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Strengthening resilience against shocks, stressors and recurring crises in low- and middle-income countries: an evidence gap map

Natural disasters, epidemics, humanitarian crises and Climatic stressors have led to billions of dollars in economic losses and immeasurable deleterious social impacts that disproportionately affect individuals and governments from low- and middle-income countries. As the rate of shocks and stressors continue to increase over time, global actors recognise that multisectoral and multidimensional solutions are needed to address the concurrent and complex challenges experienced by the world's poorest and most vulnerable.

As a result, development outcomes have increasingly been considered through a resilience- or a capability-based lens regarding the ability to manage, mitigate, adapt to and recover from shocks and stressors. To date, billions of dollars in funding have been committed to global resilience-strengthening and risk management and mitigation strategies. Alongside this increase in global attention and resources dedicated to improving resilience, is a need to understand the breadth of evidence on the effectiveness of these efforts, to identify evidence gaps, and to facilitate access to existing research. However, there have been no systematic efforts to comprehensively map and consolidate this multisectoral evidence.

Highlights

- This evidence gap map is the first systematic effort to map the evidence on the effects of resilience-focused interventions and their outcomes in low- and middle-income countries.
- Although there has been a steady increase in the number of publications evaluating resilience programming since 2014, the evidence remains scarce and unevenly distributed.
- Unsurprisingly, multisectoral and multiple-component interventions are prevalent in resilience programming.
- However, many primary evidence and synthesis gaps exist, hindering our ability to understand which approaches and/or combinations are effective, in which contexts, and how they compare to other approaches.
- There is an urgent need for a coordinated and strategic approach to commissioning rigorous impact evaluations and methodologically sound systematic reviews, and to adopting findings through policy and programming.

To address this research gap, this EGM was commissioned by the US Agency for International Development's Bureau for Resilience and Food Security to inform agency and global efforts to strengthen populations' resilience to shocks, stressors and recurring crises in low- and middle-income countries. This map presents the existing effectiveness evidence on resilience

programming – such as disaster risk financing, early warning systems, social protection, environmental and natural resource management, financial inclusion and livelihoods, social cohesion and conflict resolution, and inclusive and accountable institutions – and its outcomes related to adaptive, absorptive, and transformative capabilities.



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Main findings

Using systematic search and screening strategies, we found 362 quantitative impact evaluations and 19 systematic reviews of impact evaluations on resilience programming.

Although there has been an uptick in publications since 2014, the evidence remains scarce and unevenly distributed. The evaluated interventions sought to strengthen resilience against drought, conflict/war and floods, leaving several knowledge gaps as to what works to alleviate the effects of other common shocks, stressors and recurring crises such as earthquakes, heat or cold waves, or wildfires.

The most common single interventions or sectoral approaches were: cash transfers (n = 69); technological solutions

(non-infrastructure) for environmental and natural resource management interventions (such as drought-resistant seeds, fertilisers, water harvesting, or recycling) (n = 34); and microinsurance, contingent credit, and portfolio-level insurance against natural disasters and climactic shocks (n = 31).

We found no primary evidence for the following interventions: data collection and analysis for early warning systems, business continuity and disaster recovery systems, capacity building of civil society, civil society feedback monitoring mechanisms, access to mobile payment services, disaster risk financing risk management policies, institutional planning and regulations related to resource management, preventative protection measures within social

cohesion and conflict resolution, data collection and analysis for social protection and safety net programming, and local coordination mechanisms for social protection and safety net programming.

Unsurprisingly, multisectoral and multiple component interventions are prevalent in resilience programming. The most common approaches combine social protection and financial inclusion activities. In most instances, there was an insufficient number of studies covering the numerous intervention combinations to achieve saturation for evidence synthesis. This means that important questions about the effectiveness of specific combination approaches relative to single or other combination approaches are unanswered.

Main findings

The diversity of multicomponent approaches may be driven by several factors. It may be that intervention combinations are typically tailored to specific contexts in order to address context-specific barriers to resilience. Alternatively, this diversity may reflect a poorly understood theory of change as to how to strengthen resilience, leading to program designers to 'shoot in all directions' in the hope that one (or a combination of them) will work.

There is insufficient geographical representation across the evidence base, leading to critical gaps in understanding of how to effectively

strengthen resilience in fragile and challenging contexts. Evaluations were commonly conducted on programs or policies in Ethiopia, India, and Kenya; fewer studies have been implemented in the regions of Middle East and North Africa and Europe and Central Asia. Of the 68 countries covered in this EGM, approximately forty per cent had fewer than four impact evaluations or systematic reviews conducted on any resilience programs in that country.

The evidence base also under-examines other important dimensions, such as the effectiveness of equity and gender-responsive programming, resiliency

over longer periods, cost effectiveness, and whether unintended consequences arise from program participation.

Identifying effective approaches for strengthening resilience is essential to addressing the risks posed by the increasing rate of natural and human-made shocks and stressors. The evidence identified through this EGM provides a good starting point, but also highlights the need for more research. This need is urgent, and we urge funders, implementers and researchers to adopt a coordinated and targeted approach to addressing these critical evidence gaps.



How to read an evidence gap map

The International Initiative for Impact Evaluation (3ie) presents evidence gap maps using an interactive online platform that allows users to explore the evidence base. Bubbles appearing 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 confidence rating (as indicated in the legend). In the online version, hovering over a

bubble displays a list of the evidence for that cell. The links for these studies lead to user-friendly summaries in the 3ie evidence database. Users can filter the evidence by type, confidence rating (for systematic reviews), region, country, study design and population.

What is a 3ie evidence gap map?

3ie evidence gap maps are collections of evidence from impact evaluations and systematic reviews for a given sector or policy issue, organised according to the types of programmes evaluated and the outcomes measured. They

include an interactive online visualisation of the evidence base, displayed in a framework of relevant interventions and outcomes. They highlight where there are sufficient impact evaluations to support systematic reviews and where more studies

are needed. These maps help decision makers target their resources to fill these important evidence gaps and avoid duplication. They also facilitate evidence-informed decision-making by making existing research more accessible.



Building resilient societies in low- and middle- income countries: an evidence gap map

Total unique studies: 362		Outcomes												
		Psychological (Absorptive and Adaptive)					Financial (Absorptive and Adaptive)		Livelihoods (Adaptive)					
Interventions		Risk Aversion	Aspirations	Confidence to Adapt	Self-efficacy	Use of Coping Strategies	Income, Savings, and Asset Ownership	Credit Access and Use	Input Markets	Labor Productivity	Market Information	Financial Literacy	Business Skills	Diversified Income Sources
Disaster Risk Financing	Risk transfer instruments and other financial instruments					●							●	
	Risk management policies													
Early Warning Systems	Data collection and analysis on adverse events													
	Infrastructure construction, reconstruction, or maintenance						●			●				
	Disaster prevention or response policies													
	Communication and advocacy on risk assessments	●		●		●	●							
Environmental and natural resource management	Public natural resource management						●							●
	Community-based natural resource management	●				●	●			●				●
	Environmental infrastructure construction, maintenance, or reconstruction				●	●	●			●				●
	Technological solutions (non-infrastructure)	●		●		●	●	●	●	●	●			●
	Communication and advocacy on environmental management					●								
	Institutional planning and regulations													
Financial inclusion and livelihoods	Savings, community-based and micro-lending groups	●				●	●	●		●		●		●
	Microcredit to help households and businesses to face shocks/stressors	●				●	●	●		●				
	Microinsurance: contingent credit portfolio-level insurance against disasters	●	●			●	●	●		●				●
	Financial education and business training			●		●	●	●		●			●	●
	Access to mobile payment services													
	Regulatory changes for financial inclusion							●						

● Low confidence reviews ● High confidence reviews ● Medium confidence reviews ● Impact evaluations ● Ongoing evaluations ● Ongoing reviews ● No records found

* This image shows only a part of the Building resilient societies in low- and middle- income countries: an evidence gap map. For the full map, please visit the [website](#).



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About this map

This brief is based on *Strengthening resilience against shocks and stressors and recurring crises in low- and middle-income countries: an evidence gap map*, 3ie Evidence Gap Map Report by Miriam Berretta, Sanghwa Lee, Meital Kupfer, Carolyn Huang, Will Riddelhoover, Daniel Frey, Faez Ahmed, Binyang Song, Kristen Marie Edwards, Jaron

Porciello, John Eyers, and Birte Snilstveit. The authors identify, map and describe the evidence base of impact evaluations and systematic reviews of interventions that aim to improve resilience capacity. The report describes 362 completed impact evaluations, 19 systematic reviews, and 1 systematic review protocol mapped on a framework of disaster

risk financing, early warning systems, social protection, environmental and natural resource management, financial inclusion and livelihoods, social cohesion and conflict resolution, inclusive and accountable institution interventions and absorptive, adaptive and transformative capability outcomes spanning across low- and middle-income countries.

Funder acknowledgment

This brief is made possible by the generous support of the American people through the United States Agency for International Development (USAID). The RFS Evidence Aggregation for Programmatic Approaches (REAPER) Project was

funded through the Comprehensive Initiative on Technology Evaluation (CITE) managed by the Massachusetts Institute of Technology (MIT) with additional support from the Feed the Future Knowledge, Data, Learning and Training (KDLT) activity managed by

Bixal Solutions Incorporated. The contents are the responsibility of the authors from the International Initiative for Impact Evaluation (3ie) and its technical partners and do not necessarily reflect the views of USAID or the United States Government.



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May 2023