# **MODELLING VULNERABILITY & SHELTER**

Hamro Ghar Approach





Implementing Partners



FEBRUARY 1, 2019 People in Need, Scott Wilson Nepal, Build Change, and PHASE Nepal Written by Daniel Coyle



# Introduction

Just over three years since the Gorkha 2015 Earthquake, the reconstruction of damaged or destroyed homes remains at the centre of earthquake victims' experience and the wider perceptions of the successes and failure of reconstruction. Nepal's context poses many challenges with respect to the design of any large-scale earthquake reconstruction programming. Of particular concern, are the long-term impacts that the earthquake will inevitably leave on those who were and remain the most vulnerable. The work presented here represents the thoughts and approaches of the Hamro Ghar consortium and our attempts to better understand the challenges experienced by vulnerable households. This work hopefully contributes towards the creation of different models and ways of approaching post-earthquake vulnerability based on household socio-economics and sectors, in this case shelter.

This document will present a model for approaching this subject that seeks to create a clear visual picture of the economic reality that households experience in the process of reconstruction. At its heart, the Hamro Ghar model is largely based on the premise that shelter reconstruction essentially poses a very clear economic challenge to affected households. While it was immediately understood on a macroeconomic level that available assistance was not going to be able to address the needs posed by the context, we believed there was also a failure to engage in a household or community level economic approach. In analysing the context and approaching the design of Hamro Ghar, we intentionally examined the household level economic contexts of vulnerable households and communities as opposed to a more technical approach that emphasized maximizing resilience outcomes. Central to our thinking was the question households themselves were repeatedly forced to ask and answer in the years following the earthquake. Namely, what inputs do households need, in terms of either capital or other contributions, to reconstruct their homes and how can these be acquired? Hamro Ghar's vulnerability model is a demonstration of one such approach and how it can be used to profile households' capacities, model communities' vulnerabilities, create design parameters for programming, and select specific interventions that target specific input deficits.

This work is primarily intended as a programming document for practitioners to use and build off of in Nepal and other contexts and should not be understood as a research paper or review of other works and approaches regarding post-earthquake shelter vulnerability. The document will begin with a presentation of Hamro Ghar's analytical model and classification system for different types of post-earthquake shelter vulnerability. After which, the approach to targeting and "indicators of success" and how they were implemented under the program will also be explained. Finally, this document will conclude with a summary of the observations and lessons we feel are captured by our analysis, model, and experience in field.

# Methodology

This model and analysis of shelter reconstruction was developed over many months through field research, pilot interventions, and sustained discussion between People in Need (PIN), Build Change, Scott Wilson Nepal and PHASE Nepal – all agencies working on post-earthquake reconstruction in different sectors and contexts. In particular, Hamro Ghar began from an intention to better understand, model and target households who several years after the earthquake still appeared to be a long way from reconstructing their shelter. Wherever the terms reconstruction or vulnerability are used, they specifically refer to shelter vulnerability and shelter reconstruction.



Data cited in this paper was all gathered through PIN's operational assessments and work under the Hamro Ghar project – a shelter reconstruction program for vulnerable households implemented by PIN with the aforementioned agencies. Hamro Ghar is a 1.5M GBP project funded by DFID Nepal to support the reconstruction of vulnerable households that is being implemented in two Rural Municipalities, Jwalamukhi in Dhading and Ichchhakamana in Chitwan. The project began in June 2018 and is planned to conclude at the end of 2019. Unless stated otherwise, most graphs and figures used in this presentation represent actual numbers, Bills of Quantity (BOQs)<sup>1</sup> and beneficiaries that the consortium is working with. Where relevant, additional notes on where information was gathered to produce various figures is presented alongside the data. This data is supplemented with information gathered during assessments and pilot programming conducted prior to the start of Hamro Ghar by PIN's MEAL team.

# Shelter Threshold – defining the economic barrier

For all households undergoing shelter reconstruction, the overall economic requirements for the reconstruction of a basic shelter are analytically comparable and generally equivalent within a given community. It became clear that there was a certain "shelter threshold" that households needed to reach in order to be able to proceed with reconstruction. The shelter threshold can be thought of either as the specific material or labour inputs required by the Bill of Quantity (BOQ) of a specific shelter design or their cash equivalent. By approaching the problem like this it is possible to graphically represent the cost or equivalent cost of different categories of inputs required to reconstruct any shelter:



Fig 1. Shelter Threshold

The categories included above are broken down based on how a household might generally acquire them and by how they are sourced through different markets.

- Unskilled labour is a source of common employment in Nepal, especially for poorer households, and was a stated source of primary or secondary employment by 29% of 1,526 households in our baseline survey. Unskilled labour sharing through cultural systems like *parma* or *allo palo* traditions still exist in many parts of Nepal, especially in areas with less market access and especially for agricultural work. Unskilled labour is generally contracted locally by households, though not always given postearthquake labour shortages.
- Skilled labour, such as required for masonry, carpentry and cement masonry work, may be contracted locally or within specific communities dependent on local market dynamics. Generally,

<sup>&</sup>lt;sup>1</sup> BOQs are itemized lists of materials required to construct a specific design or model of a shelter generated by engineers in the preparation of such designs.



there exists an acute shortage of skilled and unskilled labourers to conduct many reconstruction projects after the earthquake. In our baseline survey, roughly 10% of households reported having skilled labour as a primary or secondary source of income.

- **Procurements** are material inputs which a household will have to purchase with cash in the process of reconstruction from a market that sells construction materials, meaning that many households may have to incur transportation costs in the procurement of these materials. This includes but is not limited to corrugated galvanised iron (CGI), rebar, cement, bricks, nails, and anything else that would need to be procured from a hardware shop.
- Local materials within this model consists of anything households may potentially be able to gather or collect locally themselves or through unskilled or skilled labour within their communities. This includes sand, wood, stone, and aggregate even though we are aware of and are currently working with households that have to either transport or procure these materials as if they were a procurement. Local materials therefore are any material that could potentially be sourced or gathered locally not from a shop.

We understand that the above categories and how people source materials changes, especially for materials like sand or wood; however modelling BOQs this way allows us to examine the "best case" scenario for households with respect to maximizing the ways in which they can gather inputs. Much of our modelling takes "best case" scenarios where we look at an "optimal case" about the shelter threshold. This means that our model assumes households could acquire wood, tools, and sand through labour instead of cash even though a great many households don't have this. The shelter threshold also assumes that other non-costed materials, such as water, are available for reconstruction.



# Fig 2. Different Shelter Thresholds

In much of our analysis we use several designs to analyse the minimum potential requirements of meeting a basic threshold for households. Figure 2 shows two types of two room houses, brick & stone masonry, both with cement banding and displays the differences to the threshold when an attic is added. Prices are based on the average of 21 locations in our working Rural Municipalities, all of whom had road access. The purpose in selecting these as demonstrative models was to identify two of the most affordable shelters that met basic standards of resilience and adequacy along with being culturally acceptable models.



For most of the modelling in this paper, we use the two-room stone and brick masonry shelters (without attic) as the lowest reasonable shelter threshold that meets standards of adequacy and resilience. While it is possible to lower costs further with wood banding instead of cement banding, the technical requirements of using wood banding are higher and the trade-off significantly lowers the longevity of resilience features (due to the potential of the wood rotting over time). We believed two room shelter with minimum size of  $25m^2$  was the justifiable minimum for an average size family of five.

As thinking surrounding the shelter threshold developed, we began to analyse and examine what we called "household capacity" – the economic value of the material, cash, and labour contributions they could make to their own reconstruction against the requirements of different shelter thresholds. Household capacity can be graphed on top of a given shelter threshold to show in a single column what a household had and what they were missing in capital terms of the actual missing inputs.



# Fig 3. Combining Shelter Threshold with Household Capacities

Figure 3 shows the requirements of a two-room stone masonry house with cement banding and an attic, the cost of categories equivalent to those specific requirements, the capacity the house has to contribute to the construction, a combined column showing the missing capital needed to acquire those inputs, and a final column showing the missing specific inputs required to meet the shelter threshold.<sup>2</sup> The dashed lines represent the shelter threshold and a lower shelter threshold based on potential 300,000 NRS that the household might have access to assuming they are enrolled in the NRA's Housing Reconstruction Program (HRP). We will use this modelling and graphic representation of household's capacity against shelter thresholds throughout this document.

# Defining Vulnerability.

From here, we considered how vulnerability is understood and defined with respect to shelter reconstruction. We noted a general failure in the wider discussion around vulnerable populations to clearly define what vulnerability meant in the context of shelter reconstruction. It seemed different definitions of

<sup>&</sup>lt;sup>2</sup> The capacity graph listed here is indicative but not based on an actual household.



general social vulnerabilities competed with an understanding of vulnerability as an (in)ability of a given household to meet a specific and generally fixed economic challenge. A lack of clear definition surrounding how vulnerability was defined also meant that it was hard to sustain a discussion surrounding targeting and modelling vulnerability within communities since there was effectively a lack of common language. Hamro Ghar understands vulnerability more broadly as a contextual dynamic where different factors of a given context mean that certain people are disproportionately exposed to threats – not a general social category determined through demographic characteristics of a household. For example, while a female head of household whose husband is working abroad may be exposed to greater risks of sexual and gender based violence (SGBV), the household does not necessarily have less financial capacity to reconstruct due to the remittances she receives. Indeed, she may actually be better off than other households depending on her socio-economic circumstances. While ethnicity and a whole range of demographics may affect reconstruction capacity, they should not be understood as equivalent to reconstruction capacity. Even though the reconstruction problem is intimately interlinked to socio-economic status, it is in fact different and should not be considered as interchangeable. For our purpose, we undertook the following definition:

Vulnerability consists of different factors, shaped by both market and individual household dynamics, that prevent a household from accessing available assistance and/or providing the necessary inputs required to reconstruct a resilient and adequate shelter without reliance on negative coping strategies that would harm the long-term life-chances of household members.

The merit of this definition is that it does not consider vulnerability as arising from a single factor at a micro or macro level, nor does it understand the impediment to shelter reconstruction as being a result of the lack of a single input – such as a lack of money or technical assistance. It also understands the need for shelter as implicitly linked with the need for future resilience and the need for adequate shelters. The latter consideration is particularly important after the onset of small one room shelters built simply to obtain the Housing Reconstruction Grant (HRG).

Finally, this definition emphasizes the long term risks this process poses to households who rely on negative coping mechanisms to reconstruct shelters – especially to women, girls and marginalized groups who are most likely to suffer from negative coping strategies. Our early assessment data found high levels of indebtedness at an average of 30% interest rates.<sup>3</sup> Even if practitioners successfully facilitate rebuilding resilient and adequate shelters, if the process simply created another range of events and vulnerabilities for the effected population, then the process many not be building resilience and may be subjecting the family to future shocks, poverty, or harm. Households who have already reconstructed their shelters may have significantly harmed their longer term viability in doing so by selling livelihood assets (agricultural materials and livestock), engaging in saving strategies (early marriage and early drop out), participating in unsafe forms of employment (unsafe migration) and most commonly by taking loans at high interest rates. Work within the shelter sector exploring vulnerability needs to seriously consider whether and how often an earthquake resilient shelter comes at the cost of greater socio-economic vulnerabilities.

Based on this definition of vulnerability, we then began to examine different factors at two levels, at the household level and at the communal/market level, that shape many of the reconstruction barriers household experience. We conducted community-wide profiles of households undergoing and struggling to reconstruct in order to create general categorizations of households and communities (for market-level factors).

<sup>&</sup>lt;sup>3</sup> PIN Capacity Profiling, November 2017



#### Market & Communal Vulnerabilities

Barriers and challenges at a communal level can inhibit the reconstruction of entire populations: market dynamics that constrain labour availability, elevated transportation costs due to distance from markets, or limited access to local materials used in construction for example. Communal or market vulnerability are not household-specific factors; they result from market forces that affect a particular group of households within a region. Generally speaking, the consortium identified two broad types of communities:

- Remote communities are farther from market centres, have lower population density, lack adequate infrastructure to cost-effectively transport reconstruction materials, and have less access to other formal financial services. The extent of the economic barrier posed by remoteness is largely determined by a community's distance to roads and larger markets because of the impact this distance has on transportation costs for procurements. Additionally, remote populations are more likely to be inhabited by historically marginalized ethnic groups of Nepal and generally suffer from a range of factors that inhibit their ability to reconstruct resilient shelters. This includes significantly higher market prices, more limited access to labour (skilled & unskilled), more limited access to certain natural resources (sand & clay), limited access to more formal lending institutions, and more limited access to information and state services.
- Accessible communities are close enough to market centres that prices do not vary significantly from other market centres, they have better access to information and infrastructure for transportation of materials, and generally have higher population densities than remote communities. Accessible communities are more commonly populated by diverse number of ethnic groups, some of which may be historically marginalized.

The effect of differential access to markets on the input categories and the overall threshold varies greatly by community. Labour, while more available in accessible areas due to higher population densities, is likely to cost more than in rural areas; however, remote communities are often subject to significantly higher transportation costs for materials that cannot be sourced locally – meaning procurements of CGI, cement, and rebar. Accessible communities should be more likely to facilitate reconstruction than remote communities because they have a lower shelter threshold. Whereas for remote communities, being farther from markets largely means that higher materials transportation costs will lead to higher household shelter thresholds.

To demonstrate the reality of how slight changes in market dynamics can create significant differences in the shelter threshold, consider Figure 4 below which shows price variations for the same type of structure. The data is based on market prices for BOQ inputs gathered within two Rural Municipalities where our program participants are reconstructing. Note that all of the communities are relatively accessible; yet the last two communities, Jautesh and Sairling, are 15-20 minutes walking distance from the road and have higher procurement prices as a result. The price difference between the cheapest and most expensive road accessible communities, Dahaki, and Kaule, is 16% (126,270 NRS, 1,140 USD), a significant variation for poorer families.





When examining the potential impact of distance from the road on the shelter threshold, market dynamics can be even more imposing. Figure 5 shows an average of prices for shelters across the above communities and then factors in cost of transporting the weight of procurements required in the BOQ. Here it is assumed that a porter can carry a maximum load of 30 kg and their rate is based off the average unskilled labour rate of 800 NRS per 8 hour work day. This model assumes the most optimistic scenario for remote communities where they have access to all local materials readily without the need for transportation; in reality, this is very often not the case, especially for sand. Even with these assumptions, the shelter threshold grows significantly with each hour of distance from a road (travel from road head is graphed on the lower access).



# Fig 5. Effect of road access on price (2-Room Stone Masonry with Cement Banding)

This type of modelling of remote communities, comparing shelter thresholds based on communities' distance from roads, allows practitioners to model entire communities and regional vulnerabilities on the



basis of objectively verifiable market data using real prices and shelter designs households have selected. This modelling could potentially be used to profile and categorize Wards, Rural Municipalities, and villages with a high degree of accuracy. This could then be used to target supply chain interventions, additional assistance packages for remote communities, or cater assistance broadly according to the market factors communities are likely to experience.



Fig 6. Cost of shelter based on distance from road

We can also see that market vulnerability is largely dependent on the type of shelter construction planned or used. The same-sized shelter (two room brick) is 262,867 NRS (77%) cheaper on average in accessible communities compared to communities more than 2 hours away from a road. However, it is important to note that many remote communities also have access to local materials and labour sharing systems that might affect the direct capital requirements for shelter construction.

#### Household Level Vulnerability

Profiling individual households' capacities is much more difficult generally because capacities are not fixed but dynamic, and profiling household's socio-economic capacities is prone to a whole range of data collection and methodological challenges. Despite this, it is perhaps worthwhile conceptualizing different shelter capacities against a shelter threshold. Take the following five examples of different household capacities, which we argue represent broad categories or caseloads of households.<sup>4</sup>

<sup>&</sup>lt;sup>4</sup> The following graphs are based on constructed examples compiled from different rounds of capacity profiling conducted by PIN instead of actual households.





# Fig 7. Conceptualizing Household Level Vulnerability

In this graph, we assume the shelter threshold is just under 12 lakh NRS (10,900 USD) for a two-room stone masonry construction with cement banding. Each column represents a general category, or "tier", of household that was identified through capacity graphing and engagement in shelter reconstruction across affected districts. Each tier can be described as follows:

- **Tier 1 not-vulnerable:** These households, despite any challenges & barriers have been able to reconstruct their shelters with or without additional assistance provided by agencies and they were able to do so in a way where the household is not subject to significant long term negative economic consequences.
- Tier 2 vulnerable to long-term consequences of negative coping strategies, non-resilient shelters, lack of adequate shelters: These are households that have effectively reconstructed a shelter, utilizing available government assistance in the process, but the reconstructed shelter either fails to meet standards of resilience, is inadequate in terms of size to be used as a shelter, or has harmed the long term life chances of members of the household through reliance on negative coping mechanisms. In this example, negative coping mechanisms are represented by a large informal reconstruction loan taken at high interest. However, it could also be represented by a household that has simply reconstructed in a non-compliant manner.
- **Tier 3 reduced access to assistance:** These households would be able to reconstruct if they had capacity to understand and utilize the assistance, namely technical and enrolment support, provided through the HRG that provides up to 300,000 NRS worth of assistance to registered households. These households may struggle to access assistance because they lack critical life documentation needed to enrol in the program, may be illiterate, speak Nepali as a second language, lack technical planning support, and/or a better understanding of the program itself that prevents them from fully utilizing the available assistance.
- Tier 4 reduced access to assistance & limited ability to provide necessary inputs for reconstruction: These households are unable to reconstruct their shelters even if they received RHG mandated support. However, they would be able to start/finish reconstruction if they received technical assistance and whatever additional inputs required to for them to reconstruct. These



households often have resources to contribute but not in sufficient quantity to fully facilitate reconstruction on their own.

• Tier 5 - reduced access to assistance & no ability to provide necessary inputs for reconstruction: These households are those that are only able to provide very minimal inputs into their own shelter reconstruction. Often times, these households are fairly easy to identify at an individual level often due to the physical ability of the household and/or social marginalization of the household. However, while often being easy to identify on an individual level, are arguably harder to capture through targeting systems.

In presenting this model it is important to realize that the purpose of presenting these categories is not to imply they are static or clearly defined. As with household's socio-economic status, if communities and households are examined over a 3-5 years post-reconstruction period, they may no doubt fall within different categories depending on when they are actually assessed due to natural changes in socio-economic circumstances. The point of this framework is rather for programmers to begin to conceptualize the different problems, barriers, types of inputs, and forms of contribution that are present among different households within a given community for the purpose of program design. With this information practitioners can use modelling to set realistic levels of assistance in their programming and provide specific categories of inputs through different programming activities. For example, households in Tier 3 who are only in need of technical assistance should not be provided with additional inputs and support on principles of efficiency (that the assistance can be used for other households who do need these inputs).

From community profiling exercises, it seemed that most affected households following the earthquake fell within the Tier 4 category – being unable to complete reconstruction without heavy reliance on negative coping mechanisms despite having some of the necessary inputs. We were never able to profile an entire community early in the process (meaning within six months of the start of the HRP) and communities vary tremendously at a household and communal level. However, in January 2018, at the time the proposal for the Hamro Ghar was submitted, only 21% of households had qualified for the second tranche of assistance.<sup>5</sup> However, it was useful to profile communities in a cluster samples to show the actual rough breakdown between tiers of houses within a singular community. It allowed Hamro Ghar to begin to see how larger community wide capacities could be harnessed for programming purposes.

# Targeting Different Tiers of Households

Something important to consider about the above is that while we have a high degree of confidence in the capacity profiles assembled, we don't believe that they should be used as definitive targeting tools to categorize individual households. While this may be possible and is perhaps worthwhile exploring in other contexts, Hamro Ghar felt some of the modelling required reliance on declarative statements that were too prone to manipulation. Instead, more objective criteria directly related to or impacting a household's capacity to provide inputs and reach the shelter threshold should be used as the basis for targeting. One of the reasons the consortium thought this was because of how easily prone to capture and manipulation targeting exercises can be. The following are several key issues and problems that exist with targeting exercises for development and humanitarian programs in Nepal and elsewhere that were important to consider in the design of targeting methods for this consortium.

#### Entrenched social hierarchies and politicization of development programming

Within this approach the consortium has taken the stance that there are wide range of entrenched power structures within local communities that will seek to extract rents from any development intervention –

<sup>&</sup>lt;sup>5</sup> HRRP Bulletin, 30 January 2018



especially wherein specific households are selected to "win" a high level of support based on their responses to targeting surveys. Targeting lists and standardized systems are well known and understood by affected households in both of our programming areas – despite one of them, Ichyakamana, having received little to no post-earthquake relief or reconstruction programming. The most significant impact of this on targeting for programmers is that any non-objective criteria are heavily subject to manipulation. In fact, programmers observed that households with a high degree of social capital and status often have a noticeably better understanding of how to manipulate targeting systems; whereas households who are socially excluded or from heavily marginalized backgrounds were less likely to understand or manipulate the standard targeting surveys.

For example, questions like "how much does your household spend each month? How much debt does your family currently have?" or "how much does your household earn each month?" would normally be useful in terms of understanding a household's financial capacity to reach the shelter threshold. Early versions of our capacity assessment methodology did in fact include questions like these. The problem is that they again carry an implicit assumption that households have consistent monthly expenditures and incomes and can give accurate statements on this, that they will answer honestly, and that culturally these questions are acceptable to ask and give answers to. So while certain questions can be improved by localizing questions about how household economies actually operate, it's generally too time-consuming a process to be practical for service design and refinement. Ultimately, programmers would still rely on the respondents' honesty instead of objectively verifiable criteria.

#### Socio-economic conditions & remittances are very difficult to quantify

The impact on remittances, a significant source of income for rural families in Nepal and 26.9% of the country's GDP,<sup>6</sup> on a households' reconstruction capacity was one of the hardest parts to quantify. Participation in remittance economies and the net impact of this dynamic on families is too complex to be discussed here – but suffice to say that remittance participation can also constitute a negative coping mechanism by creating indebtedness.

While it is possible to model and conduct household level economic analysis, this felt outside the scope of our current work and capacity. However, such a model or tool would have been highly helpful. It was impossible for Hamro Ghar to measure how much families are receiving from remittances and other sources or how much of what was received was being used for things like debt repayment often incurred in sending family members abroad. Access to remittance economies further problematize the picture because it often meant that an able-bodied family member who could assist in shelter reconstruction was missing but at the same time producing some capital for the family that could be used to acquire inputs. It was also impossible to weigh the opportunity cost of having a family member in-country to help with reconstruction vs. their potential economic contribution from remittance economies.

#### Even strong correlatives to socio-economic status are problematic to use

One way to approach the problem of targeting is by relying on objective criteria that are statistically significant correlatives to socio-economic status. For example, in Nepal ethnic identity and geographic location are often strong indicators of socio-economic status and are supported by the UN's HDI Country Report.<sup>7</sup> However, targeting that relies heavily on the basis of correlatives is often not well received by

<sup>&</sup>lt;sup>6</sup> <u>https://nepal.iom.int/jupgrade/images/stories/CoM/LabourMigration\_for\_Employment-</u> A %20StatusReport\_for\_Nepal\_201516201617\_Eng.PDF

<sup>&</sup>lt;sup>7</sup> http://www.hdr.undp.org/sites/default/files/nepal\_nhdr\_2014-final.pdf



communities who are quick to point out that association with any of these criteria does not always predefine a specific household to lower or higher socioeconomic status. For example, Dalits represent the group with the lowest HDI indicators in the country; however, the reason for this is intertwined with very active processes of socio-economic exclusion and marginalization. Targeting based on ethnicity runs the risk of creating social backlash against these groups, potentially worsening their exclusion and exacerbating underlying conflict drivers. Additionally, it is often rejected and protested by local elites in ways that hamper or undermine the potential impact of programming. As a result, while objectively-verifiable statistical correlatives are useful if they can be programmatically applied within a given context, many of them are simply too problematic to use and provoke self-defeating conflict and controversy surrounding for program.

#### Targeting under Hamro Ghar

In approaching targeting under the intervention, programmers approached the problem based on the above considerations but also with the understanding that our program design only required us to identify Tier 5 households as having "limited to no capacity" to provide inputs. This group would obviously be receiving the greatest amount of support by definition whereas interventions for Tier 4 households involved requiring them to enrol in labour sharing schemes and contributing towards other people's shelters in the form of unskilled labour. This meant that essentially if a household was physically able in participating in a Tier 4 assistance scheme, it was expected. Additionally, the program also planned to provide basic technical assistance, providing households with designs & BOQs accompanied with basic orientations on the RHG program – which should address the major barriers for Tier 3 households.

Tier 5 households, by definition of having "limited to no capacity", were therefore households whose conditions prevented them from participating in Community Reconstruction Groups (CRGs) and lacked access to financial support from other means. The consortium began to graph households as falling broadly somewhere within two axis comprised of: physical ability and socio-economic status of households – both key determinants of a household's capacity to reach the shelter threshold

The first factor examined in targeting was the physical ability of household to provide unskilled labour to their own construction of CRGs due to physical disability or a high ratio of dependents to physically able adults. Generally three groups were categorized based on household demographics of family members currently physically living together:

- a) Households with no physically abled adults between the ages of 18-55.
- b) Households with a high ratio of dependents (children under 18, elderly family members or physically disabled family members) to physically able adults.
- c) Households with no dependents or few dependents.

Along the vertical access, socio-economic status is displayed based on verifiable data and statements. Again, three general categories emerged that were identified for representing different levels of socioeconomic status:

- 1) Households who reported primary and/or secondary source of income was from unskilled labour or agriculture.
- 2) Households who reported primary and/or secondary source of income from skilled labour or who reported having family members within the country sending income.



3) Households who reported having a current or prior bank loan from a formal institution,<sup>8</sup> reported a primary income from a salaried position, or reported having support from a family member working outside of the country.

The purpose of these categories again was not to create an overall scoring system for all households, but rather to create "exclusion criteria" for households who had either physical ability or socioeconomic conditions that clearly meant they had some means to provide some inputs towards their own and others' shelter reconstruction (whether through capital or unskilled labour). Graphically, targeting can be represented in the following way:



The above roughly conceptualizes where different Tiers fall within this targeting scheme. However, the purpose of this approach was not to definitively categorize households in Tiers or to create a scoring system for each household. Rather, "exclusion criteria" were created for households who had either physical ability or socio-economic conditions that clearly meant they had means to provide some inputs towards their own and others' shelter reconstruction (whether through capital or unskilled labour). Then a hard set of "inclusion criteria" were created on condition that they fell within the A1 category. If they did, they were automatically included as Tier 5 beneficiary. Households identified within the A1 or red section of the graph were verified and then included as Tier V households into the program. This left categories B1, B2, and A2 in a general category of people who may also have "limited to no" capacity to contribute. Using additional data from the baseline survey, households were then scored and the highest scoring were included into the program as Tier 5 households. Scoring included a range of factors like whether households had children who were no longer attending school, ethnic background of household, dependency ratio of the household, source(s) of income, lack of critical life documents, and a range of other factors that either constituted a "capacity" or a "lack of capacity".

It should be noted that our targeting was based on budget availability across the two target Rural Municipalities and not on an actual objective economic threshold. Hamro Ghar did revise targets to include more Tier 5 households due to the higher numbers of households we believed had "limited to no capacity."

<sup>&</sup>lt;sup>8</sup> Formal bank loans require strong collateral in Nepal and are difficult to obtain. It was thought that if a household had access to formal loans, they would also have a high degree of collateral and therefore be from a better socio-economic status.



Therefore, enrolling a household as a Tier 5 household was a programmatic assertion about the level of assistance they needed and the programs capacity to provide it – not an objective research or profiling exercise. Therefore, Hamro Ghar did not attempt to quantify the actual number of "Tier 5" vs "Tier 4" because the program was not going to be able to provide assistance in excess of our budgetary limitations.

# Defining Indicators of Successful Programming

During the course of program development, several observations and views became apparent to programmers that were critical in designing our indicators for success:

- a) There were insufficient funds between different actors, the NRA-HRP provided assistance, and households themselves to facilitate reconstruction for everyone.
- b) There were many different activities already developed and being implemented that addressed a range of challenges related to shelter reconstruction but we were unable to compare the impact or opportunity cost of one activity over another.
- c) That "one-size fits all" solutions were not possible in this context given the diversity of the population, markets, and household capacities.

The macro-level problem in any reconstruction context is the trade-off programmers are forced to make between ensuring resilience, adequacy and affordability for households with different capacities. We felt there was a moral obligation to maximize coverage while providing correct levels of assistance to households with different degrees of vulnerability given the lack of funds across reconstruction contexts to address the needs created by the earthquake.

As a consortium, at the start of the intervention we found very few households actually qualified as Tier 3 – mostly due to the NRA imposed deadlines surrounding the program which encouraged people to start reconstruction. At the time of proposal development in December 2017, we observed that reconstruction to date had largely facilitated and helped households that were within a Tier 3 category complete reconstruction, while generally doing little to provide Tier 4 and 5 households with the missing inputs they needed. Many of the Tier 3 households that were assessed in early stages of the program had proceeded to reconstruct in non-compliant or non-adequate ways due to the HRP deadlines. As a result, the potential advantages in terms of efficiency to having a program that addressed and worked with all segments or Tiers of a community were largely missed. Because of geographic remoteness, there are high operational costs in running programs that only facilitate or address concerns of one Tier without addressing the needs of others – especially in areas where population density is low. As a result, the consortium decided to adopt a "whole community reconstruction" approach that measured four indicators across different households identified through targeting for different levels of assistance.

# Efficiency - Market value of activities facilitated by the intervention compared to inputs

First and foremost, Hamro Ghar developed an indicator that captured the efficiency or value for money of any activity focused on shelter reconstruction – regardless of whether it was technically oriented, access to finance based, or involved distribution of cash or materials.



Hamro Ghar's intervention included technical assistance to enable people to access the HRG and during this process we gathered the designs, BOQs and stated capacities of households enrolling in the program. From this it was possible to measure in capital terms the market value of the reconstruction process for project participants. The value of the completed constructions can then be compared against the cost of the inputs provided by the intervention to create a percentage. This indicators accounts for the difference in household's constructions households who need larger shelters will also have larger BOQs. Therefore efficiency of any given approach and set of activities can be shown through the following formula:

$$E = \frac{\sum B}{\sum I}$$

- E = Efficiency of the intervention
- B = Beneficiary BOQs based on local market prices
- I = Value of direct project inputs

Efficiency is therefore a ratio or percentage between the total market value of the reconstructed shelters for a set of beneficiaries over the total cost of inputs required by the intervention. Higher efficiencies will return higher ratios because project inputs and overall intervention design lead to the completion of more shelter constructions. Efficiency as a project indicator can be calculated for sets of beneficiaries or according to different Tiers of beneficiaries. This allows activities and combinations of activities to be compared across beneficiary groups and entire interventions regardless of how diverse the activities are. Practitioners only need to gather participant's BOQs, final reconstruction status, and the expenditure report for implemented activities.

Generally, a one-to-one or zero-sum market return should be easily achievable given that actual inputs or vouchers can be redeemed for their market equivalent in any program. However, it is actually possible to achieve less than this if either the selection of activities, their design, or their implementation is done poorly. For example, the fact that many households used their 50,000 NRS first instalment for purposes other than shelter reconstruction demonstrates how certain activities or support doesn't always directly translate into shelter outputs. Investments can fail to achieve their stated intentions of reconstructing resilient and adequate shelters. Most significantly, the opposite – securing a positive return on shelter investment – was also possible within this context as long as adequacy, resilience, and negative coping mechanisms involved in shelter reconstruction were controlled for.

The main benefit of efficiency as an outcome level indicator is that it opens the field of "shelter reconstruction" to a broader range of innovations from any sector of programming, such as access to finance initiatives or even livelihood programming. Within this framing, market systems and livelihood programming's impact on shelter reconstruction can be better evaluated against more traditional approaches such as the provision of cash vouchers for materials or skilled labour support. Efficiency indicators will always change based on the particular context of any given community and certain interventions are not possible across any given context. However, in adopting a mutually comparable indicator to measuring success, agencies can begin to identify which combination of activities are more successful in facilitating greater market returns. Here it is also possible to recognize that through the combination of specific sets of activities, programmers are likely to achieve greater returns instead of the application of one type of activities (vouchers for materials for example). In sum, this indicator addressed all three above concerns. The remaining three indicators are really intended to also ensure that the intention



of our intervention is also being achieved: the reconstruction of resilient and adequate shelters that doesn't encourage or incorporate negative coping strategies.

### Adequacy (m2 of habitable space / # of occupants)

Firstly, the consortium decided to measure adequacy of permanent shelters by comparing the living space created through any given intervention divided by the number of household members currently sleeping in the house. Something that has yet to be discussed at length is that the above BOQ based analysis very much imposes a "one size fits all" for the purpose of controlling the number of variables analysis. However, the shelter needs of households are obviously based on different factors related to the households. First and most, the size of the household has a tremendous impact on its adequacy for occupants. The livelihoods of the household also play a large role in determining adequacy – with many people in Nepal using their homes to store crops and other agricultural materials. For this reason, shelter adequacy is no doubt both contextual and household specific, but it is possible to measure it simply by measuring the available space constructed per resident. This can then be compared to pre-earthquake statistics or international living space standards, such as SPHERE. Additional adequacy measures can also be incorporated that measure the sufficiency of the shelter in terms of livelihood needs and/or satisfaction. Due to the challenges often presented in reconstruction contexts, it is unlikely that the adequacy of reconstructed households will match pre-disaster contexts. The point of setting common systems of calculating adequacy is a general measure of efficiency and to consider adequacy as a key trade-off driving household decisions surrounding reconstruction.

#### Shelter Resilience (design & technical monitoring)

The resilience of any given permanent house is best measured through the shelter's design and technical monitoring carried out throughout the construction process. Within Nepal's reconstruction context, the RHG already requires periodic monitoring of shelters before additional funds are dispersed. Within the current program, routine technical monitoring conducted by engineers was used to measure resilience rates since technical and resilience checks are best conducted throughout the construction process at different stages. While originally NRA's HRP program had clear criteria for evaluation and approval of tranches that could have acted as a proxy for resilience indicators, it was clear from field observations that these checks were not necessarily technically accurate for various reasons when they were cross examined by Hamro Ghar engineers.

Therefore, houses that are based on designs compliant with the building code, receive the additional tranches from the RHG and pass internal technical monitoring were accepted by Hamro Ghar as being resilient. Generally, shelter resilience is a scale and can be reduced by a range of factors, such as quality of materials. Using the "optimal case" scenario for shelter thresholds Hamro Ghar approved the lowest acceptable legal standards as a sufficient level of resilience, even though from a technical perspective, this may not be ideal or encourage higher levels of resilience in construction. However, obtaining even this level of resilience in shelter reconstruction (or reconstruction at all) is incredibly difficult due to the economic implications of setting a higher standards.

#### Negative Coping Mechanisms (% of households relying on different negative copings techniques)

Negative coping mechanisms can be incredibly difficult to track and quantify throughout a given intervention; however, they are a key way through which often poorer or socially excluded families cope with disasters and conflicts. Other researches have already identified the different strategies through which



households may have tried to reconstruct their households in Nepal.<sup>9</sup> It has been established that indebtedness, trafficking, early marriage, unsafe migration, early drop out, child labour, and other strategies may be adopted by families in order to cope with the financial pressures generated by the earthquake or impoverished contexts in general. What is important to consider within shelter reconstruction work is to track whether negative coping mechanisms are being encouraged through various interventions or whether shelter interventions are not providing adequate assistance to facilitate shelter reconstruction for poorer households without relying on such methods. Within the context of this program, the following negative coping mechanisms were identified at the beginning of the intervention through community dialogue and research:

- Indebtedness (particularly with high interest rates)
- Unsafe migration / trafficking
- Early drop out / early marriage (particularly of adolescent girls)
- Selling productive assets (land, livestock, etc.)
- Non-resilient / non-compliant shelter reconstruction
- Non-adequate shelter reconstruction (to severe degree to access RHG assistance)

This is by no means an exhaustive list of negative coping mechanisms in Nepal but rather a list of the methods program teams were able to identify as different ways through which households attempted to address specific deficits in labour, materials, or cash that are required within the process of shelter reconstruction. Indeed, shelter related indebtedness was the most commonly observed and widely accepted form of negative coping mechanism, which been examined by other researches.<sup>10</sup> Hamro Ghar MEAL teams will continue to assess and track different coping mechanisms households are undertaking in order to address these deficits throughout the intervention. Households that have completed reconstruction will be asked how they completed the process and whether they adopted one or more of the negative coping mechanisms identified throughout the course of the intervention in order to reconstruct their shelter.

# Hamro Ghar - selection of activities and designing the intervention

Much of the intervention and design of activities was predicated on ways through which the consortium could achieve the following:

- a) Helping households identify and quantify their actual needs (Shelter Threshold) through technical assistance and planning.
- b) Ways to unlock and enable households to access the NRA's HRP assistance.
- c) Ways to enable households to acquire necessary inputs to reconstruct shelters, especially means which harnessed potential in-kind contributions from participants.

The first point was important because to help households intentionally economically plan and prepare for shelter reconstruction to maximize the usage of their capacities and make sure they understood the requirements of each design. The second point, enabling HRP assistance was obvious as the grant (roughly 2,700 USD) was a significant contribution towards the construction of any shelter that was neither costed to the intervention or the beneficiary. Both of these were achieved through a technical assistance program that provided orientations to households on the HRP, enrolment support, and planning assistance. Enrolment support was provided to households who were not enrolled in the program due to different

<sup>&</sup>lt;sup>9</sup> See The Asia Foundation's "Aid and Post-Earthquake Recovery in Nepal", <u>https://asiafoundation.org/wp-content/uploads/2017/04/Aid-and-Recovery-in-Post-Earthquake-Nepal-Qualitative-Field-Monitoring-September-2016.pdf</u>

<sup>&</sup>lt;sup>10</sup> See Common Feedback Project Nepal Reconstruction Reports



bureaucratic issues related to the administration of the grant itself. Some people were still waiting to hear about their grievances whereas others had effectively "fallen out" of the program when the household member holding the agreement had passed away. Planning assistance essentially encompassed providing households with custom BOQs for selected designs that also included information on what inputs were likely to cost each household. After this was done, households were then asked what they had to contribute to their own household constructions and how they might use the HRP assistance. We were then able to create capacity graphs for each household to better understand their stated needs.

Early rounds of capacity assessments and graphing used a different modality. Prior to receiving DFID funding, PIN had conducted capacity assessments in two communities in Rasuwa and Sindhupalchowk to assist in designing potential programs. The earlier process of capacity assessments often involved declarative statements about financial capacity and debt alongside engineer measurements of available local materials and salvaged materials. However, using this methodology meant that we were often unsure whether households were accurately self-reporting their own capacities to contribute labour and capital to their reconstruction process. This was particularly the case because of similar concerns surrounding targeting and the perception that PIN's MEAL team was conducting targeting exercises instead of assessments. However, under Hamro Ghar we gathered data after beneficiaries were already selected and enrolled in the program during the process of technical assistance when there was a strong disincentive for households to provide inaccurate information (because it would make technical assistance less useful to them). This allowed for the creation of household level capacity graphs like the one shown in Figure 9.





This graph depicts the capacities of households that we selected as Tier 5 households compared to those identified as Tier 4 households. Based on this exercise, the following can be summarised about the requirements of the average household in each category:



Inputs	Average Capacity				Average Deficit				Percentage of Inputs Missing	
	Tier 4		Tier 5		Tier 4		Tier 5		Tier 4	Tier 5
Skilled Labour	\$	593	\$	84	\$	488	\$	780	10.1%	54.6%
Unskilled Labour	\$	241	\$	232	\$	789	\$	725	25.8%	24.3%
Procurements	\$	434	\$	371	\$	3,221	\$	3,058	10.8%	12.3%
Local Materials	\$	576	\$	375	\$	608	\$	430	50.6%	48.0%
Totals	\$	1,844	\$	1,062	\$	5,106	\$	4,992		

Collectively, these 75 households require 361,000 USD worth of inputs to complete their reconstruction. Households also had an average of 62,000 NRS of debt for shelter construction already, mostly due to the fact some people had started their plinths, and an additional 18,800 NRS of other non-shelter related debt. Interesting to note is that Tier 4 have 57% more capacity than Tier 5 households, might actually be a low estimate because Tier 4 households, as clear from the figure, have a greater ability to mobilize finances (indicated by the fact that they are more likely to have debt and debt in higher quantities) and a greater capacity to contribute to their own and other people's construction through labour sharing schemes. It can be noted that while the capacities are different, Tier 4 households tended to be larger and select larger homes – many of the Tier 5 shelter thresholds shown above are based on one room shelters since it was often a shelter for a one or two person household. From this, it seemed that discussions and models that framed affected households as either "vulnerable" or "not-vulnerable" really failed to support the large number of households who have similar needs for inputs. To further illustrate, if it is accepted that the selected BOQs do not exceed a household's need, a Tier 4 household comprising a family of five has similar economic needs as that of a single-elderly widow in Tier 5. If this is how need is defined, there is actually little difference between them except for the fact that Tier 4 households are more likely to be able to have a greater capacity in general and greater likelihood of obtaining inputs given sufficient time since they can engage in unskilled labour work.

In approaching designing an intervention to address the needs of each Tier, Hamro Ghar provided material inputs up to a value of 50,000 NRS (455 USD) -- the mandated assistance for vulnerable households within NRA guidelines. However, this was only provided on the condition that they were willing to participate in Community Reconstruction Groups (CRGs). Participation in CRGs meant that households had to contribute unskilled labour to each other and to Tier 5 households. Hamro Ghar also provided on-site engineering technical assistance to households and supported the household with Disaster Risk Reduction (RDD) trained masons in exchange for their contributions. Tier 5 households were provided with a much higher assistance in terms of material inputs, but many of the materials could be locally gathered by CRGs in exchange for the benefits they received. Setting correct incentive schemes for participation meant that people were only willing to participate in CRGs if they needed to, as assistance is provided in exchange for significant contributions to other household's reconstruction efforts.

A revolving fund was also established to provide interest free loans of up to 100,000 NRS in coordination with the Rural Municipality, banks providing the HRG, and the beneficiaries. Through a tripartite agreement, beneficiaries were enabled to take up to a lakh of assistance to expedite the completion of the reconstruction. When the final HRG disbursement of one lakh is transferred to the household, the bank freezes the funds in their account and this money is automatically repaid to the Rural Municipality and Hamro Ghar. Both Hamro Ghar and the Rural Municipality have made initial contributions to the revolving fund, which is strictly for the purpose of shelter reconstruction. The hope is that this will reduce the reliance



on informal lending schemes with high interest rates and provide especially Tier 5 households with prefinancing for construction free of cost.

Other programmatic techniques are being piloted in different areas to further maximize the impact of investments by lowering costs. For example, supply chain bottlenecks due to limited transportation services in the region were identified as a major issue and far above market prices that Hamro Ghar could procure. As a result, some CRGs were provided with free truck-rental to simply move their procured materials free of charge at a relatively low cost to the Hamro Ghar project compared to what households would be required to pay. A more complete recounting of the standard operating procedures and incentives provided by Hamro Ghar can be obtained by contacting the programming team.

# Conclusion

We want to emphasize again that the Hamro Ghar intervention is built on a great many contributions, discussions and work developed by other actors working on shelter reconstruction in Nepal and recognize that many aspects of our intervention are not necessarily unique. In particular, Practical Action's work on supply chains offer another example of interesting approach aimed at lowering shelter thresholds and focusing interventions on quantifiable impacts on market dynamics that affect household's capacity to acquire inputs. This document was written with the intention of increasing the depth and frequency at which practitioners engage in modelling, categorizing and profiling vulnerability from a socio-economic perspective to better understand the specific tools developed and deployed to address reconstruction needs. For shelter reconstruction to successfully and efficiently "not leave anyone behind," practitioners need to base our understanding on real world conditions where households have different capacities and needs.

Nepal's reconstruction context poses a great many challenges; most obviously, the macro-economic requirements for shelter reconstruction alone far exceeded the government's and external stakeholders' capacity to meet all these demands. This will almost always be the case with large scale disasters. After the earthquake, 500,000 homes were destroyed and another 250,000 were partially damaged with an estimated cost of 2.35 billion USD in damages to shelter alone.<sup>11</sup> In this sense, available assistance was always going to fall far short of the economic requirements. However, the major failing was not in practitioners' inability to reconstruct everyone's shelter, but to better engage in helping solve as many of the microeconomic problems posed to individual households with respect to the different capacities, contexts, and challenges. The challenges posed by the context are no doubt daunting if we fully understand that many people will suffer for the rest of their lives because of the April 2015 earthquake. In the interests of furthering a collective understanding of the disaster and a diversity of approaches that can be used to tackle reconstruction problems, we conclude by sharing the following lessons and observations evident from our approach and modelling.

#### Need to better understand micro-economic challenges and recovery from a household's perspective.

Hamro Ghar is not the only program or work to examine household level economic barriers; indeed different researches consider cost and what a household reported they needed in order to complete reconstruction. However, we tried to conduct a more in-depth analysis of the economics challenges posed by households and in communities. This work allowed for the construction of models for vulnerability, categorization of different households and market vulnerabilities, insights into targeting systems used to identify vulnerable households, and a way of identifying specific input deficits.

<sup>&</sup>lt;sup>11</sup> Post-Disaster Needs Assessment, p4.



**Using technical assistance to better understand household economies.** Technical assistance featured prominently in different agencies' work following the launch of the HRG and the provision of compliant designs & BOQ as a prominent part of the technical assistance process. However, outside of this consortium's work we are unaware of whether this information was used to construct household or communal level analyses of shelter thresholds and households' capacities. This would have been an excellent starting point to better understand what additional steps and assistance was required to ensure shelter reconstruction was not stalled or delayed.

There is a need for better understanding and models of remoteness as a key determinant of cost for many households. While household level socio-economic analysis is methodologically challenging, market data is much more reliable and can be used to create regional or local level profiles. It is completely possible for better modelling of household and communities based on their distance from roads and market centres to reveal which areas are going to suffer from objectively higher reconstruction costs and then use this data to provide them with additional support. This could have even helped operationalize and define "remote area" provisions for the 50,000 NRS additional assistance based on objective terms.

Start working with vulnerable households from the beginning of the reconstruction process. Our lack of willingness to engage in the question of defining and targeting vulnerability means that they are often left behind. Programmers don't have to wait for several years after the earthquake to start interventions focused explicitly on the most vulnerable. Investments and programming need to imagine the efficiencies in terms of operational costs and programmatic opportunities that can be gained when different Tiers of a population have their respective needs addressed simultaneously. Hamro Ghar program started far too late in the reconstruction process and as a result lost out on the opportunity to help a greater number of people from different socio-economic backgrounds as.

**Need to define and model different categorizations of vulnerability.** When "the vulnerable" were a subject of discussion, who they were and what was even meant by vulnerability was oftentimes unclear and ambiguous. Discussions tended to conflate a wide range of different vulnerabilities to mean the same thing even though the resulting effects of different factors created different deficiencies and challenges in the process of shelter reconstruction. There is a need for future work on post-disaster vulnerability to model and categorize different types of vulnerabilities that can be operationalized into targeting systems and assistance.

There were a wider range of vulnerable households than imagined. There is a clear difference in terms of capacity between a single elderly household and a family of five – our own model recognizes this. However, there were many poor families that did not fit the general conceptualized "vulnerable beneficiary" who was visually identifiable as critically vulnerable. Many households in our Tier 4 programming had similar needs and challenges to those we classified as most vulnerable, just a different likelihood in being able to recover and acquire assets. Vulnerability models, including our own, need to do more to grapple with questions of socio-economic status instead of just physical vulnerabilities, such as physical ability and age.

**Need to understand which tools address which problems.** Practitioners need to have a better understanding of specific barriers and how programming activities address them. There was extensive discussion and design of "technical" solutions to problems of resilience that, while useful in improving resilience outcomes, did not address the lack of inputs required for households to reconstruct. There was



difficulty in separating out these different approaches and often more pertinent questions regarding how households were going to acquire inputs and how interventions planned to provide them.

**Importance of measuring impacts of investments.** Money will always be the pertinent limiting factor in reconstruction work and it's possible within this sector to objectively quantify the value or the number of people served through investments. This can help create and incentivize innovation that will encourage approaches and tools that maximize investment potential to target and reach the greatest number of people. Over time this information can be used to refine and tailor interventions to best fit particular challenges related to reconstruction.

There were too many implicit costs within Housing Reconstruction Grant in terms of technical assistance and planning. The requirements of accessing assistance are high if you exhaustively list them out and think about who was ultimately enrolled in the program. Requirements to have all relevant critical documents, enrol and work with formal banking institutions, understand technical compliance requirements, financially plan according to a multi-staged process of construction, and liaise with the NRA engineers have high implicit costs. The affected population is largely rural, many speak Nepali as a second language and/or are illiterate, many have historical patterns of marginalization and low levels of trust in state bureaucracies, and many never had a bank account before. The difference between the social capital needed to utilize assistance and the social capacity of households was too large. Figure 10 shows the planning and financing implications of the RHG model – a reconstruction approach that is technically and economically intensive in terms of planning requirements. Much of our own assistance as a result was dedicated towards facilitating access to this program. Additional investments could have been freed up had the RHG program had lower requirements in terms of these capacities.





**One size fits all models of assistance are not equitable or fair to vulnerable households.** After completing the early versions of community capacity graphs, the range of differing needs and capacities within any community became clearly apparent against the RHG that provided a "one-size-fits-all" model of assistance. Regardless of how difficult it is to provide different levels of assistance to different categories of households, practitioners need to develop better, more objective ways of doing so if post-disaster



vulnerabilities are to be addressed. In a world and a country that is deeply unequal, providing the same level of assistance and actively preventing and barring agencies from providing what households were missing has meant that we sacrificed our ability to help people who could have otherwise been supported.