



MRR INNOVATION LAB PROJECT IN BRIEF

RESILIENCE IN THE MIDST OF PANDEMIC IN NEPAL

Lead Principal Investigators

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Project Partners

Heifer International, Interdisciplinary Associates (IDA), Feed the Future Livestock Systems Innovation Lab

Development Innovation

Development program resilience

Commodity

Livestock

Targeted Population

Women

Country/Location

Nepal

Timeline

2020

Funding

\$35,000 (USAID)

The COVID-19 pandemic has interrupted daily life in every corner of the world. The rural poor are especially vulnerable, whether through direct impacts on health or disruptions to the market systems families rely on for their livelihoods. Livelihood programs may help rural families to become more resilient to unanticipated shocks like COVID-19. In Nepal, an MRR Innovation Lab research team is expanding its partnership with Heifer International to explore how rural families are coping, whether its programming increases resilience, and the challenges and opportunities for improving household resilience in the midst of a global crisis.

The Challenge

Rural families in Nepal are extremely vulnerable to natural disasters like flooding, cyclones and earthquakes. The 2015 Ghorka earthquake provides one such example. The earthquake killed nearly 9,000 people, flattened entire villages and left hundred of thousands homeless. Rural livelihoods were also affected. Livestock were killed, water access for irrigation and consumption was in many cases blocked, preparations for the monsoon rice season were disrupted and markets for agricultural inputs and outputs were temporarily inaccessible.

The COVID-19 pandemic is a completely different type of shock. Individual families are vulnerable to the illness, but the response to the pandemic has also disrupted the local market and social systems they rely on. Many families rely on remittances sent from migrant workers abroad, but the pandemic has halted work for many migrants, resulting in major reductions to household income.

A number of development programs have been designed to help families to improve their livelihoods in spite of these many risks. Such programs are designed around concepts of sustainability and resilience to shocks. For many years now, Heifer International has been building livestock-based asset transfer and training

RESEARCH INNOVATION

Research on resilience to shocks is critical for building sustainable development programming. Two studies have considered how Heifer International programs contribute to resilience. A study in Zambia¹ using panel data found that Heifer International beneficiaries were 44 percent less likely than control households to fall into poverty nearly four years after the program ended.

A study in Nepal² using matching methods found that beneficiary households coped with the 2015 Gorkha earthquake more effectively than non-beneficiaries, especially to address food insecurity. In addition, households eligible for emergency loans were less likely to acquire undesirable informal debt.

This MRR project measures beneficiary resilience to shocks related to the COVID-19 pandemic with detailed household data from two large-scale studies in Nepal, extending this work to evaluate how families are coping with the shock of the pandemic, as well as whether and how Heifer International programming made them more resilient.

¹ Phadera, L., et al. 2019. "Do Asset Transfers Build Household Resilience?" *Journal of Development Economics*.

² Thompson, W. 2018. "Three essays on development and resilience in Nepal." University of Georgia PhD Dissertation.



programs in Nepal to facilitate building a sustainable and independent income.

While there is no precedent for an unanticipated shock like COVID-19, programs like Heifer International's in Nepal provide an opportunity to learn more about how families are coping with hardship related to the COVID-19 pandemic.

Researchers can take advantage of this baseline data, combined with new phone-based survey data, to analyze household resiliency and program impacts in the midst of crisis. In recent years, USAID supported two research projects in collaboration with Heifer International in Nepal. The first was a rigorous randomized evaluation of a Heifer International rural livelihoods program through the Feed the Future Innovation Lab for Assets and Market Access. The second was an evaluation of a novel digital technology to improve goat-selling cooperative performance, supported by the Feed the Future Livestock Systems Innovation Lab. Both projects collected extensive household survey data.

Research Design

An MRR Innovation Lab research team is building on its six-year partnership encompassing both of these projects for the most rigorous study to date of Heifer International programming focused on resilience. First, the study is conducting a rapid assessment examining the ways in which rural households have been affected by the COVID-19 pandemic using phone surveys with 75 community self-help group members and 25 cooperative leaders. Both are groups established through Heifer International programming.

Second, researchers are leveraging the Feed the Future Innovation Lab for Assets and Market Access evaluation where the original treatment statuses of study households is still intact. The program formed women's self-help groups,

encouraged savings, provided a livestock transfer and offered extensive training on improved livestock management practices, entrepreneurship and values. The main panel dataset collected for the original study has a sample size of more than 1,700 beneficiaries. Baseline data was collected in 2014, with follow-up data collected in 2016, 2017 and 2018. This evaluation included an analysis of how families coped with the 2015 Gorkha earthquake that struck a number of the communities in which the research was actively taking place. The MRR Innovation Lab research team is leveraging the original experimental design, extensive baseline data and a database of respondent phone numbers.

Based on the results of the rapid assessment and building on experiences evaluating resilience to the devastating 2015 Gorkha earthquake, the MRR research team is creating a phone survey that will extend the evaluation of Heifer International programming and its impact on resilience in the midst of the COVID-19 pandemic.

Development Impact

The findings from this project will help inform Heifer International's disaster response efforts in Nepal and elsewhere. The organization is uniquely positioned to layer a response on top of existing social and market infrastructure.

This project may also lead to new financial or market innovations to be implemented by Heifer International. Cooperatives established by the organization could offer loans or grants to beneficiaries, for example. These innovations could also lead to new research opportunities to evaluate their effectiveness and impact by leveraging data collected in either of the studies previously supported by USAID and Feed the Future, as well as other ongoing studies of Heifer International programs in Nepal.



Development Opportunity: Nepal

- 28** : Population in millions (2018)
- 15%** : Poverty rate at \$1.90/day, 2011 PPP (2016)
- 22.5** : Rural population in millions (2018)
- 70.1%** : Total employment in agriculture (2019)
- 9.5%** : Prevalence of undernourishment (2017)
- 35.8%** : Prevalence of stunting for children under 5 years (2015)

Source: World Bank

More than 70 percent of Nepal's population works in agriculture, yet the country struggles to produce an adequate and affordable supply of food. Weak productivity growth and low yields have weakened rural economies, increasing urban and international migration and making it harder to avoid malnutrition.

The underlying causes of hunger, poverty and undernutrition in Nepal include low agricultural productivity, limited livelihood opportunities, weak market connections and coordination, inadequate production and consumption of highly nutritious foods, poor infrastructure and inadequate government resources.

Nepal has the agroecological potential to produce a food surplus and has an excellent track record in piloting groundbreaking development programs. Multi-sector efforts incorporate best practices, such as conservation agriculture, crop rotation and small-scale irrigation, though potential is high for activities to stimulate agricultural production, increase incomes, improve nutrition and boost food security.

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The Feed the Future Innovation Lab for Markets, Risk and Resilience generates and transfers knowledge and innovations that promote resilience and empower rural families, communities and markets to share in inclusive agricultural growth.