Impact Assessment and Research Evaluation at CIFOR/FTA

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CIFOR 25th ANNIVERSARY
FORESTS MATTER

CGIAR RESEARCH PROGRAM ON Forests, Trees and Agroforestry

CIFOR/FTA

- Impact Assessment as a Research Approach, to learn whether an intervention works (e.g. assessing policy, technology, institutional innovations)
- Research Impact Assessment, to assess whether research has been effective as a tool for development (accountability)
- Methods that work for focused interventions on one or few variables do not work well for research or other interventions in complex systems
- CIFOR/FTA uses theory-based evaluation for Research Evaluation

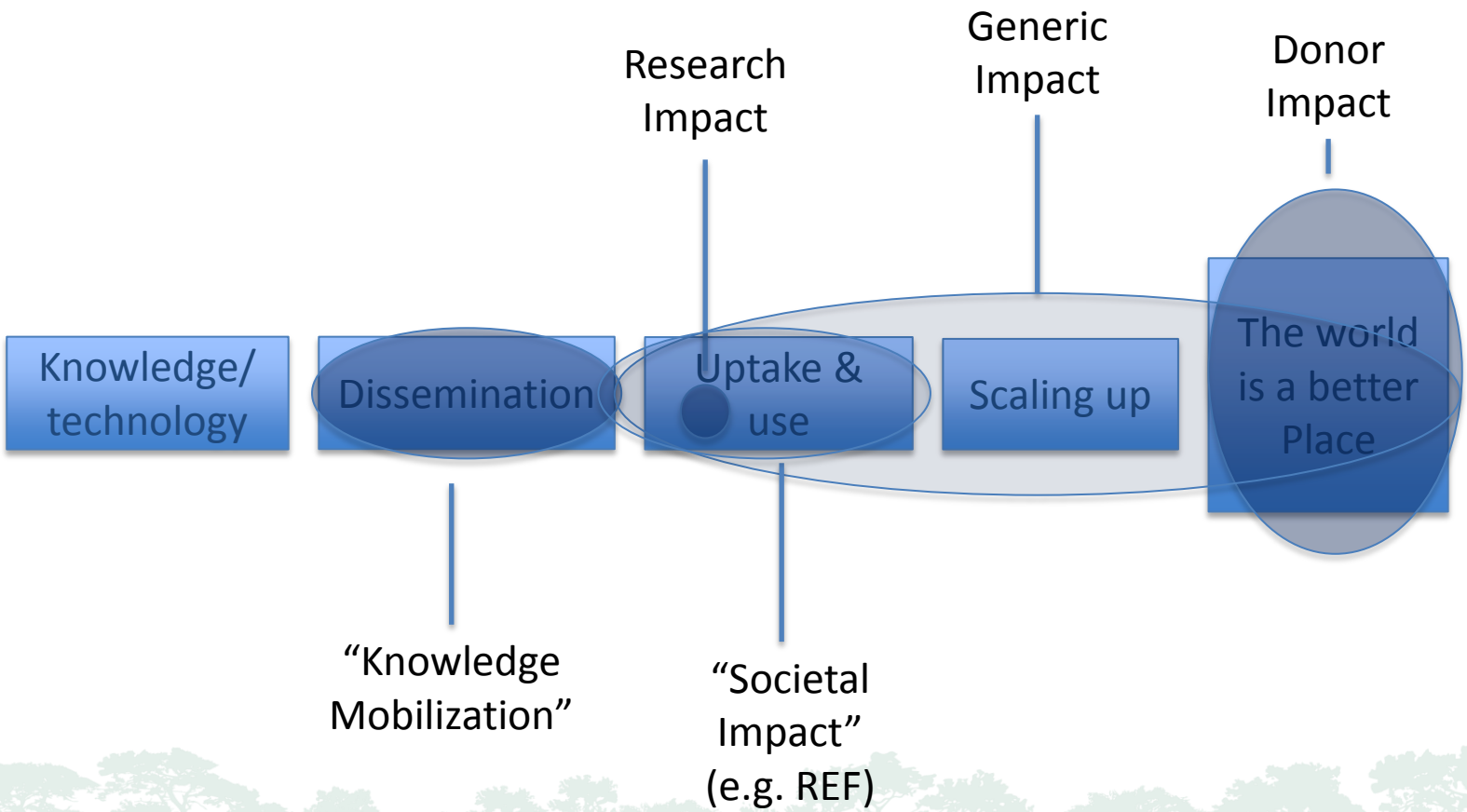
Slide 2 Comments

- Impact assessment is an important research approach at CIFOR/FTA. Such research aims to attribute and quantify the impact of social, economic or environmental interventions. The primary tools used are systematic review, quantitative experimental and quasi-experimental impact assessment, supplemented by qualitative methods.

- There is also an expectation that we should do impact assessment of our own research to learn and also for accountability purposes. It is important to realize that research as an intervention is, at a minimum, one step back from any policy or practice change, and realistically many steps removed. This adds tremendous complexity.

- Experimental and quasi-experimental impact assessment is ideally suited for interventions that operate on one or few variables. Magic bullet medicines like antibiotics or insulin, or discrete technologies like mosquito bed nets or herbicides can be tested and results compared relatively easily before and after intervention, with and without intervention, and in multiple replications. Within the CGIAR there has been an historical emphasis on science-based technological development which lends itself to experimental impact assessment. When technology can be packaged as a seed of an improved crop variety, it is relatively straightforward to assess and quantify impact.
- There is also still a popular conception of an evidence hierarchy which suggests that systematic review is more reliable than RCTs which are more reliable than quasi-experimental methods and those more reliable than cohort studies, case-control studies and so on. This notion has been strongly contested on the basis that any study, no matter what the method, can be done poorly or well; just because a study uses an RCT design does not guarantee quality or reliability. More importantly, not all methods are appropriate for all purposes.

DEFAULT RESEARCH TOC



Slide 4 Comments

- There is a prevailing simple but common theory about how research contributes to change. Research produces knowledge or technology which is then disseminated, taken up and used and hopefully scaled up so that benefits are realized widely. Typical conceptions of “research impact” refer to a very small component of the uptake and use stage. That is, the uptake and use by other researchers measured as citations, journal impact factors and other bibliometric measures. Given the high emphasis that such metrics are given in academic and even development research, researchers and especially communications units have focused on “knowledge mobilization” as widespread, high-volume dissemination, delivering research products at the end of the research pipeline. Donors, whether taxpayers, private foundations, or others, tend to think of impact in terms of concrete realized benefits in improved human welfare or environmental condition. When they ask for demonstrations of impact, they are often asking for evidence that the world is a better place (as a result of a 3 year project they funded). In academia, there is increased emphasis on “social impact”. For example, the Research Excellence Framework (REF) ranking of UK universities gives 20% weight to social impact, which refers to any uptake and use of research beyond academia. And there are other more generic concepts of impact, which really relate to any kind of change caused by an intervention. There is a great deal of ambiguity in the concept of impact.

SUPPORTED BY CGIAR
QoR4D FRAMEWORK

- Relevance
- Scientific Credibility
- Legitimacy
- Effectiveness

ISPC. (2017). Quality of Research for Development in the CGIAR Context, Brief N. 62. Rome: Independent Science and Partnership Council.

Belcher, B.M., Rasmussen, K.E., Kemshaw, M.R. & Zornes, D.A. (2016). Defining and assessing research quality in a transdisciplinary context. Res. Eval. 25, 1-17.

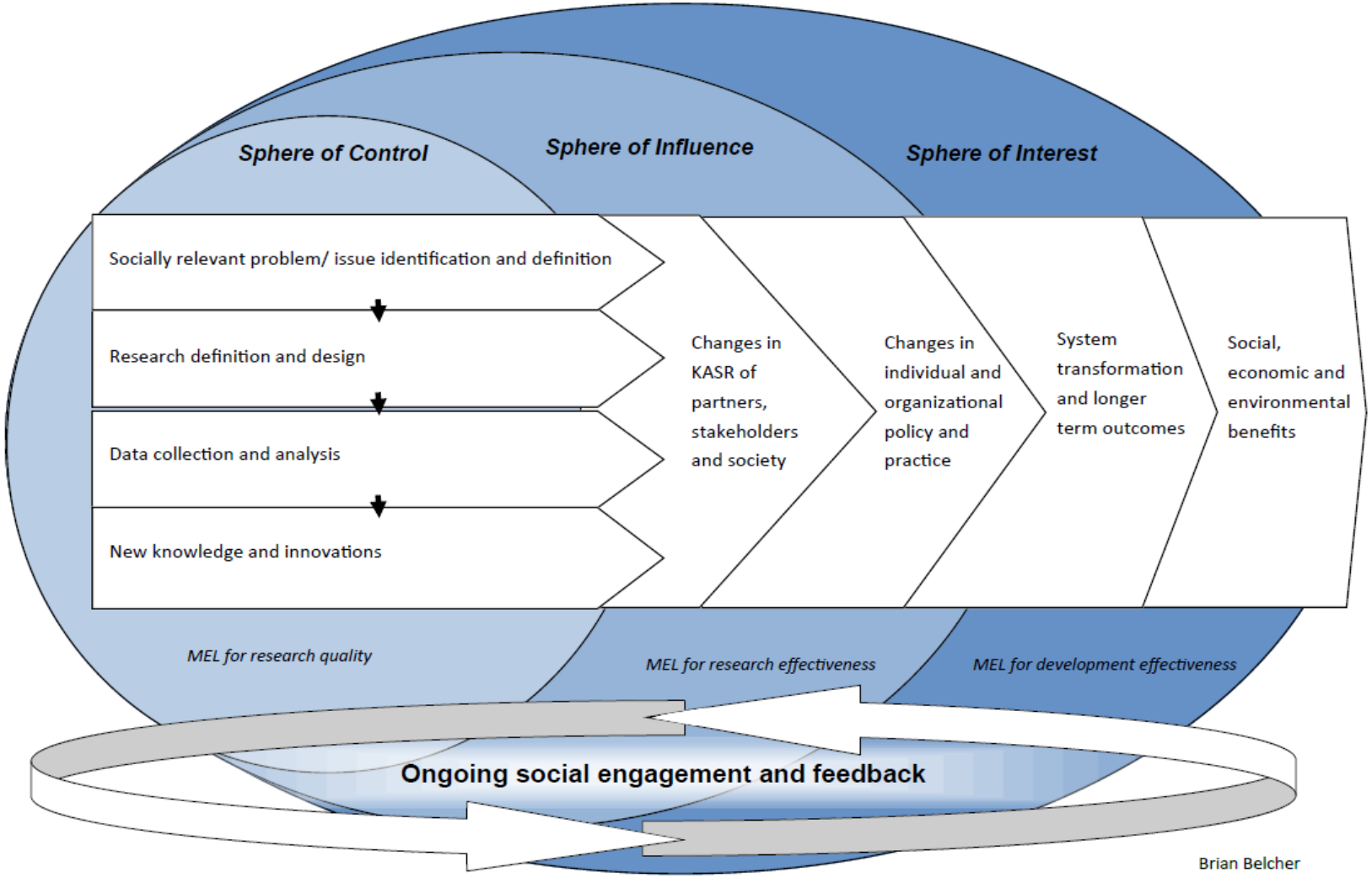
Slide 6 Comments

- A large and increasing amount of research performed at CIFOR and in the CGIAR more generally, uses interdisciplinary and transdisciplinary approaches, with multiple interventions on multiple variables within complex systems. This kind of approach has been promoted and supported by the CGIAR reform process which, among other things, sought to encourage broader and deeper partnerships. The aim is to go beyond purely science-based partnerships to engage with government, civil society, stakeholders and other actors to help ensure that research questions are relevant to development needs, that the values and concerns of the intended users are represented in the research process, and that pathways to impact are actively developed and supported. The CGIAR Quality of Research for Development (QoR4D) framework of supports this approach by shifting from a traditional academic-style of science quality evaluation to a broader concept of research quality that is assessed on its potential and its actual production of knowledge that is perceived by users to be relevant, credible and legitimate and that is effective in solving priority problems.

TDR ToC

Research	Engagement/K. Translation at Boundary	Higher Level Results	Impacts (=SLO)
Partnerships & Networking	Relationships Building	Improved knowledge creation	Realized Benefits: The world is a better Place
Problem ID & definition	Platforms/forums for negotiation	Improved shared understanding of issues & options	
Methodology	Research agenda influence	Improved policy environment	
Capacity Development	Methods, data contributions	Improved technology employed	
Data & analysis	Capacity to do & to use research increased	Wide-spread improved practice	
Knowledge & innovation (co) generated	Public Discourse informed		
	Policy processes informed		
	Practice enhanced		
	Expertise/reputation enhanced		

Pathways to Research Outcomes and Impacts



KASR = Knowledge, attitudes, skills and/or relationships

MEL = Monitoring, evaluation and learning

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Slide 8&9 Comments

- In this kind of research, the research process itself generates value through partnerships and networking, through identifying and defining the problem, through the development of methodology, enhancing capacity, and otherwise influencing the research agenda and other research. Each of these can contribute to change independently or in addition to the data, analysis and primary knowledge generation process. Much research involves stakeholder engagement in one way or another and “co-generation” of knowledge is intentional. A quick look at an illustration of this much broader theory of change makes it clear that an experimental or quasi-experimental approach to impact assessment will not work. It is not possible to control for all the variables; indeed research is deliberately operating on multiple variables. It is not possible to replicate in comparable contexts because such research does not produce a single intervention package and it actually sets out to change the context. It not possible to establish a reasonable counterfactual, which is the very basis of classical impact assessment.

THEORY-BASED RESEARCH EVALUATION

- Document the project theory of change
- Identify priority impact pathways for analysis
- Assemble existing evidence for and against the project's contribution to each key step
- Collect additional data necessary to test each step
- Investigate "mechanisms" to explain how outcomes were realized
- Articulate and test alternative hypotheses

A contribution claim can be made if the ToC is logical, the results are supported by evidence and other potential influencing factors have been assessed and either recognized as contributors or rejected as insignificant.

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- We have therefore adopted and developed a theory-based evaluation approach for this kind of research. We use a detailed theory of change (ToC) at the project scale as the analytical framework. A ToC is a model of a change process that provides description and explanation of both how and why an activity or a set of activities (an intervention) is expected to cause or contribute to a result or a set of results (outputs, outcomes and impacts). A ToC details the primary actors, steps and pathways in the change process and specifies the theoretical reasons for the changes. A well specified ToC is essentially a set of hypotheses about each step in the change process that can be tested empirically. Using the ToC, we identify data requirements and data sources (typically document review and interviews with key informants) to assess actual achievements against expected outcomes at each stage to ask: Did the outcomes happen? If so, how? If not, why? In lieu of a reliable counterfactual, it is important to consider and test competing hypotheses for how a change may have happened.

- Essentially, we need to ask whether the outcome could have happened without the research and related interventions. If not, then it is reasonable to conclude that the research made a necessary contribution. In the more common situation, where there are other possible explanations, it may only be possible to show that the contribution was plausible. Document review and interviews do often yield good evidence to support or reject contributions to individual steps in the ToC.

- These kinds of challenges inherent in engaged, inter- and transdisciplinary research are not at all unique to the research context. Any effort to intervene in complex socio-ecological systems (which is to say, all agricultural and natural resources management research) must deal with these considerations in one way or another. A theory-based evaluation approaches using qualitative information can provide very valuable supplements or alternatives to other impact assessment approaches.

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