

Aren't we all vulnerable: why do vulnerability analysis?

■ MARCUS MOENCH



The idea of 'vulnerability' is widely-used shorthand for the disproportionate impacts that climate change will have on high-risk groups and fragile ecosystems. Decision makers increasingly want to target adaptation funding to those people and environments most affected by climate change. They must also be able to monitor the effectiveness of their investments. Vulnerability analysis is sometimes presented as the solution to these wants and needs — but existing approaches are often of little use: at best, they reiterate what we already know; at worst, they are used to justify entrenched agendas. To be truly useful as a basis for dialogue, action and accountability, the meaning of 'vulnerability' must be clarified and the methods for analysing it greatly strengthened. This means establishing standard, replicable approaches that differentiate between the roles and exposure of stakeholders, systems and institutions.



Climate change threatens the basic systems on which we all depend. But its impacts will vary across economic and social contexts. Marginalised groups — the poor, women, children, and those who for political, cultural, religious, or ethnic reasons lack access to capacity and resources — are particularly 'vulnerable' to the impacts of climate change. Their vulnerability is rooted in complex contexts where social differences interact with and magnify the impacts of climate hazards on basic life-support and higher-level systems.

Vulnerability analysis is, as a result, essential to diagnose and address the underlying factors that concentrate climate change impacts on such groups — or is it?

It could be argued that vulnerability analysis is merely a complex and costly way of stating the obvious: that poverty is debilitating; that access to social, political, and economic capital offers advantages; that factors such as gender, ethnicity and culture create barriers that help some and hinder others.

Where the vulnerability of physical infrastructure and ecological systems is concerned, it can similarly state the obvious: that climate change is likely to compound the stress on already degraded ecosystems and that fragile infrastructure is particularly likely to fail.

In many cases, embedding vulnerability analysis in climate change responses represents an effort to align the 'climate agenda' with other global agendas, be they social, environment or development. The thinking here is that adaptation needs will be 'solved' if we hit the

Millennium Development Goals; if we protect ecosystems; or if we 'climate proof' infrastructure.

Who's vulnerable?

But it is not clear how much this integration will really contribute to societies' ability to adapt to climate change.

When the basic systems on which societies depend fail, impacts can be counterintuitive. During recent droughts in Afghanistan the highest levels of malnutrition were found among the children of which groups? Not farmers as you might expect, but the relatively wealthy shopkeepers and moneylenders who lost their capital and income when farmers couldn't repay loans, and who weren't eligible for relief from aid agencies.

Similarly, when droughts strike in India, marginal farmers tend to cope by migrating and accessing regional urban and rural labour markets. But their better off neighbours often lose all as wells dry up and loans for agricultural inputs come due.

In some ways the world's most 'vulnerable' groups to extensive droughts may be the urban poor and lower middle-classes, trapped in jobs with little wage mobility, and pressed from below when food prices rise. Other vulnerable groups include those whose emotional attachment to specific locations or climate-vulnerable livelihoods, such as tourism or agriculture, undermines their ability and willingness to move as climates change.

Analytical frameworks developed under the Asian Cities Climate Change Resilience Network (ACCCRN),



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supported by the Rockefeller Foundation, highlight how interactions among agents (individuals, households, business and organisations), institutions and complex ecological and infrastructure systems can generate forms of vulnerability that cannot be predicted through traditional methods that emphasise the role of social and political conditions.

An interdependent world

We live in an increasingly integrated and economically interdependent world. Villagers in rural Nepal meet many of their basic needs with money sent home by family working in far away urban areas. The urban rich and poor in Manila both depend on rice from Vietnam and Thailand. And the price of pork in China is influenced by grain harvests in Australia and the United States. The consequences of these interactions can be significant: the rise of urban food prices may have played a role in sparking the unrest across the Middle East in 2011.

People are both supported by and trapped within a web of systems that cuts across scales, cultures and social divisions. Ripples will be widely felt if any part of that web is disrupted; and the impacts on people and environment will be shaped by many social, institutional and physical system interactions at global, regional and local levels.

It is true that many of the impacts will be concentrated on socially marginalised groups, ecosystems already 'at risk', and areas with fragile infrastructure. But it seems unlikely that existing strategies to address such issues can respond to the complex interactions triggered by climate change.

Beyond simplicity

Understanding vulnerability appears to be both more simple and more complex than analysts and policymakers would like to believe. On one level, much existing analysis just highlights the links between climate change and poverty, environmental degradation and development. This means that analyses are often simply used to justify environment or development investments as 'adaptation'.

But moving beyond this is difficult, both analytically and politically. Because the concepts and methods behind vulnerability analysis are not clear, analyses depend a lot on the analyst. As a result, most vulnerability analyses are difficult to replicate and do not provide a baseline for measuring progress. Existing approaches seem most useful for justifying action that, at best, makes sense anyway as part of a response to climate change and, at worst, simply reframes entrenched perspectives and interests in 'climate' terms.

Researchers and policymakers must agree formal, standard concepts and methods that can capture

complex dynamics across scales, systems and social divisions. In recent work to build climate resilience in Asian cities under the ACCCRN program, the Institute for Social and Environmental Transition and partners have developed approaches that focus on the economic and social marginality of agents, the fragility of the systems in which they live, the constraining versus enabling characteristics of institutions, and the way in which both stakeholders and systems are exposed to climate change. This approach is now also being applied in Nepal in 'local adaptation plans of action' in partnership with IIED and others.

By differentiating between the roles and exposure of stakeholders, systems and institutions, this type of approach offers a starting point for clarifying terminology and developing more consistent methods. Politically, however, such an approach is likely to challenge deeply embedded views and interests across all levels.

Next Steps

For vulnerability analysis to play a useful role in either high-level debates about the differential impacts of climate change or the more pragmatic task of targeting adaptation funds and documenting their effectiveness, some basic questions must be resolved. These include:

- Can concepts and measures of vulnerability be defined clearly enough to provide a consistent basis for analysis?
- What methods exist to capture the complex interactions in systems across scales?
- Do different contexts require different approaches to vulnerability analysis and, if so, how can confusion be reduced?
- What are the barriers to using the results of vulnerability analyses in designing, implementing and monitoring programmes to support adaptation — and how can they be overcome?
- How can vulnerability analyses be improved to really support adaptation rather than simply state the obvious or justify entrenched perspectives?

The way forward seems to require conceptual approaches that clearly articulate and differentiate between the factors that contribute to vulnerability and resilience. It requires methods that draw on common concepts but that can be adapted to different contexts. And it requires a shift from identifying problems (analysing vulnerability) towards identifying solutions (common principles for building adaptive capacity). Highlighting critical entry points where climate change action can be most effective will be key.



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Further reading

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