PRISE
Pathways to resilience in semi-arid economies

Research for climate-resilient futures

Developing innovative tools to measure climate resilience

Project 6 (II)

Led by the Grantham Research Institute on Climate Change and the Environment, with the Mountain Societies Research Institute at the University of Central Asia, this research focuses on Kyrgyzstan

Context

Climate change impacts will increase the number and intensity of extreme weather events, such as floods, storms and droughts. These extreme events will affect people across the globe, yet communities in the developing world will feel their impact the most. While extreme weather cannot be avoided, much more can be done to improve people's ability to cope with and adapt to its changes, and increase their climate resilience.

Aims

To improve people's resilience to climate shock, we first need to be sure about what resilience is – or all the different factors that affect resilience; and how we should be measuring it – taking into consideration all the various factors that affect resilience. The current approach to measuring resilience involves long questionnaires covering a wide range of topics from income to assets, to social networks, to natural resources, to early response systems, to the strength of local government. This information can help to understand the characteristics of a family or a community, but it is difficult to use to determine an overall level of resilience.

How could the information on these many elements be combined to provide an overall rating? Moreover, how do we know that we are including the right questions for this specific context?

PRISE work on developing simple, accurate resilience measures

Our work on resilience to climate-related shocks and stressors in Kyrgyzstan, and developing resilience indicators to predict well-being, is an important part of global research currently underway to develop simple, accurate and consistent measures of resilience that can be used across many cultural contexts. PRISE research specifically explores whether people's self-assessment of their own resilience – known as a 'subjective assessment' – will be useful in the search for a succinct and accurate climate-resilience indicator.

Pathways to Resilience in Semi-Arid Economies (PRISE) is a five-year, multi-country research project that generates new knowledge about how economic development in semi-arid regions can be made more equitable and resilient to climate change. PRISE aims to strengthen the commitment of decision-makers in local and national governments, businesses and trade bodies to rapid, inclusive and resilient development in these regions. It does so by deepening their understanding of the threats and opportunities that semi-arid economies face in relation to climate change.

Where we work: Senegal, Burkina Faso, Kenya, Tanzania, Ethiopia, Pakistan, Tajikistan and Kyrgyzstan.

Member organisations: Overseas Development Institute, UK (lead organisation); Grantham Research Institute for Climate Change and the Environment, UK; Innovation Environnement Développement en Afrique, Senegal; Sustainable Development Policy Institute, Pakistan.

Country Research Partners: Regional Environmental Center for Central Asia, Tajikistan; University of Ouagadougou, Burkina Faso; Kenya Markets Trust, Kenya; Mountain Societies Research Institute, Kyrgyzstan.

PRISE research projects:

Research area 1: Migration futures in Asia and Africa: climate change and climate-resilient economic development.
Research area 2: Migration, remittances, adaptation and resilience in arid and semi-arid regions of Senegal and Tajikistan.
Research area 3: Harnessing opportunities for climate-resilient economic development in semi-arid lands: adaptation options in key sectors.
Research area 4: Enabling environment for private sector/ multi-stakeholder action to strengthen resilience to climate change.
Research area 5: Property rights, investments and economic development in the context of climate change in semi-arid lands.
Research area 6, Part 1: Cross-boundary multi-scale governance of semi-arid lands: Implications for climate resilience and economic development.
Research area 6, Part 2: Resilience to climate-related shocks and stressors in Kyrgyzstan: developing resilience indicators to predict well-being.
Research area 7: Water governance in semi-arid lands: political and economic insights for the management of variability and extremes in a changing climate.

Developing new tools: our approach

We adopted a mixed-method approach to investigate whether subjective questions – or those that ask for opinions, perceptions and/or self-assessment – can be developed to help identify those families that cope and adapt most effectively under conditions of change or extreme climate-related events.

Gender-divided focus groups were first used to explore how communities experience, cope with and adapt to shocks and stressors, some of which directly linked to climate change (e.g. flood, drought, poorly-timed rainfall) while others indirectly linked/did not link to climate change (e.g. crop disease, attacks on livestock by wolves, death or illness in a family).

Findings from these groups were then used to develop a series of exploratory subjective resilience measures. Researchers asked communities to report their well-being level in a 'typical' year, when experiencing less severe shocks and stressors, and in a 'difficult' year, when experiencing one or more severe events. They also asked which shocks and stressors people were most concerned about happening in the future and to rate their ability to cope with such events, how long it would take them to recover, and what forms of action they would take to adapt.

These measures form part of a household survey that will follow 600 families, in three Kyrgyzstan provinces (Batken, Jalal-Abad and Naryn), and take place three times over 2017.

© Abbie Clare, Attendees of focus groups in Naryn province, Kyrgyzstan

Influencing policy

- Findings from this study will be discussed and shared iteratively with stakeholders in Kyrgyzstan, including representatives from the Ministry of Labour and Social Development and NGOs involved in climate-resilience programming, such as the World Food Programme, GIZ and the Aga Khan Foundation.
- Through this iterative process appropriate indicators of resilience should emerge, which can improve how we assess community- and family-level resilience and therefore support decision-makers to improve the targeting of relevant policies and funding.
- Initially, these indicators will have been tested in the Kyrgyz context and will therefore be of most interest to Kyrgyz policy-makers and institutions. However, further testing across multiple contexts has the potential to enable future versions of these indicators to be used to help people in many countries and in many social, environmental and cultural contexts.

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Collaborative Adaptation Research Initiative in Africa and Asia

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