Review of climate adaptation evaluations

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Urgency to act on climate impacts

1. Since the 2nd Int. Conference on Evaluating CC & SusDev:
   - Paris Agreement
   - Climate action pledges from all countries (NDCs)
   - Increased levels of climate finance
   - Hightened public pressure to act (in some countries)

2. **BUT** Paris temperature goals unlikely to be achieved
   - National pledges lead to >3°C warming by 2100 (Carbon Action Tracker, 2018)
   - Large fossil fuel investments & subsidies are ongoing
   - Rapidly growing methane releases from melting permafrost ➔ acceleration of warming (Nisbet et al., 2019)

→ Need to adapt as far as possible
Evaluation of climate adaptation actions

1. What does the Paris Agreement say?
   - Art.7: Countries “Shall, as appropriate,” engage in: “Monitoring and evaluating and learning from adaptation plans, policies, programmes and actions”

2. Purposes of adaptation evaluations
   - Efficacy, learning and accountability as main purpose of adaptation evaluations (UNDP, 2004; UNFCCC, 2010)
   - 2nd Int. Conference on Evaluating CC and SusDev: need to evaluate adaptation (Uitto et al., 2017)
   - “Adaptation interventions should be based on evidence of what works” (Prowse & Snilstveit, 2010)
Impact evaluations on the rise - also for adaptation?

- **2010:** “the evidence base on the impact of CC interventions is minimal” (Prowse & Snilstveit, 2010)

- **2014:** 2nd Int Conference: very few adaptation evaluations

- **2019:** ?

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A systematic review of adaptation evaluations

1. Scope
   - Published in scientific journals
   - Explicitly referring to adaptation to CC
   - Type of evaluation: “Rigorous” impact evaluations (White, 2010)
     - Excluding: ex-ante, process and formative evaluations

2. Sources:
   - Web of Science Database (33,000 journals*)
   - International Initiative for Impact Evaluation (3ie) Repository (4,600 evaluations)
   - Survey of 10 experts on adaptation M&E from international organisations

*Results apparently vary due to library subscriptions!
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3. Search process:
   - **Web of Science**: all databases
   - **Title**: “climate” AND “adaptation” AND “evaluation”
   - Screening of relevance based on **title & abstract**
   - 3ie repository: „adaptation“ as search term

4. Results:
   - **Web of Science**: 71 unique hits
     - Ex-ante: 33, planning: 8, climate impacts: 10, other: 15
     - Relevant: 5 on indicators, but **0 evaluations**
   - **3ie repository**: 1
   - **Survey of 10 experts**: 3
     - **Total: 4 adaptation impact evaluations**
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5. Identified evaluations:


PSM = Propensity Score Matching, RCT = Randomised Controlled Trial
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5. Identified evaluation reviews:


Possible explanations

1. Adaptation is elusive and complex
   • These evaluation challenges are “thwarting the efforts of skilled evaluators, or tempting information providers to defer evaluation to rely on more easily tracked but less meaningful metrics” (Vaughan et al., 2019)

2. Few completed adaptation interventions
   • First generation of adaptation projects/programmes only becoming completed

3. No incentive to publish in journals
   • No incentive for implementers/donors to publish in scientific journals
Does Index Insurance Help Households Recover from Disaster? Evidence from IBLI Mongolia

Veronika Bertram-Huemmer and Kati Kraehnert

This article investigates the impact that indemnity payments from index insurance have on the asset recovery of households following a catastrophic weather disaster. Our focus is on the Index-Based Livestock Insurance (IBLI) in Mongolia. We analyze the effect of IBLI indemnity payments after a once-every-50-year winter disaster struck Mongolia over the winter of 2009/2010. The analysis is based on three waves of a household panel survey implemented in western Mongolia two to five years after the shock. We employ the bias-corrected matching estimator to account for selection into purchasing IBLI. Results indicate that pastoralist households purchasing IBLI before the shock recover faster from shock-induced asset losses than comparable uninsured households. We find a significant, positive, and economically large effect of IBLI indemnity payments on herd size one to three years after the shock. Four years after the shock, the effect vanishes. Results are robust to defining post-shock livestock recovery in various ways, as well as the choice of covariates and the use of alternative propensity score estimators. An analysis of shock-coping strategies suggests that IBLI appears to have relieved households from credit constraints. In addition, indemnity payments helped herders avoid selling and slaughtering animals, thus smoothing their productive asset base. Our article is among the first to provide evidence on the beneficial effects of index insurance after a weather shock in a developing economy.

Key words: Extreme weather events, index insurance, livestock, Mongolia.

- Does not mention "adaptation"
- Mentions "climate change" only once
  ➢ Limitation of the search algorithm
Implications

1. For evaluation
   • “this will require (...) a **greater focus on risk, uncertainty and complexity**; a **reinvention of project evaluation**; **full use of the evaluation toolkit and judicious evaluation governance arrangements**” (Picciotto, 2009)

2. For adaptation
   • Traditional planning-implementation-review cycle is too slow
   • Need to **find more creative ways to inform adaptation planning**
   • Donors need to pay more attention to **utility-focused evaluation and learning**!
Adaptation metrics background paper

- Orienting the discussion
  - What are adaptation metrics?
  - What can they be used for?
  - What are their limitations?
  - What current practices exist in:
    - Agriculture & food security (FAO)
    - Finance and investment (EBRD & WB obo MDBs)
    - Cities (GEF)
  - Recommendations

- Informing the debate to not jump to indicators without considering purpose & meaning

Thank you!  

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