International Initiative for Impact Evaluation

Evidence gap map

Agriculture

Mapping the evidence on financial instruments for agricultural risk mitigation

Decades of research shows that risks in agricultural production trap farmers in a vicious cycle of low investment, low productivity and poverty. Agricultural risk mitigation programmes can play an important role in breaking this poverty trap. Many governments, multilateral development organisations and private agencies are proposing, piloting and implementing at scale programmes that use tools for financial agricultural risk mitigation (FARM). The potential of FARM instruments (e.g. insurance) is an emerging field of interest for policymakers, but they require more evidence to inform decisions about it.

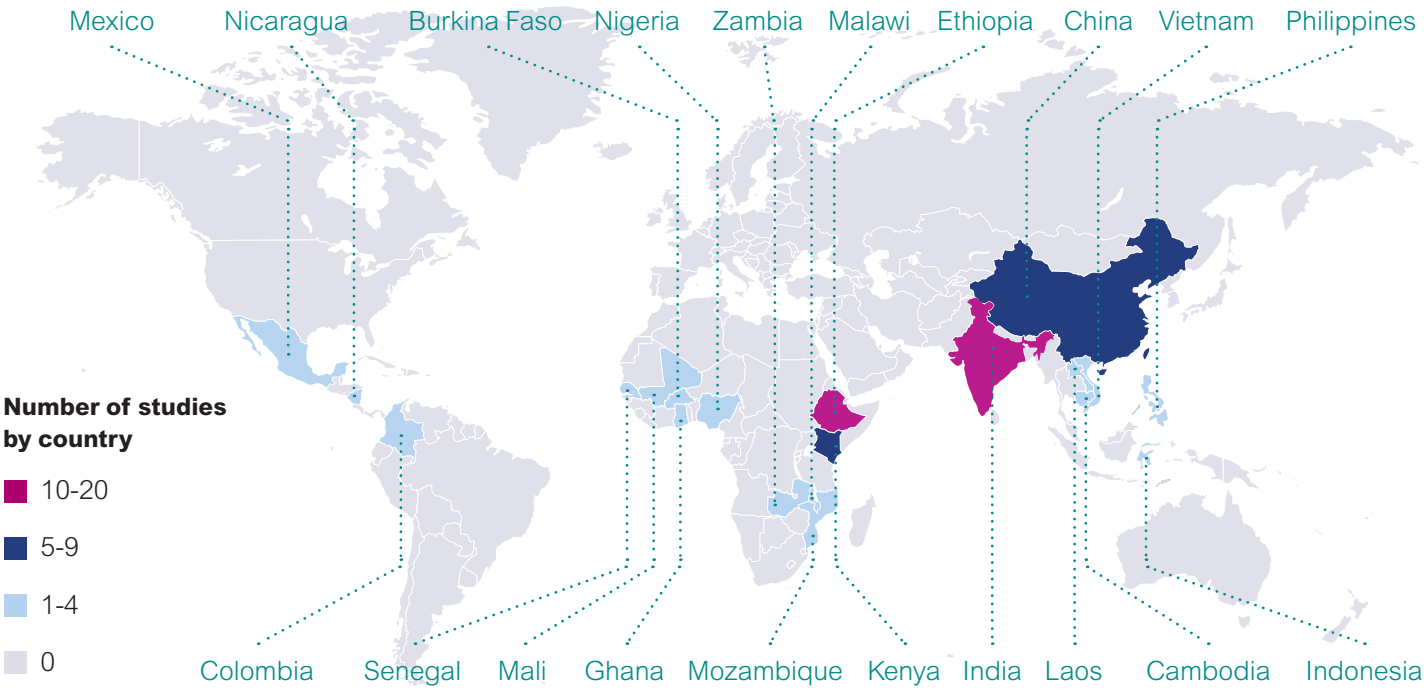
The International Initiative for Impact Evaluation (3ie) has produced an evidence gap map that identifies impact evaluations and systematic reviews related to FARM in low- and middle-income countries. It takes stock of the evidence base in a way that can inform policy decisions and investments in research.

Highlights

- Among risk-mitigating products, index insurance is the most widely studied.
- Short-term outcomes (e.g. uptake of FARM instruments and changes in assets and yield) have been most studied, while welfare outcomes (e.g. changes in children's education and health outcomes) have not received much attention.
- Most studies have focused on household- and farm-level outcomes, with less examination of impacts on typically vulnerable subpopulations (e.g. women and children).
- Impact evaluations have been concentrated in India and some African countries.
- Many countries facing high climate risks have not been studied.

Main findings

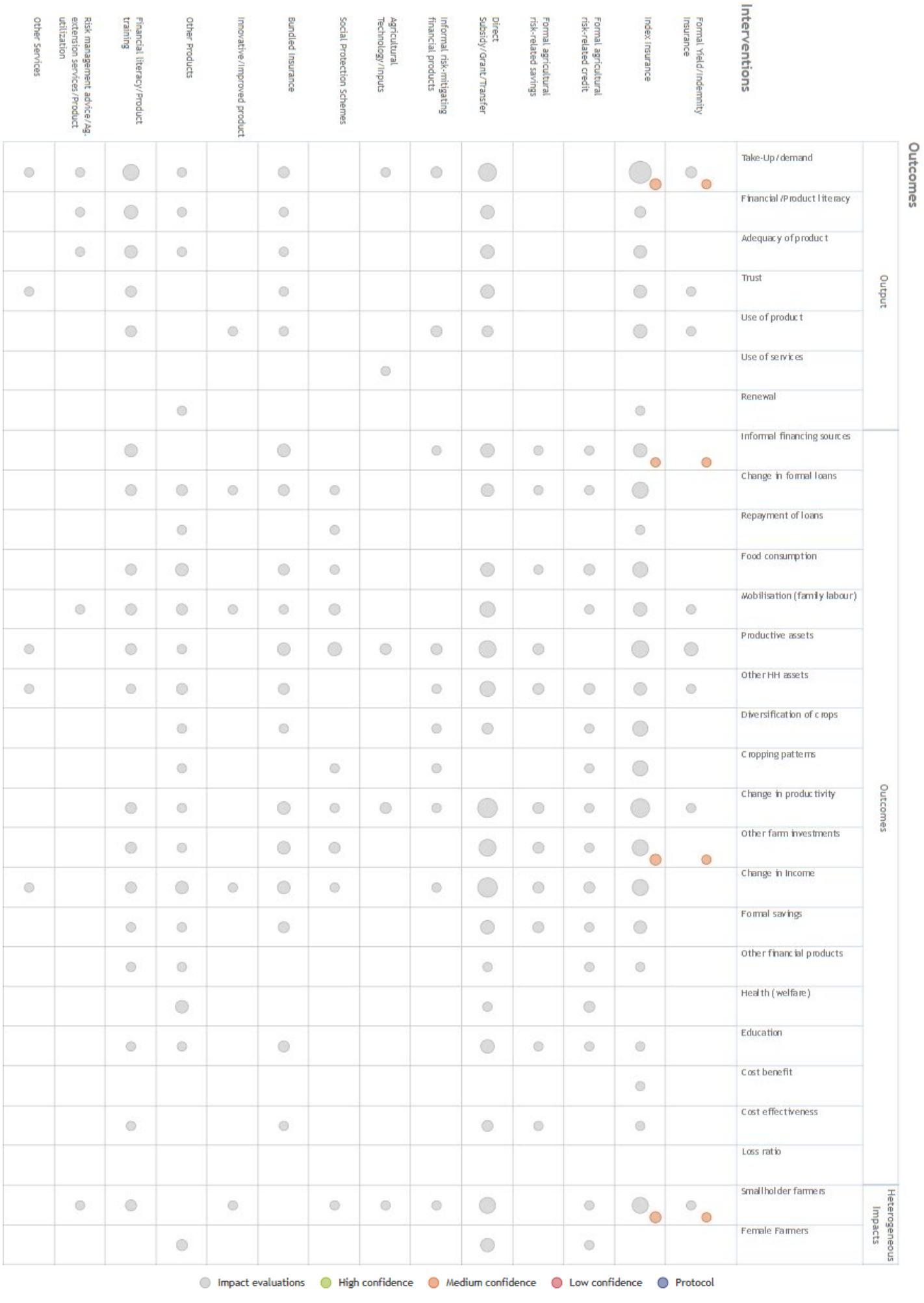
- **Formal risk management products are the most-studied intervention type.** Index insurance has received 40 per cent of the attention (24 studies), followed by studies examining the effect of direct subsidies, grants and cash transfers; financial literacy; and providing product training to farmers. Many of these interventions are employed to support insurance products. Only a few studies examined the impact of products that bundle insurance with other financial support (e.g. credit or savings).
- **Studies were conducted in 21 low- and middle-income countries, but their distribution is uneven.** FARM programmes in Ethiopia, Kenya and India are the most studied. These do not necessarily map to countries facing high climate risk.
- **Evidence is clustered towards some outcomes.** Of studies looking at demand and supply outcomes that influence outcomes farther down the causal chain, the majority examined uptake and demand for FARM instruments. Fourteen studies examined whether FARM products led to changes in financial literacy and product understanding. Other similar outcomes received less attention. Very few studies looked at insurance renewal, the effect of FARM programmes on the use of insurance and extension services, or the repayment of loans. None of the studies included in the map examined loss ratio, which is an important performance outcome for most insurance agencies.
- **A large percentage of studies examined outcomes likely to manifest over the course of one year.** These outcomes include change in productive assets, productivity as measured by yield and revenues, and farm investments. Less than a quarter of the studies looked at the impact of FARM on access to and use of formal loans. Even less examined how savings and informal financing respond to FARM. This is a non-negligible gap, as one of the important theorised functions of FARM instruments is to increase access to formal finance and reduce reliance on non-formal networks.
- **Indicators of well-being received less attention.** One third of the studies focused on yearly changes in income, but less than one quarter focused on food security. Other welfare-related indicators (e.g. health and education outcomes) were even less studied. One possible reason for this skewed interest in some outcomes is the length of the evaluation, which averaged 32 months. This may be too short a time for human development indicators to change in response to reduced risks.
- **Randomisation is the most prominent study design.** More than half of the studies employed randomised assignment to understand the effect of FARM instruments on various outcomes. The numbers have been steadily increasing, suggesting that experimental methods are being used to add to the evidence base.



How to read an evidence gap map

3ie presents evidence gap maps using an interactive online platform that allows users to explore the evidence base and findings of relevant studies. Bubbles at intersections between interventions and outcomes denote the existence of at least one study or review. The larger the bubble, the greater the volume of evidence in that cell. The colour of each bubble represents the type of evidence and, for a systematic review, a quality rating (as indicated in the legend). In the online version of the evidence gap map, hovering over a bubble displays a list of the included studies for that cell. The hyperlinks for these studies lead to user-friendly summaries on the 3ie evidence database. Users can filter the evidence by type, quality rating (for systematic reviews), region, country, study design and population.

Agricultural Risk and Mitigation Gap Map



What is an evidence gap map?

3ie evidence gap maps are thematic collections of information about impact evaluations and systematic reviews that measure the effects of international development policies and programmes. The maps present a visual overview of included existing and ongoing studies or reviews in a sector or sub-sector in terms of the types of programmes evaluated and the outcomes measured. This evidence is mapped onto this framework graphically, identifying where evidence exists and where there are gaps. Map reports provide all of the supporting documentation for the evidence gap maps, including the background information for the theme of the map, methods and results. 3ie evidence gap maps are available through an interactive online platform on the 3ie website that allows users to explore the studies and reviews in each map.

About this map

This map is based on *Understanding financial agricultural risk for smallholder farmers in developing countries: what do we know and not know?*, 3ie Evidence Gap Map Report 9 by Bidisha Barooah, Bharat Kaushish, Jyotsna Puri and Beryl Leach. The authors include 57 impact evaluations and 2 systematic reviews covering conventional risk pooling and transfer mechanisms (e.g. pure insurance products), savings and credit when combined with risk management instruments, and non-financial risk management products (e.g. drought-resistant seeds) when combined with risk management instruments. They exclude non-production non-farm risks (e.g. price risks and political risks).

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3ie promotes evidence-informed equitable, inclusive and sustainable development. We support the generation and effective use of high-quality evidence to inform decision-making and improve the lives of people living in poverty in low- and middle-income countries. We provide guidance and support to produce, synthesise and assure the quality of evidence of what works, for whom, how, why and at what cost.

For more information on 3ie's evidence gap map, contact info@3ieimpact.org or visit our website.

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