	*Program* Likely change in outcome	*Counterfactual* Likely change in outcome	Net Incremental change in outcome expressed (%)
A	Beneficiary	2	0	2	-1			
B	Beneficiary	3	1	1	2			
C	Management	4	2	2	-2			
D	Management	2	2	3	0			
E	Management	4	3	2	3			
F	Management	3	1	3	3			
	Beneficiary	2.5 (A)	0.5 (B)	1.5	0.5	0.078 (C)	0.047 (D)	3%
	Management	3.25	2	2.5	1	0.406	0.156	25%
	Program stakeholder group					0.242	0.102	14%

Step 3: Multiply the *probability* (A) by the *magnitude* (B) **and** divide by 16 to give you the program likely change in outcome (C).
Step 4: Repeat Step 3 for the counterfactual (D)

Step 2: Calculate the 'mean' response per stakeholder sub-group

Step 5: Calculate the Net **Incremental Change** which is the difference between C and D multiplied by 100.

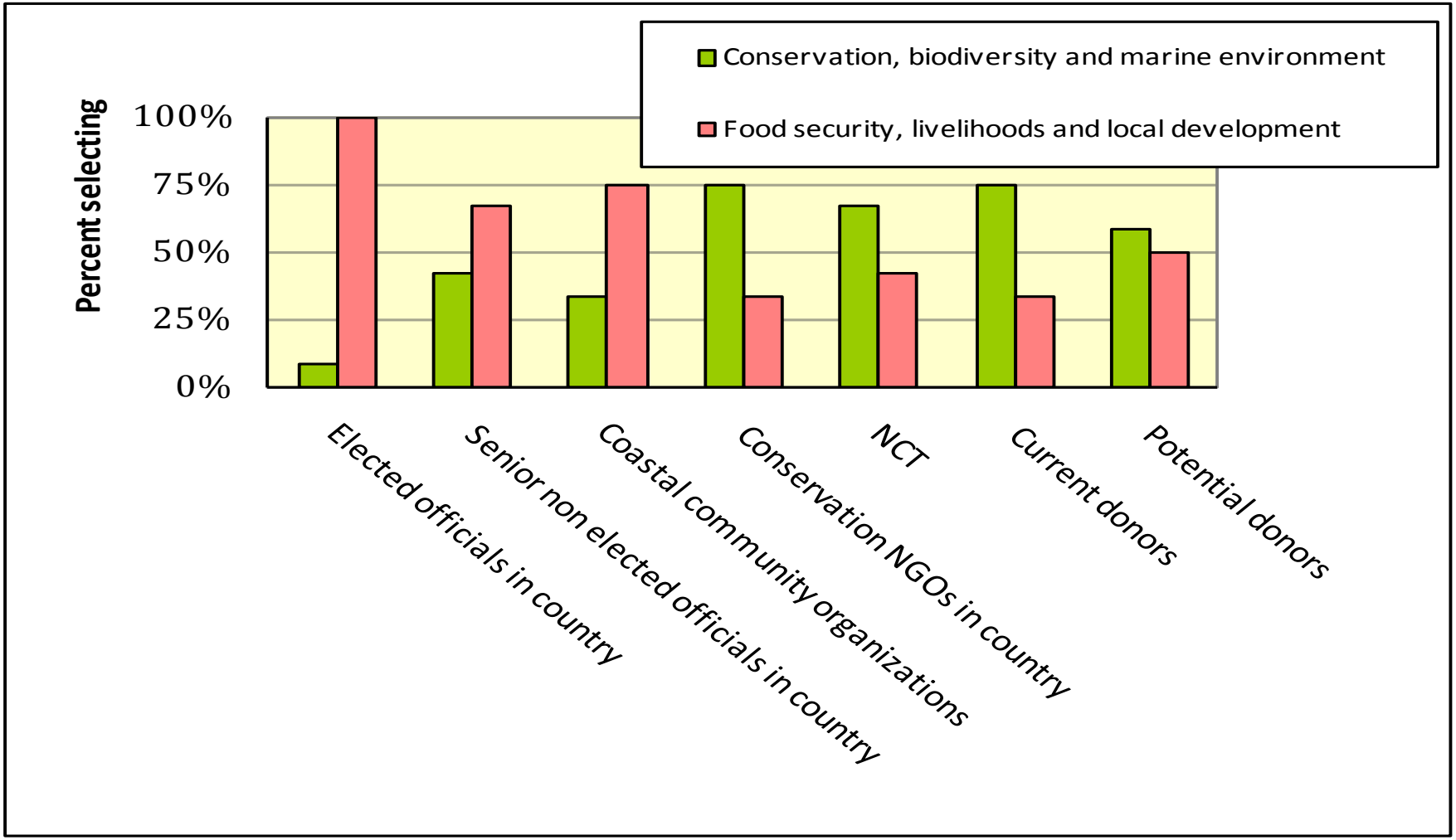
What Do We End Up With?



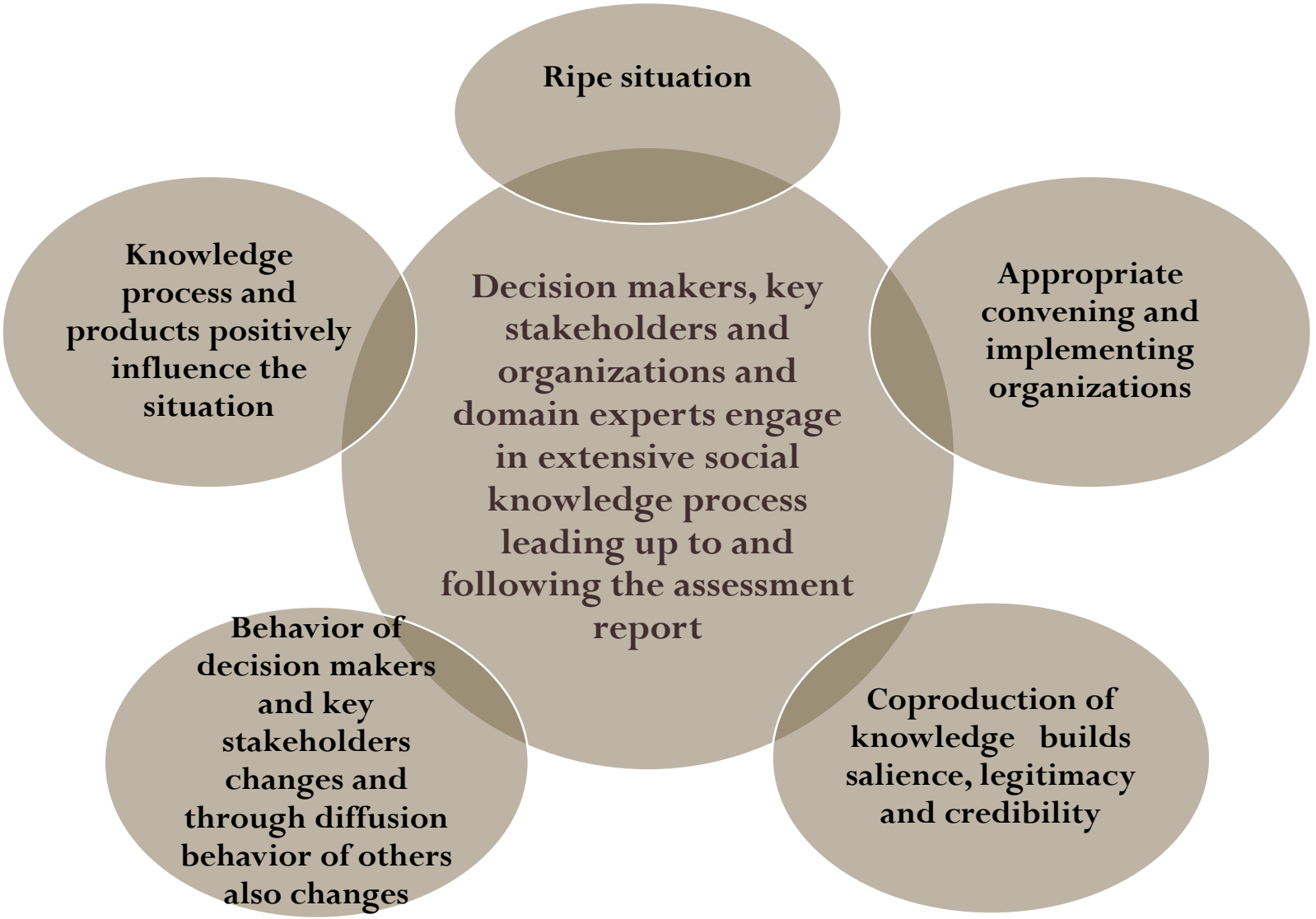
- Verification
  - Cronbach's Alpha 0.973 to 0.986 (>0.8 considered reliable)
  - Correlation coefficients significant at 0.01 level
  - Judgments consistent with external science measures (external validity)
- In post evaluation feedback all parties found evaluation salient, legitimate and credible
- RIE generates an estimate of the range of net incremental change in effects of program.

Why Interest-Based Computations?

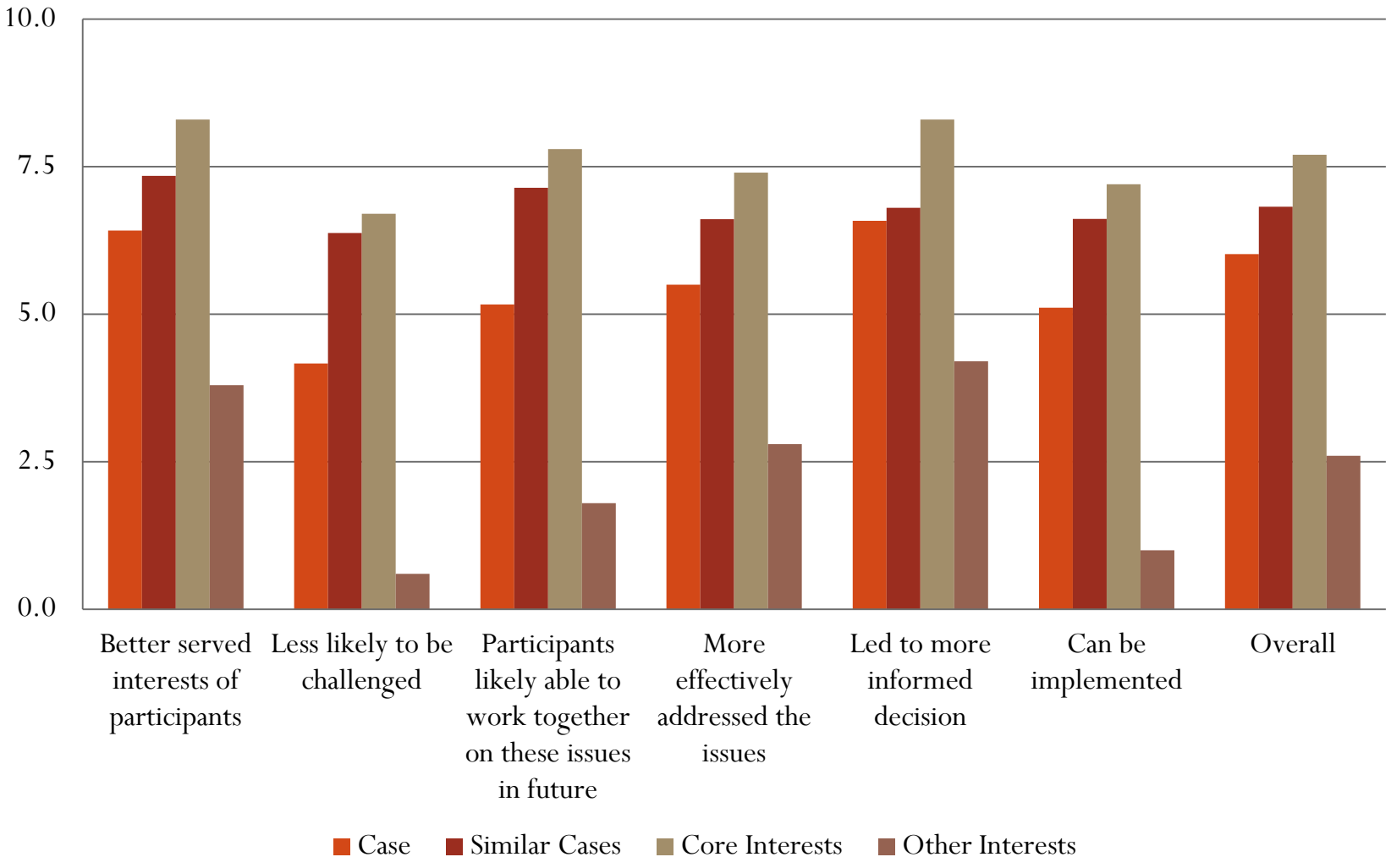
Different worldviews and priorities



RIE is a Use-Inspired Approach



Why Happens when Interests are Excluded?



Summary - RIE Assesses Costs and Results in Human and Natural Systems

RIE can be used:

- Impact, outcome, formative, developmental or ex-ante evaluations and for program design
- Projects and small programs
- Complex multi-system settings
- Programs where performance data is limited or not available

Enabling Factors:

- Willingness of program and key stakeholders to engage with the evaluation process
- Good knowledge base of the program

Risks

- RIE is not yet a fully established approach.

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Summary of Main Features

- RIE compliments existing evaluation approaches providing an evaluation approach that:
  - Produces good quality assessments of CHAN impacts;
  - Provides other important evaluation elements such as effectiveness;
  - Can be used in settings where existing approaches are challenging;
  - Uses processes to promote use; and
  - Can be used at all program stages from design through completion.

Feedback please!

Thoughts?

Ideas for applications?

Opinions?

Questions?

Where Has RIE Been Used?

- 15 evaluations in natural resource management settings complete or underway
  - Five Oregon natural resource management cases addressing water and salmonid issues
  - Five US EPA enforcement cases
  - Two US Interior National Park Service rule making cases addressing use of off road vehicles in National Seashores
  - Three federal programs under the Canadian national evaluation policy pilot initiated by Treasury Board of Canada
- In design stage
  - Evaluating use of collaborative decision processes in the US EPA Superfund program involving sample of approximately 14 collaborative cases and a like number of matched Superfund cases using usual decision processes
  - Evaluating contribution of using local resource management (coastal-marine and terrestrial) in approximately 6 Pacific island nations (Fiji underway)
- Types of programs where RIE is being considered
  - Evaluation of programs of UN Environmental Program (UNEP)

Acknowledgements

Funders

- William and Flora Hewlett Foundation
- US EPA
- US Department of the Interior
- Anglo Africa Center for Learning on Evaluation and Results (World Bank)

Collaborators

- Bonnie Colby (Agricultural Economics, U of Arizona)
- Will Hall (US EPA)
- Mike Niemeyer (Oregon Department of Justice)