

Supporting and Informing the Process of Risk Arbitration in Post-Disaster Recovery

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ABSTRACT

One of the main challenges to promoting disaster risk reduction practices following a disaster is that these (a) rarely take proper account of the multitude of risks that households are exposed to and arbitrating between, (b) are rarely framed within a definition of “acceptable risk”, and (c) rarely acknowledge that decisions about risk are usually made at the household level. This paper summarizes findings from assessments of the post-disaster reconstruction process in Haiti, which highlight that a better understanding of these dynamics of risk arbitration would provide significant guidance to disaster recovery actors promoting risk reduction.

Introduction & Background

Disasters make obvious the need to reduce risk in reconstruction, so that avoidable calamities are not repeated. Often, however, the demand and need for risk reduction in reconstruction is faced with significant obstacles due to the complexity and constant urgency of post-disaster environments. One of the main challenges to promoting “building-back-better” practices following a disaster is that these rarely take proper account of the multitude of risks that households are exposed to and arbitrating between in post-disaster contexts. Even in non-disaster situations, households are constantly arbitrating between various risks: risks related to multiple natural hazards of various frequencies, economic risks, risks of violence and abuse and many more. In post-disaster environments, the process of risk arbitration changes, reflecting increased awareness of a particular risk (that which led to the disaster), but also because of the acute increases in various other risks in the wake of a disaster (e.g. loss of livelihood, risk of abuse, etc). In short, the dynamics of risk arbitration are extremely complex, and those organizations and institutions involved in post-disaster recovery rarely possess the capacity to analyze these dynamics properly. Understanding these dynamics is critical for organizations that have historically focused on a very narrow view of risk-reduction post-disaster.

The 2010 earthquake in Haiti was one of the most devastating natural disasters in recorded history. The casualty estimates range from 150,000 to 220,000 with 1.5 million displaced. The scale of the disaster was the result of lack of awareness of the seismic risk at all levels. It was not part of the collective consciousness, as no significant earthquake had occurred in the preceding 240 years. Nor was it part of the consciousness of policy-makers and engineers. Indeed, many of the large engineered buildings collapsed during the earthquake [1].

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As in many other natural disasters, the post-disaster context provides a short window of opportunity to permanently shift the culture of risk and risk perception in society. Numerous efforts were therefore made to promote disaster risk reduction through safer building practices, relocation to safer sites, and other approaches. However, these efforts have had limited impact, especially outside of neighborhood-specific programs. Based on an evaluation in collaboration with the World Bank, the International Federation of the Red Cross Red Crescent, UN Habitat and Habitat for Humanity as well as independent field research, this paper briefly describes some of the main missed opportunities for large-scale disaster risk reduction in Haiti following the earthquake. These observations can offer lessons for post-disaster risk reduction in many other contexts.

Understanding the Combinations of Risks Faced by Households

Acknowledging that “risk-proofing” reconstruction is an unattainable ideal, the role of disaster risk management in reconstruction is to promote as much as possible the least risky among various combinations of risks. This requires an understanding of these combinations of risk. Households in Haiti are faced with multiple hazards of widely varying recurrence intervals (earthquakes, hurricanes, floods, fires, etc), socio-economic risk, risks of violence, and many more. Yet no systematic study was conducted in order to properly understand these various risks, even at sites selected for relocation or priority development, nor were systematic studies conducted of people’s perception of their own risks.

The only such study conducted was geared towards understanding the reasons why people were leaving internally displaced people’s camps set up in the wake of the earthquake. It was found that the three main reasons for people leaving camps were (i) risks from poor sanitary conditions, (ii) risks of rains/hurricanes and (iii) security risks, collectively accounting for 66% of people leaving camps [2]. This is a telling example of the breadth of risks that households arbitrate between when making decisions. Such studies that look at a broad cross-section of risks are critical for properly planning and managing programs geared towards reducing risks faced by disaster-affected populations.

In most cases however, even when risk was considered it was usually focused on a single hazard based on the expertise of whichever expert was at hand or risk map available. Unsurprisingly, these projects that focused on a single risk (usually flooding or earthquakes) typically failed because the other risks were unacceptable to the populations (economic risks or others).

It is only on the basis of a proper understanding of the combinations of risk that households face that any risk reduction action can be framed.

Defining “Acceptable Risk”

One of the obstacles for risk reduction in post-disaster Haiti was that while everyone agreed that risks should be reduced, no one knew what it should be reduced to. An almost overwhelming quantify of risk-information products were developed following the earthquake. But even when detailed neighborhood-level hazard assessments were conducted, the issue remained of what to do with the information. How does hazard information turn into criteria for decision-making, and

then to specific risk mitigation action (no-build zone, need for site mitigation, construction standards, etc)? The need for criteria (or standards) was partly driven by concerns for liability by agencies, which often led to inaction[2].

The arbitration and management of combinations of risks is only possible on the basis of an understanding of “acceptable risk.” Such criteria cannot be developed by risk reduction experts alone, though they are often asked to do so. Defining standards for “acceptable risk” is an ethical issue (what is morally acceptable?), a practical issue (what is possible given limited resources?), and a cultural issue (what is appropriate?), and should therefore result from an open and realistic debate involving civil society and communities who will have to live with the risk.

In the absence of properly understood standards for “acceptable risk”, agencies tended to either avoid action altogether, ignore using risk as a criterion, or to significantly over-design their interventions. An example of the later was the “transitional-shelter” solution that was heavily promoted early on in the wake of the earthquake. The “T-shelter” approach was framed as a disaster risk management initiative, securing the population against the impending hurricane season[3]. This also set the standard for T-shelter design, a structure able to withstand three Category 3 hurricanes, and costing as much as US\$10,000 including design, materials, labor, shipping (plywood was imported), warehousing, etc (Haiti Shelter Cluster, April 20, 2010, Transitional Shelter Parameters). However, from a risk management perspective the T-shelter standards should have arisen from a proper discussion of “acceptable risk,” and properly weighing other potential “transitional solutions”. An engineer who participated in the T-shelter working-group meetings explained that the working group went straight to “design”, without explaining clearly the “design assumptions” or “acceptable risk”. In fact the high-level standards proposed led to very expensive shelters, while other options for shelters meeting “acceptable risk” criteria were not discussed.

Appropriate standards for risk reduction activities need to reflect “acceptable risk,” which arises from a balance of numerous factors (risk level, costs, complexity, appropriateness, etc).

Informing the Risk Arbitration Process by Households

In Haiti as in many contexts, decisions that determine risk are made mostly at the household level. These are related to decisions of “where to settle/build?” and “what to build?” These decisions are then realized through processes that occur mostly outside any regulatory environment, through informal land settlement and informal construction of homes. The state has very little regulatory or enforcement capacity through which risk can be mitigated by means of risk-informed land-use planning or ensuring compliance to safe construction standards.

In the neighborhoods of Port-au-Prince in which agencies had significant control of the reconstruction, compliance to risk reduction standards could be ensured in a variety of ways: direct implementation by agency, cash-transfer upon prior inspection, etc. The agency therefore had control over risk arbitration. But the vast majority of communities did not receive such assistance, and neighborhood approaches failed to impact risk on a broader geographic scale.

One approach therefore for broader-scale disaster risk management in such contexts is to leave the risk arbitrage up to the household but make sure that decisions are informed. People’s

perceptions of risk are typically very different than their true risk. Hence this approach necessitates significant communications to improve awareness of risks and guidance for how to mitigate them (once again based on an understanding of the combinations of risks faced).

Research in Haiti has shown that households are in fact very concerned with risk, and make rational decisions on their own risk. Outcomes falling short of “acceptable risk” therefore reflect (a) lack of awareness of various risks, their frequency and their significance, (b) lack of knowledge of how to address these risks, or (c) socio-economic constraints for addressing these risks. Field-research conducted by the author on the process of “self-recovery” in Haiti found that most households who reconstructed on their own expressed a willingness to pay more in order to hire trained masons and obtain better quality materials [4]. However access to information of best practices, training opportunities and quality materials has been lacking. Therefore risk management in such context should focus on promoting proper awareness of risks, filling the knowledge/training gap for addressing them, and enabling if possible the financing of risk reduction action (through subsidy or other mechanism).

At the same time, risk decisions cannot always be made at the household level. This is in part because decisions at the individual level can have far-reaching impact. An unsafe building on a hill, for instance, is a danger to all households living downhill, which was unfortunately demonstrated in numerous hillside settlements across Port-au-Prince. Furthermore those making decisions on the risk level (intentionally or not) are often not the ones living with the risk. In Port-au-Prince, landlords fund and organize construction of buildings but the renters live with the risk. This is partly why community-based approaches for risk-reduction are often more effective than household level ones, since the community can provide social pressure and some level of accountability and monitoring. The risk arbitration process then becomes a community level one.

Conclusion

Assessments carried out following the 2010 earthquake in Haiti have shown that some of the major obstacles for promoting disaster risk reduction in reconstruction stem from (a) a lack of understanding of the combinations of risk that communities face and are arbitrating between, (b) a lack of debate on and definition for what constitutes “acceptable risk” and (c) a lack of focus on informing the risk-arbitration process of households and communities at a broad geographical scale.

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