



# Impact of Nepal's Earthquake on Food Security and Livelihood of the Urban Poor

Food was the main concern for the earthquake affected. Shelter was secondary to food issue.

Nepal was shaken by devastating earthquakes in 2015. The major temblors occurred on April 25 and May 12. These were followed by many aftershocks, many with new epicentres. Although, destruction of life and property was reported only in 14 of the country's 75 districts, every sector of the Nepalese economy became affected. According to the Post Disaster Needs Assessment (PDNA) carried out by the Government right after the earthquake, even sectors like tourism and education were affected. All this is undoubtedly going to have a huge impact on the agricultural sector and, subsequently, on food security. Among the productive sectors, the losses and damages in the agriculture sector are calculated to be 28,366 million Nepalese rupees. These losses are second only to the tourism sector. Overall, the earthquakes are expected to increase the population in poverty by an additional 2.5 to 3.5 per cent in 2015-2016. This translates to at least 700,000 people added to the list of the poor. This situation is most likely to significantly push a large chunk of the population towards food insecurity.

Nepal has always remained committed to ensure food security to its people. These commitments were evident in The World Food Summit, 1996, The World Summit for Children, 1990, The UN General Assembly of 2000, which proposed the Millennium Development Goals (MDGs), and The World Summit on Sustainable Development, 2002, where countries recommitted to the MDGs, to name a few. The Interim Constitution of Nepal, 2007 recognised every citizen's right to food sovereignty as a fundamental right and this recognition has been given continuity in the Constitution of Nepal, 2015. Similarly there are many legislative provisions which stress on food security aspects of the people of Nepal, for example, the Competition Promotion and Market Protection Act 2007, Food Act 1966, Black Marketing and Few Other Social Offence and Punishment Act 1975, Consumer Protection Act 1997, and Land Act, 1964.

Nepal's commitment to MDGs is also a pledge to achieve food security. Nepal is one of the 189 countries committed to fulfill the MDGs. For that alone, the country formulated various plans and policies, apart from incorporating those goals in its mainstream plans and policies. The Tenth Plan (Poverty Reduction Strategy Paper) (2002/03-2006/07), in particular, and other plans, in general, all incorporated the MDG goals. The Three Year Plan (TYP) (2010/11-2013/14) also continued to channel government investments in areas necessary to fulfil the MDG commitments. All these efforts did come out with positive results with Nepal making significant progress towards meeting the MDGs, an achievement that was internationally acclaimed. Nepal was able to do so despite being bogged down by huge problems, like the armed conflict, political instability and similar hindrances.



The MDG goals related to ensuring food security for the people are:

Target 1A: Between 1990 and 2015, halve the proportion of people whose income is less than one dollar a day;

Target 1B: Achieve full and productive employment and decent work for all, including women and youth and

Target 1C: Between 1990 and 2015, halve the proportion of hungry people.

All these targets fall under Goal 1: Eradicate extreme hunger and poverty.

The target for percentage of population living below United States Dollar(USD)1 per day was achieved in 2013. Similarly, the percentage of population living below the national poverty line also decreased over the years and reached 23.82 in 2013, only marginally below the target level. Target 1B as a whole was unlikely to be achieved in the stipulated period, the exception being the target regarding the proportion of employed people living below USD 1 per day- which looked possible to achieve. Nepal had already achieved Target 1C in 2013.

Having fulfilled the MDG targets on employment, poverty and hunger, Nepal should currently be making efforts towards consolidating the MDG achievements. But, this does not look possible now because of the earthquake. Work on the remarkable progress may be bogged down by reconstruction efforts. . As already mentioned, each and every sector of the Nepalese economy has been affected by the quake in 14 of the 75 districts. In fact, there is a high possibility of these MDG achievements sliding down.

The recent earthquake has also restricted the agriculture sector's potential to address food and nutrition security further. The initially-estimated 2.1 per cent annual growth rate of agriculture and forestry GDP in 2014/15 has now been revised to 1.7 per cent. Many factors, after the quake, are likely to affect agricultural production negatively. Most of the food grains in the rural areas were destroyed when the houses collapsed. Immense losses in the number of livestock have been reported too. The human resource that should be engaged in agriculture during the sowing months of June and July was diverted towards finding shelters and reconstruction. This clearly means a loss in agricultural production next year. Female headed households in affected regions demand special attention especially if they are mired in poverty. This pushes members of such households to food insecurity. The food security situation has never been satisfactory in Nepal as it is and the earthquake is going to leave a lasting impact.

## Survey findings

A survey was undertaken in Bhaktapur, Lalitpur and Kathmandu districts of Kathmandu Valley to assess the impact of the earthquake on food security and livelihood of the urban poor.

### *Profile of respondents*

The selected respondents were from the urban poor engaged in informal labour with no fixed income. They were engaged in various occupations like agriculture, daily wage labour, carpentry, wood carving, carpet weaving, rickshaw pulling etc. Almost 48 per cent of the respondents were male, around 53 per cent were female. Almost 7 per cent of the respondents were in the age group of 15-24 years, 15 per cent in the 25-34 years group, 27 per cent each in 35-44 age group, almost 25 per cent in the age group of 45-54 years and 26 per cent in 55 years and above. Almost 48 per cent of the respondents were illiterate, while seven per cent had taken informal training- just able to read and write. Seventeen per cent of the respondents were below SLC (high school graduation certificate) while the remaining 28 per cent were either SLC or above. As far as marital status is concerned, 82 per cent were married, three per cent were unmarried, two per cent divorced and 13 per cent of the respondents were widows/widowers. The average household size was approximately five members.

### *Most pressing post-earthquake concern*

The survey shows that the most pressing issue was food. Almost 56 per cent of the respondents stated food as their basic concern. Shelter was also a problem, but it was secondary to food concerns. It was a problem only to 31 per cent of the respondents, which is low compared to the number of respondents who stated food as their major concern. For some of the respondents i.e. for nine per cent, education was also a problem. The other issues like health and livelihood issues were not a major concern for the respondents.

The most pressing issue of the respondents, i.e. food, was analysed on the basis of the four pillars of food security.

### *Availability*

The availability of food is evaluated against the production and distribution of food in the surveyed areas. The agricultural land in these areas has been occupied for unproductive purposes like erecting temporary shelters for the earthquake affected people. Focus Group Discussion (FGD) carried out in Sankhu also pointed out that there was some damage



to the existing irrigation system. All these are going to have a direct impact on the production of crops which in turn is going to affect the availability of food. Another important thing to consider is that the farmers in affected districts have been preoccupied in unproductive activities (doesn't necessarily mean unimportant, but these activities came around as a result of the earthquake) like coordination with various organisations, helping the community or looking after sick family members. Such activities have prohibited them from carrying out their actual occupation, i.e. farming. The positive side to this is that social capital and networks were used to a large extent. The strength of a community can be seen when people draw on this capital to solve common problems like meeting the requirement for food, shelter etc. Here, we have also considered the loss of standing crops and seeds to evaluate the impact on production and distribution. A few of the respondents reported that they had lost their standing crops and seeds. There was damage to maize, potato and millet, the standing crops at the time. The seeds of rice and wheat, that were yet to be planted, were lost.

Similarly, the loss of stored cereals was considered in order to evaluate the impact on the distribution of food and on household food intake. There was a high amount of loss of stored cereals including maize, wheat and millet. There was loss in stored rice and potato also. Among the respondents, 41 per cent, a substantial number, reported losses of their livestock post-earthquake, which could also affect availability of food.

### *Accessibility*

It is not sufficient for food to be available. It has to be accessible to the people. A majority, i.e. 85 per cent, of

the respondents met their food requirements by purchasing it from the market. A few, i.e. 10 per cent, of the respondents were still fed by their relatives with whom they were living with after their own shelter got destroyed. The rest of the respondents either still relied on the relief distributed or on household production.

Since a lot of respondents were relying on food available at the market, food accessibility should also be analysed looking at the purchasing power of the people. Almost 40 per cent of the respondents reported a decrease in their income levels, post-earthquake. A few (i.e. three per cent) reported a decrease in their income levels by almost 40 per cent. Almost 53 per cent of the respondents (majority from Bhaktapur) said that the damage in infrastructure had affected their occupation. Fifty one per cent of the respondents said that there is a decrease in demand for their work, post-earthquake. The decrease in income level will have a negative impact on the accessibility of food for these respondents. These respondents were mainly reliant on sporadic labour opportunities resulting in varied income in different months. Moreover, many were of the opinion that the opportunities to earn were not many after the earthquake. Not many of the respondents had other additional sources of income (only six per cent received remittance). The trend among Nepalese migrant workers returning home to be with their families to help them and support them in times of crisis may be the cause behind the decreasing remittance for these respondents. This created more pressure on the livelihood of these people.

The number of working members in the family was the same before and after the earthquake. Forty seven per cent of the respondents had only one working member in their family, while 48 per cent of the respondents had two. If the average family members are taken to be five, this number might be considered low and may also explain the poverty that these families are mired in. While income levels were decreasing for many, the food prices were not stable after the earthquake. Almost 98 per cent of the respondents reported a post-earthquake increase in food prices .

Though the accessibility of food for any family may be sufficient, it still may not be same for all the members of the family. Following the general tradition in our country, female members of the household generally eat after all the male members have eaten. But the survey found out that all the family members of almost all the respondents ate most of the meals together. Hence, there was no question of difference in the accessibility of food between the male and female members of the family.

### *Coping Mechanism*

The coping mechanism adopted by the respondents in view of decreased income was to reduce the number of food intakes. Forty nine per cent of them reported reducing their meal numbers. While 80 per cent of the respondents used to eat three times a day before the quake, this number went down to 63 per cent post-earthquake. While 17 per cent reduced the number of their food intakes, another 17 per cent borrowed food and 17 per cent more relied on cheaper options. A few resorted to reducing the quantity of food or even consumed their seed stock.

Another coping strategy taken by the respondents was to reduce their protein consumption (mostly referred to meat, milk and milk products consumption). The number of respondents who consumed protein once a month and once a week had increased, while those consuming it twice a week had decreased after the earthquake. This might explain the increase in the numbers in once a week or once a month categories. Though almost 53 per cent of the respondents had reported that damage to their capital infrastructure had affected their occupation, only 35 per cent of the respondents had done any evaluation of their loss and its impact on their livelihood.

It is generally assumed that people who have lost their source of income may be forced to sell their essentials in order to meet their basic needs. This would make them more vulnerable by further reducing their resilience. It is generally thought that in such a situation people will use up their savings or sell their valuable or personal possessions to meet their requirements. But, the survey did not indicate any such situation. Almost all the respondents (i.e.99 per cent) of the respondents said that there was no need for them to sell their possessions or assets. Only three per cent had used up their savings to meet their basic needs. This may be attributed to the relief

**The coping mechanism adopted by the respondents was reducing their food intakes.**



materials being distributed in the earthquake affected areas. The FGDs carried out in these areas indicated that for a certain period of time, not only their food requirements and need for shelter were met by relief provided by different organisations and individuals, but even their health needs were looked after by them.

Though income had decreased, the respondents had not changed their occupation. They were either unaware of the opportunities or simply did not have confidence to change. Many were engaged in occupations that required some amount of skills, like wood carving, carpet weaving and other craft. So it was very difficult for them to switch jobs now as new crafts require new skills. Only 30 per cent of the respondents from Bhaktapur were engaged in more than one occupation, but all the respondents from Kathmandu and Lalitpur were engaged in only one occupation.

### Utilization

The coping strategy adopted by the earthquake affected people is bound to affect their utilization of food. Nutritional failures among people will prevail in such a situation, particularly among children. Utilisation also depends on the education level of the person concerned. So, looking at the literacy levels of the respondents (48 per cent were illiterate), the choices of food, which will subsequently affect nutrition, can be thought of. They would not care for nutrition in their food intake to the extent that they would sometimes even consider eating biscuits or junk food (like Wai Wai, a popular pre-cooked noodle in Nepal) for lunch and dinner.

The ability to utilize food also depends on access to water and sanitation. Low utilization of food mainly results from poor hygienic conditions and inadequate sanitation facilities. The survey showed a positive picture in all the districts in this aspect. All the respondents had access to water, whether it was



**The ability to utilize food depends on access to water and sanitation. The survey indicated positive scenario in this regard.**

public tap water (82 per cent), piped water into the house (14 per cent) or from the well (four per cent). Generally, the destruction and disruption of water supply has a negative impact on women and girls as they are the ones responsible to provide water for household activities and other uses. They will have to fetch water from a greater distance and their work burden will increase. But, the survey shows that the average time taken to access the source of water was a little less than two minutes (1.78 minutes to be precise). The nutritional level, as well as health of the respondents, depends largely on sanitation factors. The survey indicated that only a negligible number of respondents, i.e. 0.83 per cent, defecated in the open. While 50 per cent of the respondents had their own facilities, 49 per cent were using shared toilets. The average time taken to reach the toilet was only one minute.

This could probably explain why only four per cent of the respondents reported illness, post-earthquake. But 53 per cent of the respondents said that they were not satisfied with the health services.

### Stability

Another food security component, stability of food, is bound to get affected by any natural disaster. There will be disruptions in the supply as well as access to food. The survey findings confirm that the availability of and accessibility to food were negatively impacted as a result of the earthquake. The fluctuations in economic factors, like income and food price fluctuations, have created further imbalances. Similarly, the coping mechanisms undertaken by the respondents and the utilization aspects show that food stability had been disrupted.

### Key Findings

- Food was the most pressing issue among respondents followed by the need for shelter.
- Agricultural production after the earthquake was affected negatively as the agricultural land was mostly used to erect shelters and the farmers were engaged in other activities, post-earthquake.
- The loss of standing crops, loss of seeds and loss of livestock are going to affect the production, and thus, the availability of food. Likewise, the loss of stored cereals will affect food distribution.
- Though food was available in the market, the prices were increasing.
- All the respondents ate most of the meals together. There was no difference in the accessibility of food between male and female members of the family.
- The main coping strategy was to reduce the number of food intakes. Decreasing protein consumption was another adaptation mechanism.

- Occupation remained the same for almost all the respondents.
- Almost all the respondents said that there was no need for them to sell their possessions, assets etc.
- Access to water and sanitation was satisfactory. Affected people did have access to water through public taps. Similarly, the sanitation facilities were also not bad.
- The availability of and accessibility to food have been negatively impacted as a result of the earthquake. Fluctuations in income and food price (economic factors), and also coping mechanisms have disrupted food stability, thus affecting food security.

## Recommendations

Strong political commitment at the highest level is a required precondition to improve food security and livelihood issues, not only in and around Kathmandu Valley but also in other districts affected by the earthquake. It may also be noted here that addressing food insecurity and livelihood issues is a herculean task and, therefore, may require more than one stakeholder to tackle it. It should be addressed through coordinated and concentrated efforts of the government along with the private sector, other development partners and national and international non-governmental organizations. The recommendations listed below are measures for the immediate, medium and long terms.

### Immediate measures

As an immediate action to ensure availability, the options include food aid, use of the public food distribution system, putting in place an effective market information and price monitoring system. Similarly, access to food can be ensured through cash transfers by ensuring zero corruption, providing meals in specific clusters and running a food-for-work programme specifically focused on public construction. Specific interventions regarding ways to meet the required protein, vitamins and minerals need to be shaped for post-quake needs regarding

utilization. Health and educational programme at the community level can ensure utilization. To ensure stability in food consumption, any shortfall should be monitored and opportunities should be created in the labour market to reduce/prevent hunger.

### Medium and long-term measures

As medium and long term measures to ensure availability, steps should be taken to improve productivity and production by providing extension services and strong technical support. Investments should be made in infrastructure, especially modern irrigation systems, to improve input and output market conditions. Access could be ensured through skill development, promotion of earning opportunities and improved financial services. To address the utilization aspect, safe drinking water should be provided, health education at the community level should be initiated, food handling and storage should be improved and implementation of food safety regulations ensured. Similarly, to ensure stability, diversification of household economic activities should be facilitated, insurance markets should be improved, safety nets should be introduced and access to credit facilitated. There is also a need to strengthen the natural disaster response measures and promote national self-reliance in food through appropriate land use policies. ■

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