



RESEARCH
PROGRAM ON
Water, Land and
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PROGRAM ON
Policies,
Institutions,
and Markets



Standing
Panel on
Impact
Assessment

Measuring the impact of integrated systems research

Panel Speaker: Vincent Gitz, Natalia Estrada Estrada Carmona, Monica Biradavolu,
Karl Hughes

Photo by Thong Vo on Unsplash

FTA's experience in measuring impacts of research on integrated systems

VINCENT GITZ, DIRECTOR, CGIAR
RESEARCH PROGRAM ON FORESTS,
TREES AND AGROFORESTRY (FTA)



Why is it important for FTA?

By its essence, FTA is a CRP working on socio-economic and environmental **systems** (linking value chains, governance, environment, etc..), with interventions of multiple **nature** (technical solutions, policies, governance, ...), that influence **multiple dimensions** (economic, environment, social), mobilizing **multiple scientific disciplines and methods** (including transdisciplinary), with **multiple outcomes** (e.g. not only crop yield).

As every other research for development program, it is important – for various reasons – to have measures of performance and success. It's particularly challenging for such programs like ours.

Important for whom?

Important for the leadership and management of the program, to position research and as part of the priority setting “loop” (including learning on past impacts), to ensure quality of research.

Important for researchers, to better assess the pathways towards impact including understanding what are the key hypothesis and levers towards impact.

Important for stakeholders, to see potential impact of their activities, to understand on what action success builds upon, therefore , where they fit in impact pathways, what they depend upon and what they can induce further, to motivate their action/behavior, and the one of others.

Important for donors (accountability, track record, fundraising).

Approach (1): The requirements

To achieve the objectives of the previous slide, you must ensure “quality of research”: relevant, credible, legitimate, effective.

The issue of measuring impact (of research) is in itself a research question, that needs to follow the same “quality of research” principles.

The method and its outputs needs to be understandable and useful for all the four previous categories of public (leadership, scientists, stakeholders, donors). MELIA scientists may be at the center of it, but it is not only MELIA-oriented.

The “How” needs to be grounded on a dialogue between MELIA and research teams, making connections all along the research cycles (not disconnected or external from it).

Challenges: different cultures; approaches and methods (for measuring impacts) is a research field in itself;

Approach (2): Collective thinking

Start of a collective thinking (2018) associating, ISC, Management team, lead scientists and MELIA.

Workshops: Initial workshop (2019) to frame the issue, take stock on existing work, discuss approaches and methods, and decide on specific workplan; follow-up workshops (2020, 2021 forthcoming). Role of ISC and leadership to challenge MELIA on its own field.

Identification a set of 5 global cross-cutting challenges, addressed by the program, linked to the SLOs and SDGs.

Identification of indicators to measure global impact on these challenges, that reflect the focus of FTA (land and people), as coherent as possible with the SLOs.

Launch of 5 integrated studies, one on each challenge : deforestation, unsustainable land management, land degradation, food insecurity, poverty.

Objectives is to (1) assess impact pathways and (2) assess global impact of the program.

Approach (3): Constraints/challenges

- Resources : impact assessment can be as costly as research itself
- Need to construct compatible databases across projects
- Challenges to involve all scientists
- Scarcity on primary data on impact (only a sample of projects have full blown impact assessments)
- Methods: at the same time, we needed to work on the methods that enable extrapolation, that are credible and accepted, based on available data...
- Time: need to develop methods and roll them out in a tight time frame
- Strategic choices: decision on key challenges to investigate, given fast evolving global framings on our issues (CGIAR framework, Phase 2 FTA proposal, Forest goals, SDGs...), and given wide perimeter of work of FTA. (reason why climate and biodiversity were not picked amongst the first 5 challenges, but are candidate for next investigation – obvious links to other challenges)

Results

1 – Process is a first key result in itself

- Created organized connections MELIA-scientists, productive confrontation on objectives and methods of MELIA and how they should be put to use for the program.
- Implication of wide range of scientists all across the program
- Reflection on approaches, including the design of a specific methodology for the integrative studies (Brian and Karl can talk about it), co-constructed given the constraints and interests / motivations of the 2 parties.

2 - Impacts estimation

- We managed to fine tune impact pathways, estimate global impacts (including taking into account hypothesis and uncertainties).
- We have numbers that demonstrate that important outcomes along the impact pathway have been realized the 5 domains (quantitative), and a reasonable basis to estimate the impact that could be realized in time.
- We can show that the impact of the whole is bigger than the sum of the individual impacts (for instance because of actions on enabling conditions etc.).

-3 – Impact on research quality

- Diffusion of Melia culture
- Better understanding (by scientists) of impact pathways and their relevance for the design, conduct and assessment of research.
- Each scientist better understands the positioning of its research in the ToC, therefore able to perceive its role into the bigger picture (also motivational).

Conclusion

Coming back to the original objectives: did we succeed?

- It is feasible
 - It has indirect effects (involvement of scientists, learning) that are as important as the results itself, and that are the condition:
 - of the success of the method itself,
 - and of it being useful for future positioning and design of research
 - This puts us in a good position to prepare a new program .. We would have been well prepared for phase 3.
1. **A more consistent use of ToCs** can help reduce the diffusion of topics and geographies of research and engagement
 2. **Use of nested ToCs** can support challenge-centric program and strategy design, including identifying targets for projects
 3. **Setting targets for projects** helps ground intended influence and impact, and makes researchers build impact into project design
 4. Importance of having **consistency in the documentation and monitoring** of projects, as well as in M&E terminology

What we hope to gain from the workshop?

Exchange on experiences from other programs

Get feedback on what we have done, especially the methods

Progress on approaches on methods, refine our own, towards new standards for IA of systems research



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Our Experience

Monica Biradavolu

Qualanalytics

Member, Standing Panel on Impact Assessment (SPIA)

Photo Credit: WLE/Jorge Oviedo

What works?

- Qual approaches for diagnosis and design. This includes:
 - Design of intervention
 - Design of Impact Assessments
- Qual approaches at the intermediate stage. The data collected can be used for:
 - Feedback to the intervention
 - Understanding mechanisms as they happen
 - Data collected at this stage can be used in the Impact Assessment
- Qual approaches for impact assessments

What works?

- [Contd]Qual approaches for impact assessments
 - Example 1: RCT with qual
 - Qual integrated with quant from the very beginning
 - Qual “units” can be a sub-sample of quantitative sample, both treatment and control
 - Followed at much higher frequency than quant sample
 - Attribution from the quantitative design, mechanisms (the “how”, “the why”) from the qual
 - Example 2: Process tracing (can be used for assessment of policy influence)
 - Generate competing hypothetical causal mechanisms
 - Use all available evidence, both quant and qual, to link intervention to outcome
 - Qual data can include documents (policies, reports, working papers, proposals etc.), interview/focus group data, notes made during workshops, minutes of meetings etc.

What does not work?

- *"We don't have enough budget for an RCT, let's use qualitative methods."*
 - True, qual doesn't cost as much as an RCT, but ToC and associated research questions must determine methods
- *"Let's use survey enumerators to conduct interviews."*
 - Good qualitative data is only as good as the skills of the interviewer or moderator. Requires a skilled team. Invest time and resources in hiring and training.
- *"Problem with qual is that it lacks rigor."*
 - Be transparent about methods - sampling strategy, selection criteria, design of tools, piloting, data management, ethics
 - Document systematically, start early
 - Analyze data with rigor
- *"Can we add some qual quotes to the report?"*

Conclusion



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- Qualitative approaches are important in the methodological toolkit
- Mixing methods is a win-win
- Qualitative data can get bloated and become messy, but that only means it is capturing the real world!
- There is a need to bring more rigor to qualitative data collection
- There is a need to improve “qualitative literacy” and use of “qualitative logic”

Thank You

Monica Biradavolu

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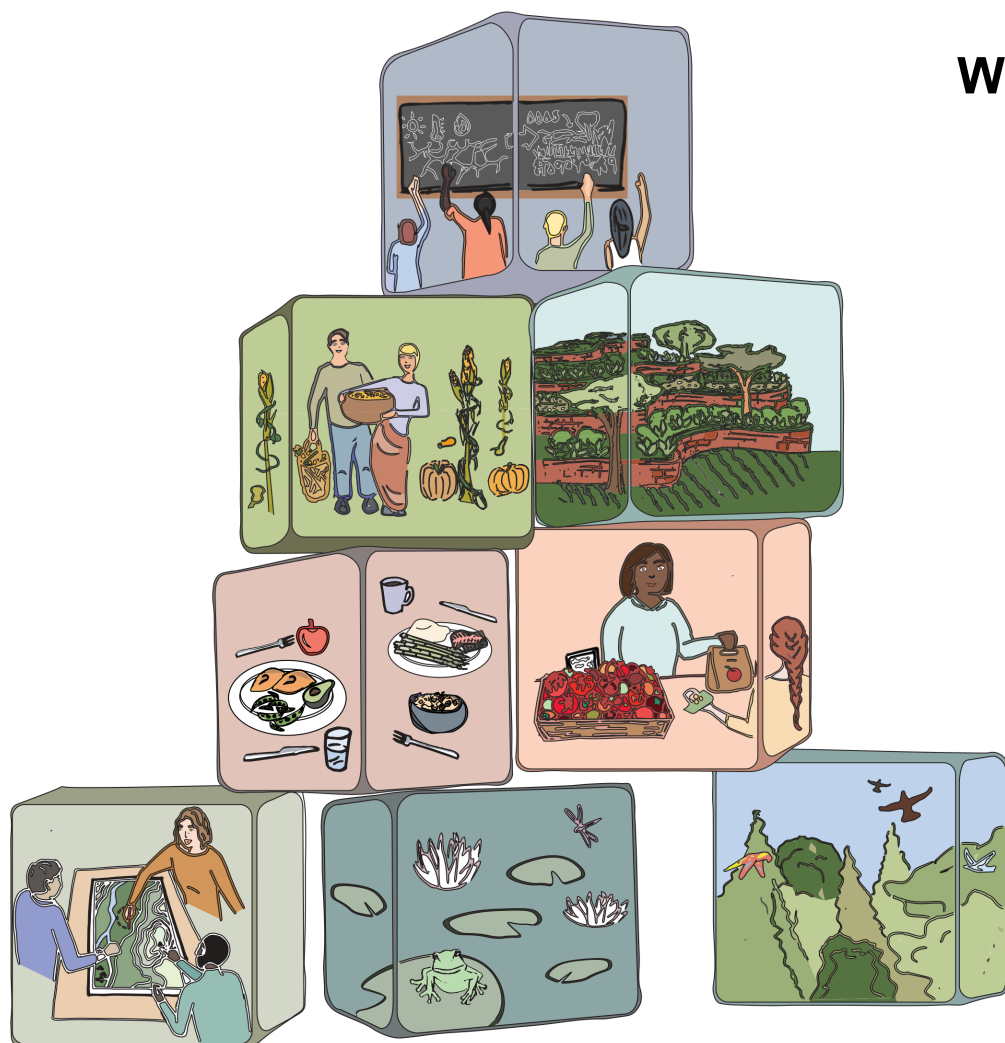
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Advisory
Services



What makes impact research challenging?

- What have been done so far?
- Results from CGIAR research

The case of **landscape approaches**

Lessons learned from a self-reflection
year funded by WLE

<https://agrolandscapes.org/>

Natalia Estrada Carmona
27 September 2021

A HOLISTIC VIEW

Metrics monitored at the level of a village or watershed (at the landscape scale) can be integrated with data collected from individual farms, as well as regions, nations and continents. This will inform local and global models, help researchers to make cross-site comparisons and lead to evidence-based food policy.



Stronger scientific
guidance for management
and policy of agricultural
systems from the plot to
the global level

**Spatial explicit processes
Synergies get expressed**

- Production
- Nutrition
- Poverty
- Gender
- Climate
- Environment (Pollination, Pest control, Water quality/quantity, Soil fertility)
- People-place interactions enable collective action

Food system

Sachs et al., 2010. Natu

Moving from interventions in a landscape to landscape-level interventions

Terry Sunderland

Reflections from

- **Surveys** with CGIAR researchers working and not working at the landscape level (122)
- **Surveys** characterizing landscape approaches supported/partnered by CGIAR (23)
- **Discussions** (podcasts) with researchers, webinars on landscape approaches
- One **meta-analysis** assessing agricultural landscape complexity and biodiversity associations (screened 606 articles, included 134 articles)

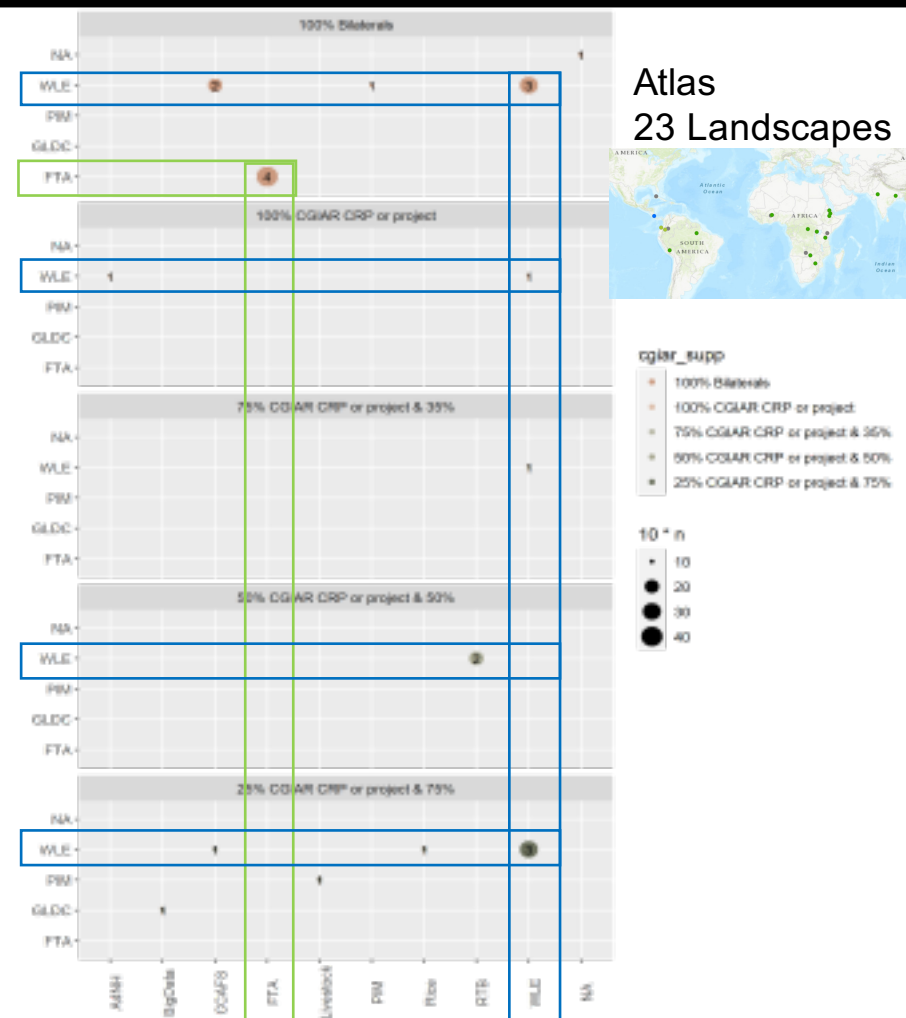
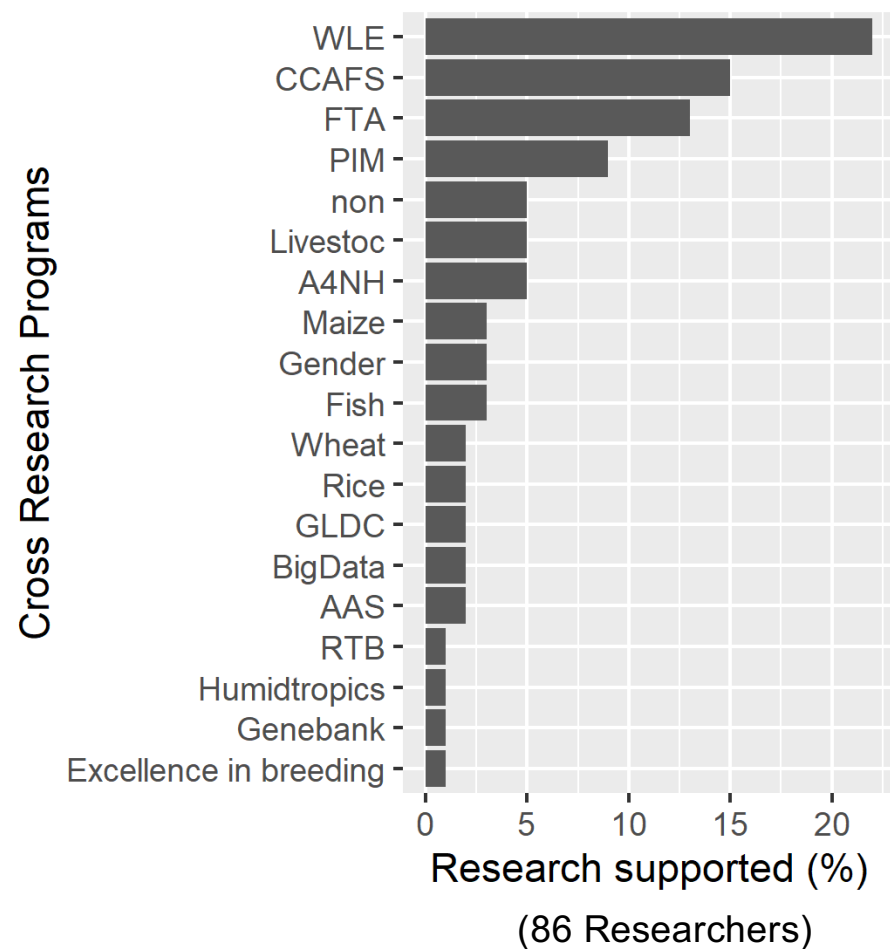


CGIAR is contributing and engaging in integrated landscape approaches worldwide, but

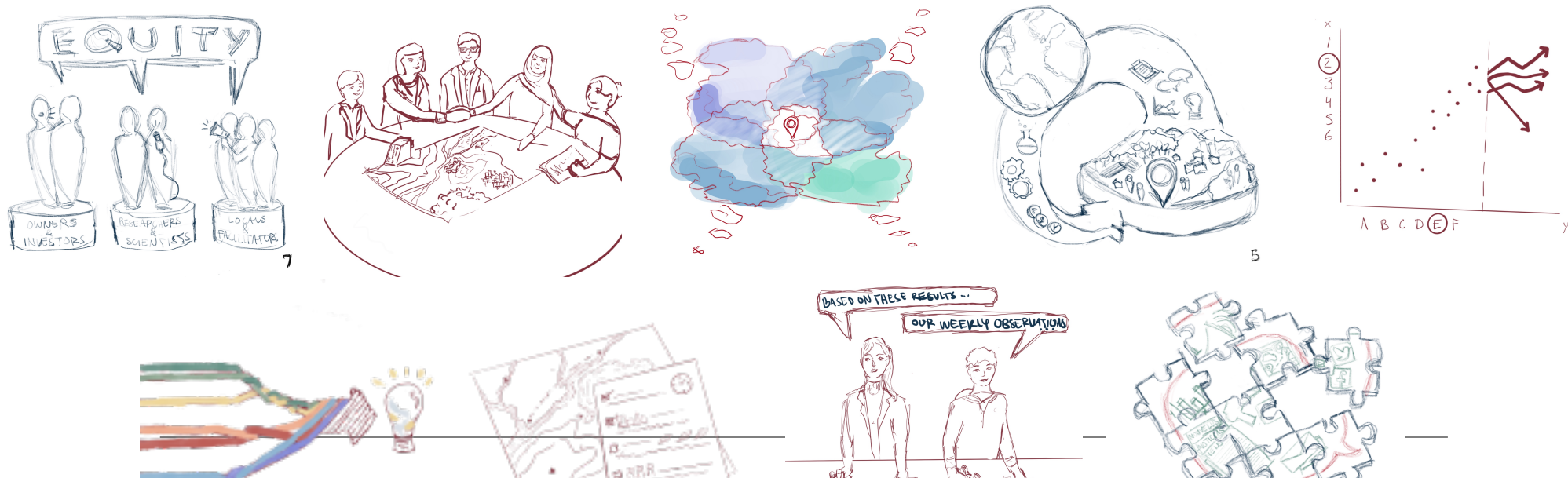
CGIAR Contributions to landscape agronomy (science borne in 2012) is negligible

Limitations to conducting systems-thinking research are not only on-site but also a cultural change is needed

CGIAR is contributing and engaging in integrated landscape approaches worldwide... through multiple CRPs



CGIAR is contributing and engaging in integrated landscape approaches worldwide...
and these complex/systems approaches **demand**

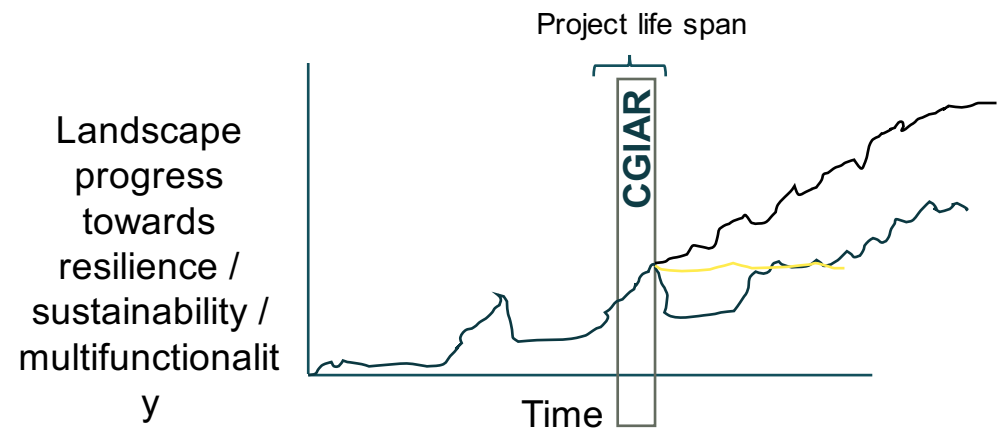
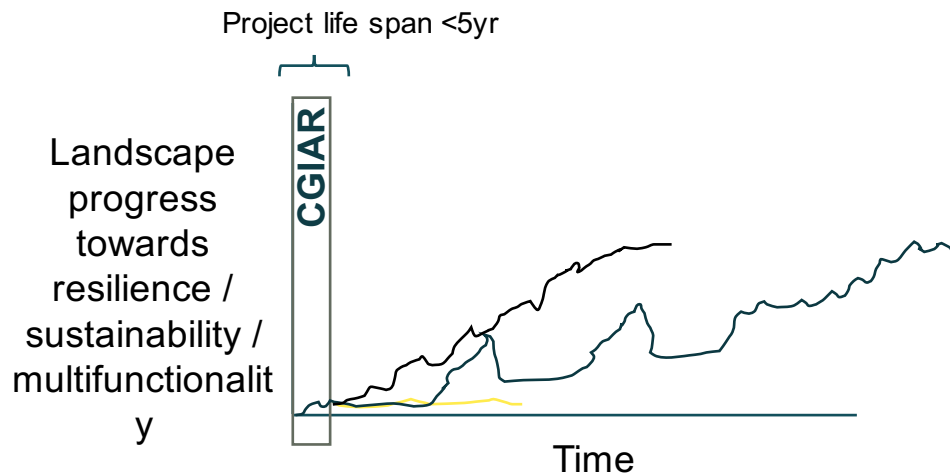
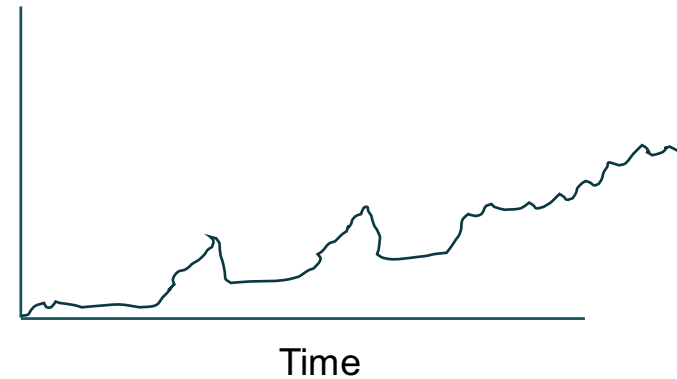


System/landscape performance metrics - **often missing or undervalued**

- Metrics on human capacity building and governance strengthening (process)?
- Metrics measuring the impact of human wellbeing, ecological performance, sustainable agriculture, governance?
- Cross-learning opportunities?

CGIAR is contributing and engaging in integrated landscape approaches worldwide ..
But CGIAR's role is different..

Landscape progress
towards
resilience/sustainabili
ty/multifunctionality



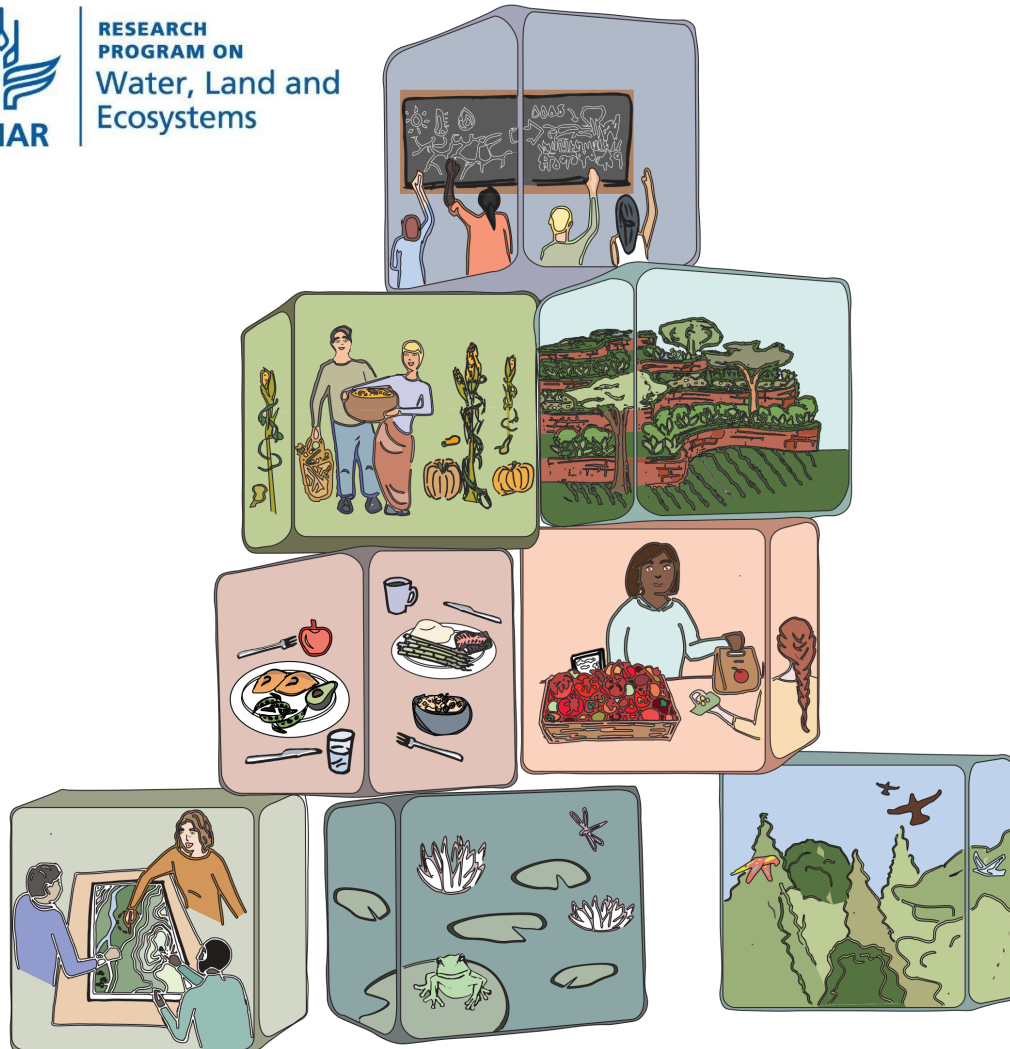
CGIAR is contributing and engaging in integrated landscape approaches worldwide ..
But there are internal limiting factors to contributing to systems-approaches

- Dominance of **silo/field** planning for agriculture (reluctance to change)
- CRPs budget design reinforce unhealthy **competition** instead of collaborative work across centers and disciplines
- Systems-approaches requires **new set of skills** and mind-set - need of training or bringing these on board
- Systems-approaches require **long term** on-ground engagement, how to overcome the short-term planning of CGIAR projects?
- Value and highlight more the value of **investing** on human capacity and governance (currently is technology centered).

Increasing systems-research impact demands constant innovation, cross-learning, and collaboration – what on-site and institutional performance metrics would help tracking that our research stay connected and relevant?



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Thanks!

<https://agrolandscapes.org/>



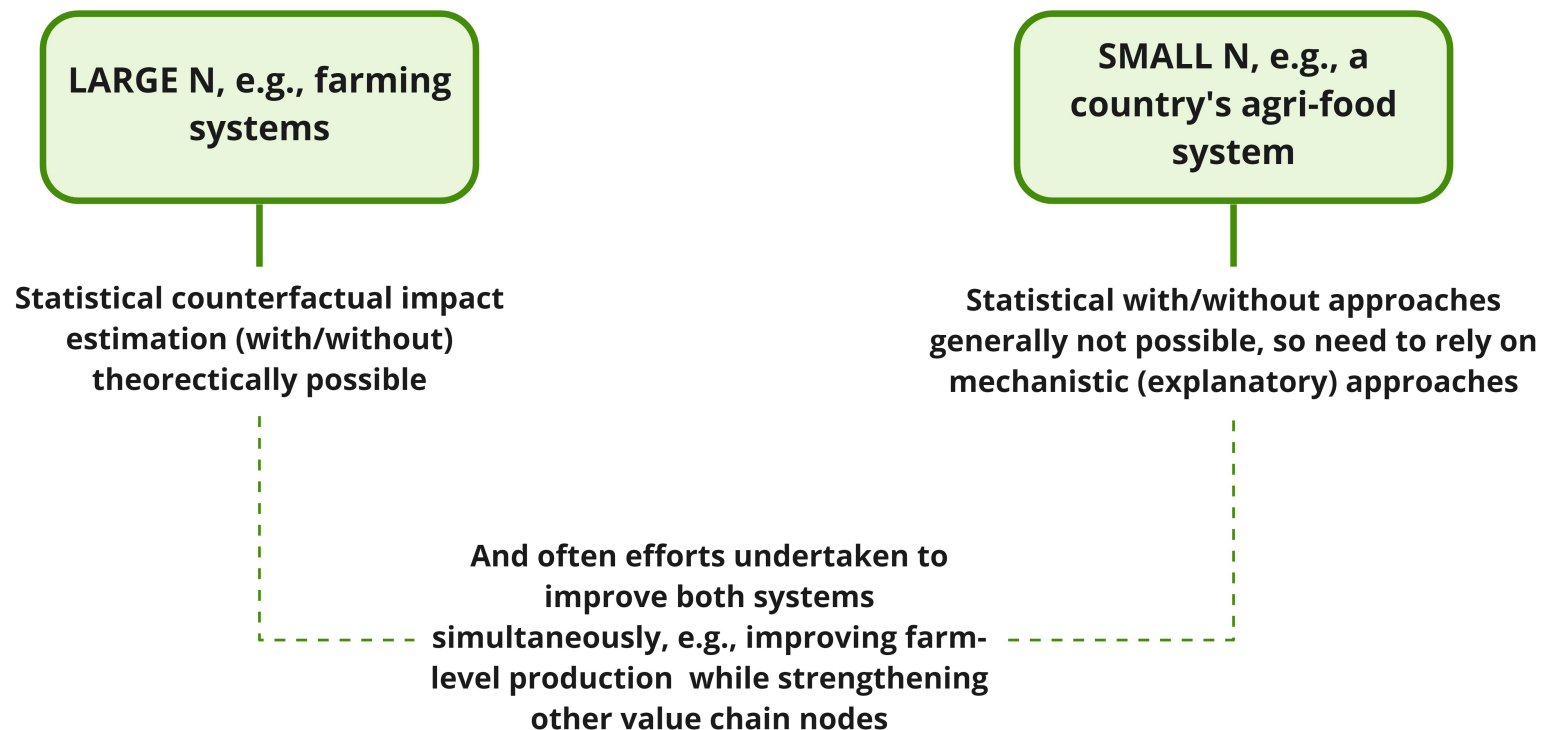
Some musings on evaluating the impacts of integrated systems research

**Karl Hughes, Head
Impact Assessment &
Acceleration**

CIFOR-ICRAF

**CRP Involvement: FTA,
PIM, WLE & GLDC**

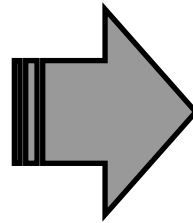
Is the system large N or small N?



How does change in complex systems happen?

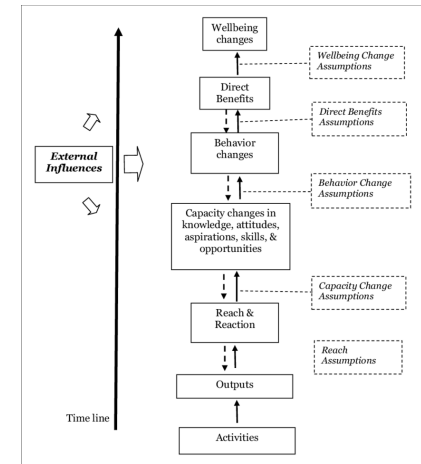


"....change in complex systems occurs in slow steady processes such as demographic or technological shifts, punctuated by **sudden, unforeseeable jumps**. Often these jumps...are driven by crises, conflicts, failures and scandals, which disrupt social, political or economic relations, creating an appetite for new ideas and opening the door to previously unthinkable reforms."
(emphasis added)

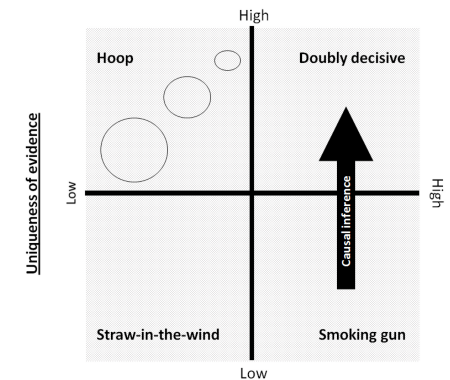


How relevant then is evidencing the unfolding of our own prospectively developed Theories of Change?

Retrospective approaches, e.g., **Process Tracing**, would therefore seem attractive to evaluators...

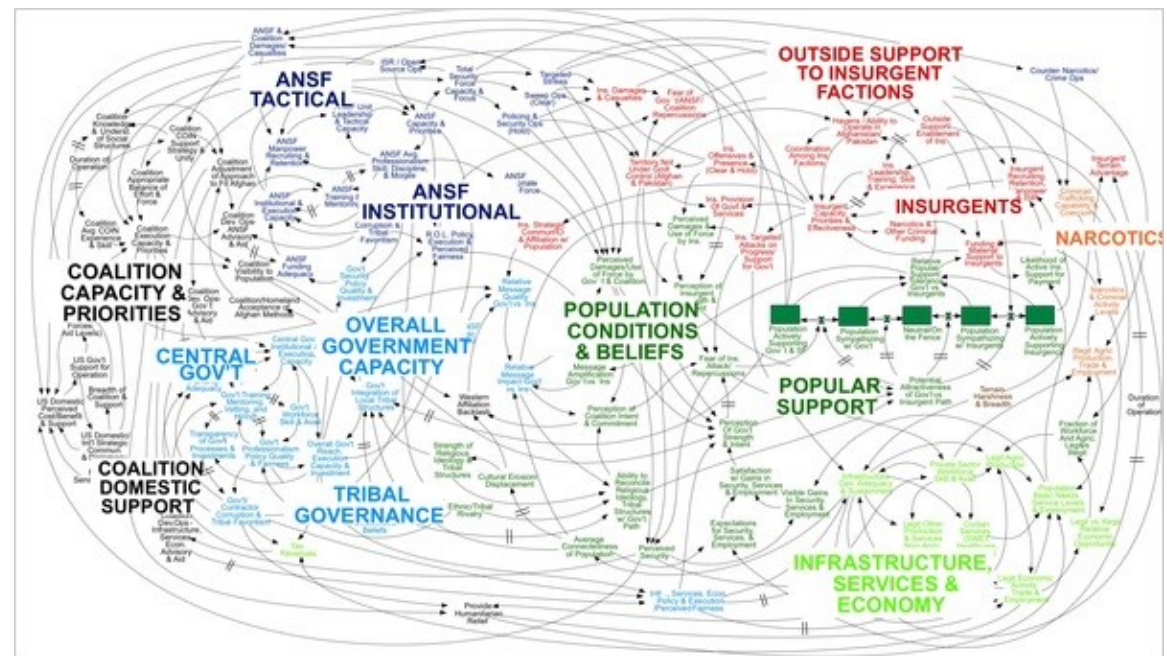


Certainty of evidence



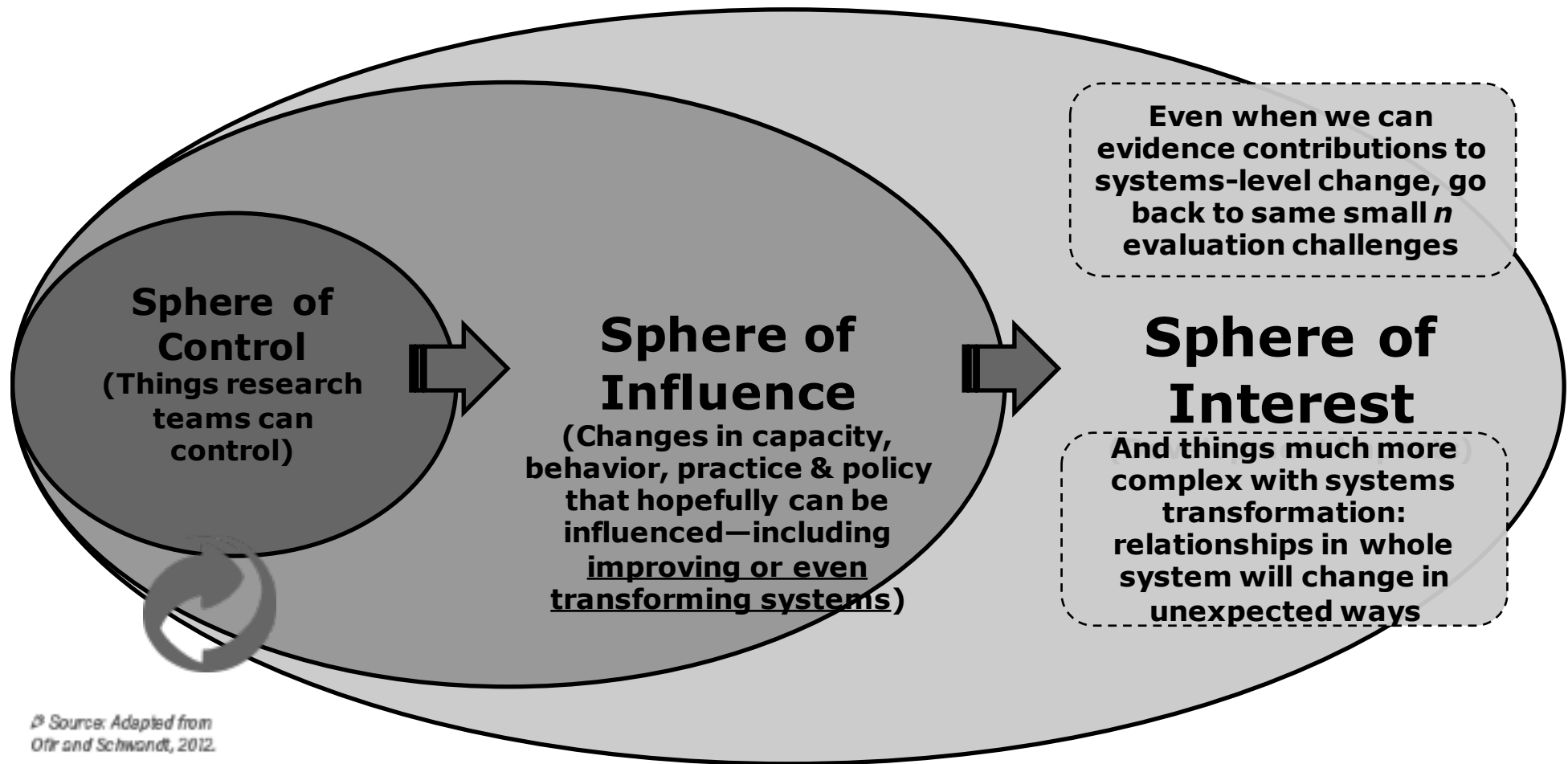
...but often need for “deep” understanding of system & context

- **Not always easy for evaluators to gain such an understanding**
- **Actual decision-making processes (or reasons for reforms, etc.) often inaccessible**
- **Insider knowledge useful & important but high potential for confirmation bias**
- **Consensus on methods for addressing bias in large n studies not same degree as for small n**
- **Historians & political scientists often debate reasons for big changes in history—things often not black & white, so inherent uncertainty**



A diagram developed for the U.S. military mapping spheres of influence in Afghanistan

How to link systems changes to changes in state?



Towards new paradigm for systems-focused R4D impact evaluation (& R4D impact expectations)?

- Arguably, the demand for direct impact evidence has made R4D less effective at inducing (or contributing to) desirable systems transformation
- We (and donors) need to recognize (and embrace) the inherent complexity, and, in turn, limitations
- Systems oriented R4D should focus—through well targeted research & engagement—on increasing the likelihood that the system will pivot (or jump) towards a more positive trajectory—*without assuming control or ability to predict exactly what this trajectory will be*

