

# Case Stories of Reconstruction

(Stories from Dolakha, Dhading, Nuwakot and Kathmandu)

Under NSET-Baliyo Ghar Program



Prepared By:



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## Syankhu Built Safer and Better

Syankhu, once a beautiful village of Chilankha, Bigu Rural Municipality, Dolakha turned into debris after Gorkha Earthquake in April 25, 2015. Among the 125 houses in the village Mr. Prem Kumar Shrestha, 33, resident of Syankhu saw only 8 houses withstanding after the quake. Shrestha was at Lamabagar, distant village in Dolakha at the time of ground shakings. Mr. Shrestha says, "I along with my 8 friends were at Lamabagar, a 3 days walking distance village from Syankhu, being furious we came back to our village and saw the misery of our families. It took more than 5 months to clear the debris." Once turned to a pile of debris, Syankhu now has a different face. Earthquake resistant buildings can be seen being erected here and there, some houses are under construction. Mr. Shrestha and his friends are busy engaged in reconstruction at their locality.

### Syankhu in Memory

Being situated in the lap of rocky high mountains, Syankhu is a gateway to Aalampu and Bigu for those who travel northern most areas of Dolakha. 88 years old, Mr. Tek Bahadur Shrestha remembers his village, "It was a beautiful village with almost same houses standing with lots of greenery around. The terraces of land down the village used to add more beauty for the visitors. Most of the houses were 2 storied. But now, we have heard that there are no provisions of making the 2 story stone houses."

### Intervention of Baliyo Ghar: Inspiration to rebuild Syankhu Better and Safer

Soon after the earthquake, Mr. Prem and his friends built temporary shelters in the village but were perplexed to start rebuild Syankhu. They heard about the government grants, provisions of house approval, compliance but no one was there to guide them, neither there were anyone to clarify the governmental grant disbursement process. 11 months after the ground shakings, NSET-Baliyo Ghar team reached to the earthquake hit areas to support earthquake affected people and guide them with technical ideas of Build Back Better. Along with other denizens of Dolakha, Baliyo Ghar team assisted Syankhu dwellers join in the page of government grant receiving process. After a month, as per the demand of existing masons of Syankhu, Baliyo Ghar conducted mason training in the village where 30 masons including Mr. Prem Shrestha enhanced their technical knowledge and skills. Lal Bahadur Magar, Coordinator of Chilankha Reconstruction Committee said, "we were very pleased to receive mason training through which our masons got idea to construct earthquake resistant houses. Only after the mason training, the process of rebuilding Syankhu started." In the last days of November 2017 more than 75 houses were constructed in Syankhu and some were under construction. Relatively, it's encouraging progress in reconstruction.



Figure 1: Syankhu Village before the Gorkha Earthquake. Pic: Prem Shrestha





Figure 2 : Syankhu Village Being Built Safer

## Lal Bahadur's Initiative to speed up the pace of reconstruction

Mr. Lal Bahadur Magar, Coordinator of Chilankha Reconstruction Committee is also one of the masons who has received 7 days mason training through Baliyo Ghar. After the training, group of trained mason started rebuilding the flattened houses. They used to receive wages amount Rs. 450 per day. To get higher wages, the trained masons started to leave their village and get engaged in construction works at Singati, a market hub of northern Dolakha and Charikot, district headquarters.



Few other social organizations started to help Syankhu residents rebuild their houses and more masons were trained. But the trend of receiving trainings and leaving the village for better wages didn't stop. Witnessing the slow pace of reconstruction and masons escaping to other places, Mr. Lal couldn't let himself stay indifferent.

As an influential social leader, he knew that villagers couldn't defy his voice hence, he called a meeting and appealed the trained masons not to escape from village leaving the birthplace being laid down. Mr. Lal in consent made a decision that those who would leave the village before the reconstruction is over, they would never get the subsidies provided from rural municipalities and ward committees rather they would be behaved as the deceivers.

After this decision, the trained mason returned back to their village and the new masons didn't dare to leave village but engaged themselves in reconstructing Syankhu. Mr. Lal says, "Had I not done this, the pace would have been in tragic condition, but now all the villagers are happy to receive the second tranche of government grant and we are pleased to show our progress among the neighboring wards. Still we are lacking skilled man power to accomplish reconstructing our village in time." Mr. Lal gives credit to NSET-Baliyo Ghar for providing technical assistance in rebuilding Syankhu Safer and Better.



Figure 3: Mr. Lal Bahadur Magar at his village Syankhu



## Trained Masons Promoting Safer Reconstruction in Northern Dolakha

Mr. Sheer Bahadur Tamang, 49, resident of Yarsha Village-ward 5 of Bigu Rural Municipality found constructing his father-in-law's house in Yarsha. The 2 roomed house was about half constructed, 4 masons were working till 6 PM in the cold days of winter where Sheer was guiding the fresh masons as per the knowledge gained during 7 days mason training conducted under Baliyo Ghar Program. Sheer remembers, "I built 4/5 houses before Gorkha Earthquake, few got completely collapsed and few got partially damaged, feeling regretful, I was seeking the earthquake safe technical ideas which BaliyoGhar did fulfilled."



Figure 4: Trained Mason Mr. Sheer Bahadur Tamang

Mr. Tamang thought something good was happening in his life during the training course. "We used to stay till late evening and discuss with technical professionals about the idea of building earthquake resistant houses; Personally I had a kind of thirst to know the better idea." Now his thirst has been quenched. He is taking lead in building many more houses in Yarsha. According to him, in Yarsha 30 masons got trained through Baliyo Ghar and they all are now involved in constructing the flattened house during Gorkha Earthquake. He is encouraging fresh masons to take participate in the mason training being held in his locality and also convincing house-owners to help masons build quake safe homes. In fact, as he says, he is now paving the way to build safe communities. He claims,

"After the training I have constructed 8 houses till date, I am confident that those all

houses can resist earthquakes. Our houses would not collapse again."

Interestingly, his daily wage was Rs. 250 before the earthquake but soon after he enhanced his skills through mason training course, now he is earning Rs. 700 per day. Not only Sheer, most of the trained masons have been paid a high daily wage which has helped satisfy family members' need too.

### Young Purna dedicated in building Safe Loting!

5 kilometers north to Yarsha, one can reach Loting Village which almost got flattened during Gorkha Earthquake. There lives an energetic young guy, Mr. Purna Bahadur Thami, 27 who is now one of the trained masons in Loting. Though he is in his late twenties, he has the experience of 12 years in housing construction. As he says, he used to go construction sites with his father where he learnt the ideas of building private houses, bracing the stones and placing them in the wall. He built more than 20 houses before the 7.8 earthquake but most of them got flattened to earth. He says, "Earthquake has taught us a great lesson, now we can't repeat the mistake by building conventional houses."





Figure 5: Trained mason Mr. Purna Thami, in his own under construction house

Purna is also a Baliyo Ghar trained mason who is involved in building 3 houses at parallel including his own house. As he claims, he has applied all the knowledge and idea that he learnt from Mason Training. He says, "I learnt lot of things, shape/size of the house, inserting the earthquake resistant elements like; band, stitch, vertical reinforcements, timber treatment, binding the components of house etc., placement of doors and windows which now I am applying in the houses I am involved in."

"Not only in the houses I am involved, but on the way and around when I see houses being reconstructed, I stop there to observe if the houses are built in right way or not", Purna added. He had the idea

about norms of building earthquake resistant houses during the mason training.

Most of the houses in Loting are being built from the local resources like mud, stones and timbers. Cemented band is being used in majority of the houses, where some are using timbers as the band and stitch. But masons and house-owners are facing problems in timely supply of those resources. As stones are not found nearby, Purna and his colleagues have to reach Durung Khola, a kilometer away from the village to collect and bring stones. "It takes long time to bring those stones to the site, we need to carry in our back, we need to reach Singati, a market hub of northern Dolakha to bring cement," he says.

Despite of lots of difficulties, Loting and Yarsha villages, part of Bigu Rural Municipality-Chilankha have been built safer and better. Chirinjivi Bhusal, Social Development Officer of NSET-Baliyo Ghar says, "though the villagers are facing lot of problems in building their flattened houses, the dedication, commitment and encouraged masons are helping build resilient community. To guide them in regular basis, we often visit every site at least a week which eventually is helping encourage house-owners and involved masons."





Figure 6: Earthquake resistant house being built in Loting, Chilankha



## Baliyo Ghar's OJT, A Turning Point for Doma Sherpa



Figure 7: Doma smoothing the plinth band in her own house

Doma Sherpa is one of the few girls in Khartal, a village of Bigu Rural Municipality-05, Chilankha Dolakha who remained unmarried in her age of 23. Neither of the pals of Doma can be found in their fathers' house. Early marriage is common in Chilankha but Doma has committed to marry only after she could earn her own by being engaged in some skilled works. She lost her father 7 years back and mother found to be busy in agricultural works, kitchen works and other agrarian activities. She experienced the shaking of Gorkha Earthquake and witnessed her house collapsed. As she says, she was wondering about the idea how the houses could withstand during the ground shakings. Now she has the answer.

Doma has been seeing from her very childhood days that only males involved in laying walls in house but now she is in the field with shovel, bell and other tools. After

the involvement in 50 days On-the Job Training (OJT) conducted by Baliyo Ghar in April 2017, Doma turned to be a trained mason who can now lay walls and lead other masons.

### Simultaneously: Household works and Reconstruction

On 2<sup>nd</sup> Dec 2017 morning, she was found smoothing the foundation beam of her own house at Khartal-Chilankha. 2 other masons were busy in making cement mortar and one digging and throwing soil / stones in the basement. Doma speaks less and by nature she is laconic. When we started talking, with an amusing smile she said, "I couldn't speak at all with strangers before the OJT, but now I have learnt to speak." Soon she had to go to her kitchen in temporary house nearby, we followed her. She managed woods for fire to heat water in order to cook a cock to feed the co-workers involved in rebuilding her home. "Mother and other members are busy in harvesting millet so I have to look after both at kitchen and site today," she said.

In her under construction house, Doma family have deployed 4 more masons and among the four, 2 of them are trained masons. Doma said, "Due to the lack of trained masons and conflicting rumors about the earthquake resistant house, we couldn't start rebuilding our house for 2 years, but after I was trained through Baliyo Ghar's OJT, I took the initiation to start rebuilding our house." During the training Doma learnt the idea and techniques of building earthquake safe home. She said, "It was not a surprise, the main thing I built during the OJT was confidence which I am using in



Figure 8: Doma washing dishes in a break





Figure 9: Doma in front of a house that was built during BaliyoGhar's OJT implementation where she was trained for 50 days

our own house right now." Through the April 2017's OJT, 6 new masons were developed in Khartal and now they all are contributing in their own village rebuilding it better and safer.

Doma's family is very pleased to have a trained mason in their own family and to have started build earthquake safe home. Doma's mother Chyangbuti Sherpa, 52, found near to her temporary shelter said, "We didn't dare to start rebuilding our house because we didn't have any idea about the earthquake resistant house but after the OJT training conducted near to us and having our own daughter one of the trained masons,

confidence came to do it." Chyangbuti is now confident enough that their house would not collapse at all in future earthquakes.



## "We can use the Stones, Doors and Windows of the Flattened Houses"

The April 25 Gorkha earthquake and several big aftershocks have knocked down some 469,539 houses partially or completely. The damaged areas in central Nepal were occupied by the rubble of solid wastes like stones, bricks and timbers. These materials were discarded as solid wastes for some months and still some take the rubble as burden. Most of the villages have cleared the rubbles by throwing them in ditches.

Few of them embraced those materials for future reconstruction works and Mr. Saroj Khadka along with his wife Ms. Sakhari Khadka, residents of Dhakrebot, Chilankha-Dolakha are few of those persons to utilize the rubbles. Khadka family has used the stones, doors and windows from their previous flattened house in rebuilding their house.

### A man who survived by "Drop, Cover and Hold"

Mr. Saroj is physically disabled person who served more than 30 years teaching the students of northern Dolakha. He has his right leg with abnormality but walks a long bending his whole body with support of stick. He has reached 100 of miles on his foot despite of his disability. He is now a retired teacher who served being Head Teacher for 15 more years in his own village. His students have become doctors, engineers and senior army officials and hence he stretches his lips towards his ears when he recalls his contribution for education. He is an influential social leader in Chilankha Dolakha.



Figure 10: Mr. Saroj Khadka drying millet in his yard

April 25, 2015 came as a dark day for him, as his well-structured 3 buildings came down to the earth. Gorkha Earthquake has taught him a great lesson, which now he is spreading in whole Chilankha. He remembers, "I reached to Aalampu, Bigu and Kalinchowk soon after the devastating earthquake just to understand the miseries of villagers, help them consoling in the traumatic condition. I couldn't stand myself in my own home with my family as I am cherished very warm in this region. In these days too, I am visiting every households to encourage them to use the stones, timbers and locally available materials to rebuild their homes."

"Locally available construction materials can be used to build seismic resistant houses, not necessary to use concrete, which may interrupt our culture and identity," he says, "I came to know all

about these after the mobile team of Baliyo Ghar came to our village to guide us build safe houses."





Figure 11: Mr. Saroj and Mrs. Sakhari Khadka in their daily life

He is the man who survived only because of doing Drop, Cover and hold at the time of earthquake. At the time of ground shaking he was at the second floor of his house with some work. When his house started to spin, quickly he entered the space beneath his bed. He heard some stones and wood pieces falling in the bed and inside he prayed to his God wishing for his and family member's life. He remembers, "My wife was at downstairs with son in-law and daughter and I was there alone in the second floor. I heard them crying but couldn't step downstairs as I am physically weak. I had heard about the "Drop, Cover and Hold" in the school, I did the same. I know hadn't I dropped inside my bed, I would have been killed by stones of my roof wall that fell during the

shakings and definitely I would not be here right now talking to you."

### "Pick the construction materials from Rubbles"

"We had three houses made for 3 brothers but we were not separated legally. We were much worried after all the houses got flattened. For more than 18 months, we coped with sun and rain under the temporary shelter. But after the intervention of Baliyo Ghar, I came to know that the stones also resist earthquakes and happened to use the stones of flattened house. I advised my brothers to do the same. Also, we had very artistic windows and doors which after minimal maintenance were used to build this house," Mr. Saroj says showing towards his house.

Now, Khadka family is happily living in their seismic resistant house. But Saroj is not limiting to his house though he is now retired, he goes to the neighbors and next village to promote safer reconstruction using the locally available materials. He says, "It's my duty to make villagers aware in regard to earthquake safety, preparedness and safer reconstruction."





Figure 12: House of Khadka family, two houses have been separated by certain gap in between.



## "Parma System" helping rebuild Bigu Faster and Safer

*Parma System* is a social practice of giving and taking help in labor or services turn by turn (Alopalo) while carrying out major social, cultural and agricultural activities. The practice of *Parma* is a culture of performing each other's work turn by turn collectively. This is mostly prevalent in rural and agricultural societies.

This system is firmly prevailing in the remote areas of Dolakha where people seem busy rebuilding their flattened houses. While reconstructing houses people from neighborhood form a group and start constructing houses of people within the team. The cycle of one 'Parma' is accomplished after building the houses of all the members of group or working the man-days equal to the man days the people have contributed. On an average around 10 masons including labors work in the Parma System for around 20 days to complete a typical two roomed stone masonry house i.e. around 200 men are employed in constructing a house and hence the house owner has to contribute this very number while constructing the houses of the people who were involved earlier. This very system of Parma is contributing a lot to the people in Bigu of Dolakha to accelerate the reconstruction campaign in Bigu. And definitely, it is helping build Safer and Better Bigu as all of the members working together are trained masons.



Figure 13: Trained mason Akkal Bahadur Magar with his wife in front of their house

One of the trained masons in the team is Akkal Bahadur Magar, who is a carpenter, bar bender and mason. He looks after his saw mill at morning and evening but at day time he is involved in masonry works. He says, "We passed 2 years of miseries, but now our village is turning to be seismic resilient as we are vigorously working to erect our flattened house. We are a 15 membered team who has almost finished our own houses and shifted to build the villagers houses. Had not we formed a team to work together the reconstruction of our village would have been in sorry condition. Team has strengthened us to work collectively, helped convince the house-

owners to build houses according to the knowledge we received during mason training and speed up the pace of reconstruction."





Figure 14: Group of women harvesting millet in front of newly built house of Akhhal Bahadur Magar and Antari Magar

When we reached to the house of Mrs. Antari Magar in Gyalbasingh-Bigu, Antari was harvesting millet with her colleagues. She said, "Males are reconstructing our village through Parma System which our culture of doing agricultural works is the foundation. As our labor sharing culture in agriculture seems successfully implemented and works get done, Parma system in rebuilding our flattened houses has indicated the consistent and robust reconstruction." As Antari claims, no doubt, the houses being reconstructed and rebuilt seem alike in terms of structure and earthquake resistant elements injected in. It's been possible only because all of the mason members in a team had developed their skills through

mason training. Baliyo Ghar Program is organizing such mason trainings and awareness campaigns in Bigu.

## Timber Banded Houses Adding Beauty

Bigu Village, one of the wards of Bigu Rural Municipality is deprived of transport facilities, though rough road reaches there. Being connected with China border, it's one of the most remote areas of Northern Dolakha. Bigu dwellers need to travel more than 5 hours to Singati, a market hub for their daily essentials. Carrying cement, steel rods and other construction materials to the village is a tough task for them and the trained masons know it's not necessary to use the concrete to rebuild quake resistant houses. Hence, they have promoted to use locally available materials like timbers, carved beautiful stones etc. House-owners are convinced in using timber bands in their house after some treatments which can be seen in almost all houses. The black painted timber bands, smooth and equal sized stones placed within, colorful doors / windows and roof with blue zinc sheets have added the beauty in every house settled in Bigu.

"We learnt the idea about the bands, vertical reinforcements, treatment of the timber before using them and using locally available materials while reconstructing a house during the mason training. And of course, we have imparted the skills and knowledge among house-owners and promoting to use the timber band with treatment," Dabal Bahadur Shrestha, a Baliyo Ghar trained mason told. According to Dabal, timbers can be cured by using Black Japan paint, Coal tar and other anti-termite chemicals.

772 houses were fully or partially damaged during Gorkha Earthquake and now 214 houses have already built in last days of December 2017. "Almost 30 percent of the people of Bigu either live in Kathmandu or America or European countries, so I think only 70 percent of total flattened houses would be rebuild here. But quite satisfying fact here is, all the houses supposed to be rebuild will resist future earthquakes," Chief of ward-7, Mr. Nimchiri Sherpa said.





Figure 15: Family of Shanti Bhujel in their newly built house



## "Integrated Settlement" Aalampu, Being Seismic Resilient

Aalampu is one of the villages (Ward 6) in Bigu Rural Municipality-Dolakha which earlier was a single VDC in itself. The village is an alleged integrated settlement, one can see its whole landscape like glued in the chest of enormous hill. Almost 600 houses were destroyed by the Gorkha Earthquake and now temporary shelters made with zinc sheets dominate the beauty of inclined hil.

On the lap of the hill, sits Mr. Purna Thami along with his family. His wife Mrs. Sukhamaya Thami along with her colleagues was in the kitchen garden picking the vegetable stuffs. Their only son has reached France for abroad study and 2 daughters have been already married. One of them is in her postpartum period hence has arrived to her father's home for rest. This family stayed beneath the temporary shelter for 2 years but now happily living in a seismic resilient house. But the newly built house have been received after a long haul as Purna says.



Figure 16: House of Mr. Purna and Sukhamaya Thami

"We are now back to our normal life but to arrive here, we have passed so many dark days and night. We remained under the plastic tunnel prepared for vegetation for more than 2 years. It took 1 and half years to know what exactly the seismic resilient house is and another half year to build this house," Purna said pointing towards his house.

Purna is not only the one who was unaware of the earthquake resistant houses and the government grant receiving procedures. Many of the villagers were perplexed in the traumatic circumstances. Building a seismic resilient house to receive government grant was like a suspense for

them. Soon after the intervention of Baliyo Ghar Program, their confusion and state of suspense was eradicated. Mrs. Shanti Thami, neighbor of Mr. Purna said, "After a group from Baliyo Ghar came to our doors, we came to know about the process to receive government grants and after a mason training was conducted in this village, we came to know what exactly was an earthquake resistant house would be." As she says, earthquake resistant house is not a big deal, just they need to involve trained masons in rebuilding their homes.

Mr. Purna informed, all of the earthquake beneficiaries started rebuilding their home after the first mason training held in Aalampu in the last days of 2016. He doesn't blame government for anything. He knows, the government grant worth Rs. 3 Lakhs is not the compensation to the beneficiaries rather it's just a help to inject earthquake resistant elements in the house. "And of course, building earthquake resistant home doesn't cost high as supposed and rumors spread but a least a trained mason is most," he added.





Figure 17: Girls of Aalampu carrying stones on their back from a distant stream to construct their houses

Till January 2018, in total 597 houses collapsed, 113 houses have been rebuilt, 280 are under construction in Aalampu. Among total beneficiaries, 525 have received first tranche of government grant, 261 and 108 have received second and third tranche of grant respectively. In this scenario, Baliyo Ghar Team has conducted 4 mason trainings enhancing the technical skills of 100 more local masons, 3 On-the Job Trainings (OJT) producing 24 new masons who are now contributing to build Aalampu Better and Safer.



Figure 18: Aalampu Village being built safer and better



## Ward Committee's Directives ensuring Safer Reconstruction

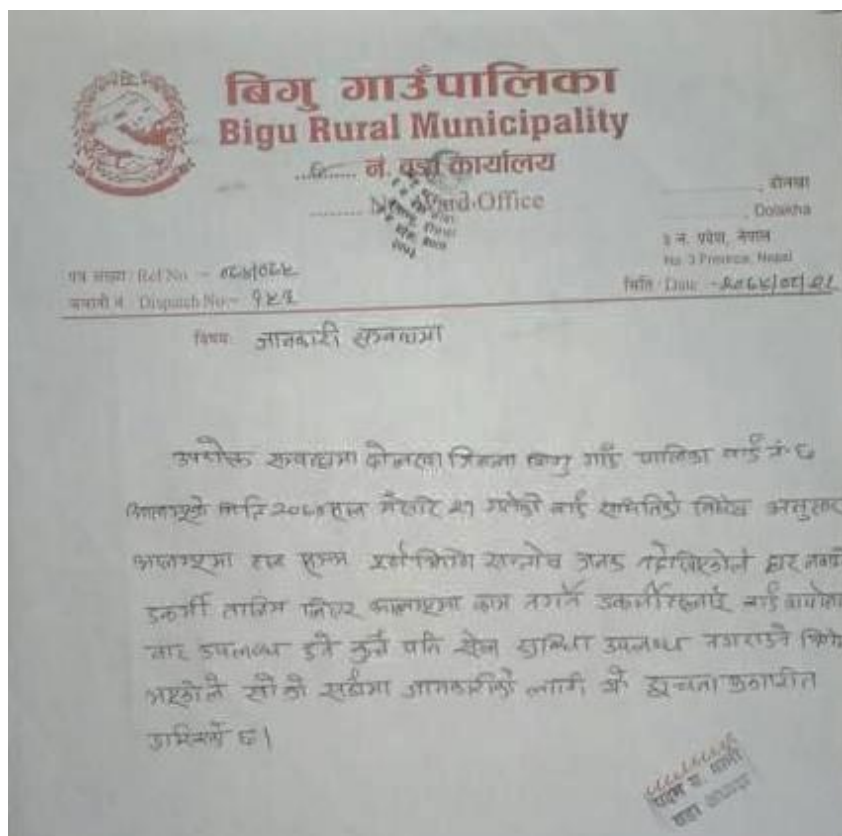


Figure 19: Decision minute of Bigu Rural Municipality Ward-6

Though within encouraging progress in reconstruction, wages have created some problems in Aalampu. Masons were provided with Rs. 300 before the mason training where wages have been increased to Rs. 500-600 after the training. But this amount didn't please the masons hence they started leaving the village to Charikot and other areas for handsome wages which eventually hampered in the pace of reconstruction. After some months the trend of masons couldn't be stopped, Bigu Rural Municipality ward -6 committee directed masons not to leave village after participating mason training. Committee urged them to contribute in reconstructing Aalampu first and only then they could settle their own. The committee warned masons to get prepared to be deprived of ward subsidies and privileges if they would leave village citing to

get better wages. This decision helped house-owners who were waiting for their house get reconstructed using the trained masons. "And interestingly it increased the pace of reconstruction and making Aalampu a resilient village. As far I am informed some other ward committees in Bigu are also following the decision of ward 6," Social Development Officer of Baliyo Ghar Program working in Aalampu, Mr. Krishna Bahadur Moktan said.



## Dream Of House Comes True for A Person With Disability Residing in Laduk, Dolakha

As we reached Laduk village after an hour's motorbike ride from Singati Bazaar on a dusty and bumpy road, Tapendra Subedi, 35, was moving about a local teashop with the help of crutches.

The moment we met him and had introduced ourselves, Subedi, with tearful eyes, thanked the Baliyo Ghar programme for fulfilling his dream of rebuilding his house flattened by the 2015 Gorkha Earthquake. To express his gratitude to the Baliyo Ghar programme, beaming in happiness, Subedi offered juice to each of us and insisted that we accept it.

### Tragic road accident in Koteshwor



Figure 20: Mr. Subedi standing at teashop nearby his house at Laduk

Subedi is a disabled person from Laduk of Bigu Rural Municipality, in the northern part of Dolakha, some 60 kilometres from Charikot, the district headquarters. Around 10 years back, he was a normal person living happily with his wife in Kathmandu. He worked as a helper at a private school in Jadibuti.

While still serving at the school, he had a tragic road accident in Koteshwor that left him inflicted. To make matters worse, his spinal cord injury was not immediately known. Subedi, who was rushed to the Tribhuvan University Teaching Hospital after the accident, was discharged by doctors the very next day following treatment for minor leg injuries. But he continued to suffer while the cause of his ailment remained undiagnosed for long despite consultations with scores of doctors at various hospitals in Kathmandu.

Later, it was revealed that he had sustained severe spinal cord injuries in the accident. By the time the problem was diagnosed, it was too late. In spite of spending a lot of money and time on treatment, his injuries were not fully cured. Now a steel rod has been placed in his back.

### Lost father during treatment

Mr. Subedi can neither sit nor walk. He is able only to stand and lie down. In an equally great misfortune, he lost his father as his treatment was ongoing. While he faced stress and trauma following his accident, his father's demise robbed him of all the care and financial resources for his treatment.

Subedi's life is now fully dependent on others as he can hardly move. His physical condition is an extra burden on his wife, who is the sole breadwinner for the family. Currently, his wife is in India with their two daughters as part of her employment. She has been sending him money. Overwhelmed by his emotions, Subedi shared, "The accident has taken away all the joys and colours of my life."

### Survived Gorkha Earthquake but lost home

The April 25, 2015 earthquake was another severe blow to Subedi's already tormented life as it devastated his house. Luckily, Subedi and his family members survived. When the quake struck, he



was undergoing treatment at the seventh floor of a private hospital in Kathmandu. He safely came down to the ground immediately after the tremors stopped.

His family members, who were at their house in Laduk village, had managed to flee while the ground was still shaking. The earthquake forced his family of five including three daughters to live in a temporary shelter. In the midst of their sorrow, the NSET/Baliyo Ghar programme came as a savior, rekindling Subedi's hope for owning a house again, which he had given up earlier.



Figure 21: Newly built house of Tapendra Subedi at Laduk, Dolakha.

### Baliyo Ghar fulfilled dream of rebuilding house

It's been around a year since Mr. Subedi moved into his newly built house after living approximately for one-and-a-half years in the temporary shelter. Owing to his disability and poor economic condition, Subedi had lost his hope that he would ever rebuild his house despite getting a government assistance of Rs 300,000 for the purpose. According to him, the government grant was too little and not easily accessible considering the criteria required to be fulfilled.

The Baliyo Ghar programme chose Subedi as one of its On-the Job Training (OJT) beneficiaries and assisted him in building an earthquake resistant house as part of the OJT component. Subedi



first met Shambhu Ram, a social development officer for Baliyo Ghar in Laduk village, and asked for assistance in rebuilding his flattened house. Ram initially discussed the request with the community members and leaders and then the Baliyo Ghar programme office in Dolakha before proceeding with the proposal.

Considering his physical as well as economic condition, the Baliyo Ghar programme selected him for the OJT in tune with the set criteria. The project was the first of its kind in the village.

Following approval of the proposal, reconstruction of Subedi's house was carried out with close monitoring by Baliyo Ghar technicians. Subedi provided the required construction materials to the technicians and masons on time although it was a very challenging task since they have to be transported all the way from Singati Bazaar. Two workers employed by Subedi and six trainee masons deployed by NSET constructed the house in exactly 50 days. Including Subedi, a total of 1,183 beneficiaries were eligible for the government grant for reconstruction in Laduk village. A total of 382 houses have been reconstructed in the village so far. "Life under temporary shelter was difficult as we tolerated extreme heat in summer and extreme cold during winter. The rainy season made it worse," said Subedi. "Harsh weather conditions and poor accommodation under the temporary shelter had made living like a hell."

Subedi's happiness knows no bounds to get to live with his family in a newly constructed house that can withstand future earthquakes. "Baliyo Ghar programme gave me a ray of hope in my life," he says. "As told by engineers, my house has all the features required in a quake-resistant house." The Baliyo Ghar programme has not only given him a safe house that can withstand future tremblors but also enhanced his knowledge of safe reconstruction techniques. He learnt about it from the NSET mobile team initially and from technicians involved in rebuilding his house later while he closely observed the building techniques.

Subedi takes pride in sharing that he is now able to teach others about safe construction techniques. Being the first house to be built in the village as part of the OJT component of Baliyo Ghar programme, many people from the village visited his house while he briefed them on the construction process.



## Shambu Ram: An engineer of Laduk folks!



Figure 22: Mr. Ram at a teashop at Laduk village.

Shambu Ram is a Social Development Officer of NSET/Baliyo Ghar program. As part of his job, his main role is to make aware, orient and sensitize locals on earthquake risks, earthquake preparedness and provide technical assistance as well as motivate them on earthquake resistant construction.

### New experience of working with new people, new areas

After joining Baliyo Ghar program, Mr. Ram was deputed at Laduk village, ward number 4 of Bigu Rural Municipality and he has been still working there for the past 21 months under Singati Local Reconstruction Technology Center (LRTC). Mr. Ram is an ethnic Madhesi hailing from Gadimai Municipality of Rautahat

District. He completed his high school as well as bachelor's degree from Rautahat District and he also briefly worked there for a Non-Governmental Organization. However, working in hilly region such as a remote mountain village like Laduk was very new experience for him where he encountered with an extreme craggy terrain, cold weather and culturally and linguistically different people. Having been born and raised in southern plain of the country, he had no previous experiences of working and living in the hilly areas at all.

"As I landed in Laduk village, there was neither smooth road nor I had any motorbike. Although, Baliyo Ghar program offered me a motorbike, I did not get then as I did not have driving license. As part of conducting orientations and mobile team service, I have to travel vast areas of village on foot. It was just a nightmare for me then," he shared, adding, "Though I felt some difficulties in my early days of job, it took me very short time to get adjust with new environment, conditions and people".

### Settled in new environment

As the days past, he became fascinated with the fresh air, chill weather and the friendly people of the remote village. His friendly behavior, dedication to the job and soft-spoken voice also contributed in making strong bond with the local people. He is now fully adjusted with the local environment and almost settled there. He has been living there with his wife after renting a house and he is extremely happy man now.

"I have been living here for the past 21 months. My lifestyle is as same as the locals have. I hardly leave the village except the occasions like big festivals such as Dashain and Chhath. I am always available for support to the people whenever they feel need," Mr. Ram said. His daily routine has been to visit the various localities of the village, meeting with the people, conduct training to masons, conducting orientations to house owners on earthquake risks, preparedness and safe construction practice, inspecting the under-construction houses and providing basic tips them in making the houses an earthquake resistant one, among others.





Figure 23: Mr. and Ms. Ram working at their vegetable field

Mr. Ram has understood the mindset of the local people very well and it also made him very easy to deal with them. “I found basically two types of people here. Great majority of them are very open minded and helpful. A few of them are unsociable too. My responsibility as social development officer is to convince such people,” he shared, adding, “I told them to build a house incorporating earthquake resistance elements as Nepal is in high risk of major earthquakes and weak infrastructure cannot withstand earthquakes”.

Although, he underwent a turrent time initially as some of locals dubbed him as a fool when he told them that earthquake does not kill people rather weak structures do. Now they have fully internalized the fact following a series of orientations conducted to them. They are now well aware on the fact that building strong house is essential so as it can withstand the future earthquakes and minimize the human casualties.

According to him, he and his mobile team first prepares a plan for a month with the help of LRTC.

The planned activities include numbers of house owner’s orientations to be conducted, number of mason trainings to be carried out and number of mobile team field visits among others. And they execute the activities as per the monthly plan.

As part of mobile team field visit, he has reached even the most remote part of the village. “Once I reached Bhurung of Laduk village, locals were surprised as well as pleased after seeing me there because no outsider had visited there before. As I saw locals building houses, I provided them some basic tips and techniques of building earthquake resistant house,” Mr. Ram shared.



Figure 24: Mr. Ram at ward office of Bigul Rural Municipality 4, Laduk



## House reconstruction progress

In Laduk village, a total of 188 houses have been reconstructed and reconstruction of 94 houses are underway out of 1183 houses to be reconstructed. Among them, 1024 house owners have received first tranche of government reconstruction grant while 277 received second tranche so far.

According to Mr. Ram, reconstruction activities are severely hindering due to insufficient masons in Laduk. NSET/Baliyo Ghar has trained a total of 107 masons so far in Laduk village and the number is just a tip of iceberg considering the number of houses to be reconstructed within limited time frame.

## Close bonding with locals

Except living there in a rented house, his wife has also grown the vegetables like potato, onion, chilies, lettuce and garlic in a land plot provided by their Landlord.

Mr. Ram also occasionally helps his wife in farm works. Although he is a non-technical person, he is always ready to help people at any time by providing technical tips to the best of his knowledge on construction of strong and earthquake safe houses. Visiting different sites of village and providing counseling to the local house owners on safe reconstruction is his everyday routine. Rest of time, he sits in ward office of Bigu Rural Municipality-4 where service seekers frequently visits seeking various services including information on reconstruction issues. He even provides counseling to them on earthquake risks and need of safe reconstruction practice. He is residing at a rented house right next to the ward office building. He is always available for them as locals come to meet him in his room before and after the office time seeking help. Locals consider that Mr. Ram is a complete package for the solution of all the problems regarding the earthquake risks and reconstruction issues. This is why locals call him an engineer. Mr. Ram is not merely a Baliyo Ghar program officer, he has now gained a status of a local of the village due to his continuous presence at the village as well as his close bond with the locals there.



## Mason training changed Puskar Thami's construction approach



Figure 25: Mr. Puskar Thami busy working at a house in Lamidada village.

Puskar Thami is from Kalinchok Rural Municipality-4, Lamidada of Dolakha District. He is a trained mason by profession. He has been working as mason for the past 15 years.

Mr. Thami was busy working at a construction site of Shamser Bahadur Karki at Narmi tole of Lamidada as we reach there. Being a lead mason, he was marching a troop of 11 persons including masons and laborers. Mr. Thami has been working 24/7 ever since the reconstruction campaign kicked off in the village some on year ago. He has neither fallen ill nor even has taken the rest a single day thereafter.

Like many of us, during the 2015 Gorkha Earthquake, Mr. Thami also lost his house. He and his family of six luckily survived the scare

though. When the earthquake struck, Mr. Thami was building a wall at nearby village. As soon as the ground shaking stopped, he rushed to home from his site as he could not figure out status of his family members. But he found all his family member safe as they had managed to flee from the home as soon as it started shaking. However, the earthquake severely damaged his two-storey house with stone masonry. As he was making plan to remove the second floor of the house damaged by earthquake. But an aftershock struck on May 12 flattened the entire house. After the earthquake, Mr. Thami and his family stayed around 9 months under temporary shelters before moving into new house.

### Gorkha Earthquake taught lesson

Thami community is considered very rich in professions like carpentry, masonry etc. He also acquired the masonry skills from his parents. He entered into the profession from very small age with his friends. In his professional life prior to Gorkha Earthquake, he had built around 60 houses and almost all of them were tall structure with stone masonry. They were mostly two to three-storey houses. He predicts that the Gorkha Earthquake might have flattened almost all the



Figure 26: Mr. Puskar Thami at work at building site in Lamidada village.



houses he built before the earthquake and even if there are still standing, no houses are appropriate to live in. It is because they were not constructed incorporating earthquake resistance elements. Now, he realized that those houses which were previously built by him were incapable to withstand even moderate earthquake. The Gorkha Earthquake has taught him a good lesson. He believes that he is a changed person now.



Figure 27: An under construction house at Lamidada where Mr. Puskar Thami is being involved in rebuilding.

## Mason training changed construction approach

Aftermath of the Gorkha Earthquake, he came to know that a mason training was scheduled to be organized at Sigati Bazaar of the district. Mr. Thami got an opportunity to have a training on earthquake resistance construction after the 2015 earthquake. Then he joined the training program. With view to contribute on post-earthquake reconstruction need National Society for Earthquake Technology-Nepal (NSET) organized a mason training where he also got an opportunity to participate in.

Mr. Thami found the training very useful to build earthquake resistance construction and he had never got such training previously although he had participated in a training organized to teach basic construction skills like, building wall, carrying out plaster among others. The previous training, however, had failed to teach him basic things like techniques of building earthquake resilient house and appropriate height/storey of building with stone masonry. Mr. Thami found NSET/Baliyo Ghar program's 7-day mason training very useful in terms of building earthquake resilient building. He learned various things about Earthquake such as why it occurs? How can we be safe during earthquakes? He also understood that it's not earthquake which kills people but the manmade structures do. Apart from this, he also enlightened with various other safe construction skills. The training taught him important tips like why and how to make foundation beam, plinth beam, corner band, sill band and lintel band etc of a house. Likewise, it also taught him appropriate ways of making



pillars/columns, beams and others for an RCC buildings so that an earthquake resilient building can be built. According to Mr. Thami, the mason training has changed him. It has changed his approach of building houses. He has been applying the earthquake resistance elements now in rebuilding earthquake flattened house in accordance with the knowledge acquired from the mason training. The engineers have not made any complaints about his way of construction so far.

### **Mason Training boosted economic status**

Prior to earthquake, Mr. Thami had only built a total of 50 to 60 houses during the period of 10 to 12 years of his career as mason. Mr. Thami shared that he has been getting contract of building just 3 to 4 houses in a year. Mr. Thami even used to go outside of the district and even to India to find the other kinds of jobs where he used to get daily wage of Rs. 400 to 500 for the job. In just two years' period after the earthquake, he has accomplished the construction of more than 50 houses.

It is because the construction rate was very low prior to earthquake while after the earthquake there are thousands of houses being built or to be built. He has become extremely busy person these days as there has been high demand of masons like him for the reconstruction houses devastated by the earthquake. He is not only getting more jobs now, also increased the daily wage by two fold and started getting daily wage of Rs. 1000. He is earning more than 30,000 in every months now. He is very much satisfied the way he is working as the profession has contributed in his earnings as well. The earning has contributed in his family expenses like payments of school fees of children, expense for daily essentials as well as in his monthly savings.

For this, he gives credit to mason training by NSET/Baliyo Ghar. According to him, had he not gotten opportunity to learn the techniques and skills regarding earthquake resilient construction, he would not have been getting the mason's job as easily as he is getting now.

### **Increased social prestige too**

As the reconstruction activities are progressing rapidly in his surroundings and nearby villages, the demand of trained mason like Mr. Thami is also very high. House owners are making request and offering contracts him for reconstruction of their houses. But he is not able to fulfill the demands of all the house owners. With is hard work, honesty and decent skill of earthquake resistant construction, Mr. Thami has able to gain high respect among the locals and engineers in the village and beyond.



## Parma system helps accelerate rebuilding Thami village



Figure 28: A view of Dampha village.

At a time when there is widespread criticism regarding the post-earthquake reconstruction process and progress, the story of a small Thami village of Dolakha District is quite opposite though.

Dampha is a small settlement belonging to Thami community of Babare Village, Kalinchok Rural Municipality ward number 3. Twenty six Thami families are happily living in the village. The 2015 Gorkha Earthquake and subsequent aftershocks had devastated the entire settlement and not even single house was standing there. One elderly man was also died during the disaster. Around three years' period after the 2015 Gorkha Earthquake was quite a forgetful for them as they had to go through a turrett time under the temporary shelters. However, three years after the

earthquake, the reconstruction of all the 26 houses have been just completed in this village.

Babare is predominantly a Thami village located some 60 kilometers away from Charikot, headquarters of the Dolakha District. The 2015 earthquake has damaged around 1199 houses in the village. Although the reconstruction progress of the Babare village is tottering around 35 percent, the reconstruction of Dampha settlement has been virtually accomplished.

Nevertheless, reconstruction of Dampha settlement could not be started right away after the earthquake due to various reasons including procedural delay by the NRA. Local's anticipation of government reconstruction grant also caused delay in rebuilding process. Apart from that, lack of knowledge on earthquake resistance construction was another hindrance. NSET/Baliyo Ghar program, however, helped to overcome the human resource crunch for earthquake resistant construction as it provided trainings to existing masons. It paved the way to go ahead with the reconstruction. The strong bond among the Dampha community members proved a successful reconstruction in the Dampha. Apart from the reconstruction process, the entire members of the settlement had stayed together under temporary shelter for approximately after one month of the earthquake.



Figure 29: House of Man Bahadur Thami in Dampha village.



## Mason Training enhanced masonry skill



Figure 30: Mr. Ashok Thami and his under construction house.

As we reach Man Bahadur Thami's house at Dampha settlement, he and other male members of his community were about to leave for construction site. They were rebuilding together a total of four houses in nearby settlement as they had recently got a contract for construction of four houses.

Man Bahadur Thami is one of the skilled masons of Dampha community. He is in mason profession for past 6 to 7 years. Man Bahadur Thami completed the reconstruction of his house as part of Parma system and moved to the house some three months ago. His house is unique in the remote Thami village as it has been built with reinforced concrete vertical member which is placed on the outer face of wall at corners and junctions. According to him, he built this in

line with the tips and knowledge he acquired during a mason training conducted by NSET/Baliyo Ghar program in the village around 15 months ago. His house has been a model house in the village. "During the training, I learned about various new techniques like how to make foundation beam, sill band, Lintel band, plinth band, corner stich, selection of stone for stone wall among others. It has helped widen my knowledge on safe construction practice," he said.

## Parma system fulfilled house dream

The Parma system means reciprocal labor exchange system where a community members exchange laborer in rotational basis for agriculture, construction and various activities that is carried out by the households. As part of rebuilding of earthquake flattened house, each members of the community got involved in rebuilding the houses one by one in tune with the NRA guideline. It took them almost one year to complete the reconstruction of the settlement.

"We divided the male members of each household into three groups and divided the role for house reconstruction as per their skills. One group was assigned to prepare foundation, second group was group of carpenters and assigned for preparing wooden materials required for new house and carrying out the tasks of roofing while third group was a group of masons and assigned to build the wall of the house", said Manbahadur.

## Mason training played role for speedy reconstruction, earnings

The Thami community is considered rich in traditional skills like masonry, carpentry and others. Majority of male members Dampha community are working as construction technicians. They acquired such skills from their ancestors. The skills proved very handy in reconstructing their house devastated by the earthquake. However, NSET/Baliyo Ghar program mason training helped to harness their traditional masonry skill. The mason training not only helped them in rebuilding their own house, but also helped earn more daily wage. "Prior to Gorkha Earthquake, we have been getting daily wage of Rs.600. After the mason training on earthquake resistant construction, we have been getting wage Rs. 1000 per day. Contract based work has been helping to earn even more as



we have been working on a contract basis after the accomplishment of Dampha settlement, “Mr. Ganga Thami of Dampha said.

### **Chandathali too adopts Parma system, acceleration in reconstruction**

As we reach Chandathali, local were busy working at the house of Mr. Ashok Thami. Ashok Thami and 21 others were prepare ring concrete mixture for upper tie beam. The group of 22 household members had been jointly working in rebuilding the houses of community members through Parma system since around one year.

Reconstruction progress of Chandathali, another settlement of Babare village was also more or less same with the Dampha settlement. Out of 22 houses of Thami households, reconstruction of 18 houses has been accomplished so far. They have also followed the same Parma system to rebuild the houses devastated by the 2015 earthquake.

Ashok was in Malaysia as part of foreign employment during 2015 earthquake. He returned back to Nepal some 2 years ago and got mason training through NSET/Baliyo Ghar program’s on-the Job-Training (OJT) around one year before. He has been working in construction sector since then and has involved in their construction of 14 houses so far. He has become a complete mason now and capable of building earthquake resistant house. The masonry skill has helped him earn good amount of money. He has even decided now not to go back Malaysia until the completion of reconstruction campaign of earthquake flattened house as there has been lot of job opportunity.

The house of Lal Bahadur Thami at Chandathali was also built as part of same Parma system. He moved to his new house July this year. He has received second tranche of government’s reconstruction grant and is in process of receiving the third and final tranche. “Had my house was not built as part of Parma system, it would not have been accomplished the construction of my house till date.



## Dalit woman's house dream fulfilled



Figure 31: A newly built house of Sita Biswakarma at Lamidada.

Sita Biswakarma is from Kalinchok Rural Municipality-3, Lamidada of Dolakha District. She is farmer by profession has been growing maize, millet and paddy in a small land plot that she owns in the village. Likewise, she is also keeping livestock including goats and cattle. On the top of that she also occasionally work as farm laborer. Her major source of livelihood is agriculture and daily wage.

Ms. Biswakarma was working in her own agriculture farm and plucking millet as we reach there. When Gorkha Earthquake struck, she was alone in the house working on the farm. Her husband was then in Kathmandu as he used to work as mason while her three children were on the way to Charikot, headquarters of

Dolakha District to attend the higher education examination. Though her two-storey house collapsed in the earthquake, she escaped safe as she was outside of house. As she rushed to her home after the earthquake, she found her house flattened by the earthquake. At that moment, rather than being worried over collapse of her house, she was anxious on failing to trace her husband and children due to communication breakdown. She later came to know that her husband, working at Halchowk, Kathmandu, survived the earthquake while her children who were on the way to Charikot from village safely exited from the bus and stayed in safe location.

A total of 24 households are residing in her settlement where mostly are from Dalit community. In the initial days of aftermath of earthquake, Sita and her fellow villagers stayed jointly under the temporary shelters. In the meantime, various helping hands also approached and provided them daily essentials like food, water, cloths, and tarpaulins among others. Only after the May 12 aftershock, they got separated and this situation continued until April 2017.



Figure 32: Ms. Sita Biswakarma busy working in her house at Lamidada.



## New house brings happiness

Ms. Biswakarma and her family members moved to their new house built incorporating the earthquake resistant materials April 2017. It took around four months to complete the reconstruction. According to her, a house is an important place for everyone. It not only provides safety and security us but also give a psychological satisfaction as well. Recollecting the difficult days under the temporary shelters she shared that she had badly missed the home and even had undergone psychological trauma. She further says that the life under temporary shelter was very tough. The extreme cold during winter and excessive rain during rainy season was most difficult time she and her family faced under temporary shelter. “The day when my family moved to new house was one of the happiest days of my life. While recollecting those days, I get very emotional even now,” says Ms. Biswakarma.

## Baliyo Ghar assisted in rebuilding earthquake safe house

She adds that mobile team from Baliyo Ghar program provided all the technical assistance in rebuilding process of her house. During entire the reconstruction process, she remained in touch with the mobile team all the time and sought help whenever she required. Ms. Biswakarma added, “I would not have rebuilt the new house if there was no help from Sir and Maam from Baliyo Ghar. I

will never forget their contribution in my life.”

According to her, it took the cost around Rs. 4 to 5 lakhs in the reconstruction of her new house. She has received two tranches of government grant for reconstructing the house and a request form is about to be submitted for the final tranche. She further says that various people from local house owners, engineers, masons to high-level teams from Charikot and Kathmandu also visited her house during and after the construction and all appreciated it the way it was constructed. “Although the house is relatively small in terms of rooms and size, but a house is a house after all, said Ms. Biswakarma, adding, “It has given me great level of satisfaction of owning the home again more than anything”.



Figure 33: Ms. Sita Biswakarma at her house at Lamidada.

## Perception on earthquake changed

Ms. Biswakarma was not aware regarding the earthquake risk and earthquake safety prior to 2015 earthquake. With the implementation of Baliyo Ghar program in her village, she got enlightened with various aspects of earthquake risk and earthquake safe construction practice. She shares that orientations conducted by Baliyo Ghar Mobile team and counseling has helped her understand about earthquake risks and ways to minimize the risks and to be safe during such disasters.



## '5 Pandavas' rebuilding quake resistant Bhasme, Chyama

When we met them in last days of February 2018, the Five Brothers were on day-out rest. They had already finished reconstructing 14 houses in Tamakoshi Rural Municipality -6, Bhasme, Chayma, Dolakha and they are now involved in 3 more houses simultaneously which they need to resume the work from the next day we met.

Masons Mr. Bhim Prasad Phuyal, Mr. Binod Phuyal, Mr. Arjun Prasad Phuyal, Mr. Netra Prasad Phuyal and Mr. Lila Prasad Phuyal have made a team to get involved in reconstruction works. They seem like '5 Pandavas' who have their collective aim to rebuild collapsed Chyama Better and Safer.



Figure 34 Trained masons '5 brothers' in Bhasme, Chyama

### On-the Job Training, a turning for all 5 brothers

Till July 2017, the 5 brothers used to keep them busy in agrarian works. They were literate but had no other skills to do as part time job. In the leisure days, they used to go to nearby chowks and pass time doing nothing but just by gossiping. Now they have been very busy in reconstructing the flattened Bhasme and other villages in Chyama Dolakha. This has been possible only after they participated On-the Job Training (OJT) conducted by Baliyo Ghar in first week of August 2017. OJT was implemented in one of the earthquake affected families of Chyama Mrs. Shanti Maya Phuyal whose husband is disable with paralysis and is economically poor.





During 50 days-OJT course the 5 brothers not only developed their skills in merely building the house structure but also about the technical aspects of earthquake safe home construction. They say in a voice, "we were very keen in learning because we seeking some opportunities to change the track of our life with some skills in our hand. Consequently we came as confident skilled masons." They became acquainted with the earthquake resistant elements that they should inject while constructing a house.

"Earthquake safe home was neither a mystery nor a complex process, it's about knowing the safe ways," Mr. Arjun said.

### "Earthquake came as an opportunity"

The five brothers are very pleased to get engaged in reconstruction works which they say it's the opportunity to serve their society. "Earlier we were idle with no skills at hand. Hence to learn and develop some skills and to make others learn we participated the training. It was a kind of debut for us," Mr. Bhim stated. According to 5 brothers earthquake came as an opportunity which paved the way to make the community resilient. "Before the quake, we realize that they were not our houses where we were staying but like graves. But now we have the opportunity to make them seismic safe and comfort zone to live in," shared Mr. Lila.

Apart from pleasing talks the 5 brothers were worried about the price hike over construction materials. The timely unavailability of construction materials have delayed their reconstruction works sometimes. "Lack of smooth road access, limited transport facilities and price hike in materials have smashed the backbone of villagers, even sometimes we have to wait halting the works," Mr. Netra said.

Bhasme dwellers are also happy to have 5 brothers as trained masons and get deployed in housing reconstruction. Mrs. Manmaya Phuyal expressed her thankfulness to the 5 brothers to help her rebuild her flattened house. Likewise, Mrs. Namita



Figure 35: Bhasme Village of Chyama Dolakha reconstructed by 5 brothers



Sharma who was working in front of her newly rebuilt house said, "OJT training helped our brothers to develop their skills and those trained masons helped us build quake safe home, it's pretty good that is happening after the destructive earthquake."



Figure 36: Mrs. Namita Sharma in front of her newly built quake safe home



## Dhanmaya misses her Previous House Fervidly, Says, "My Soul has not Entered Yet"



Figure 37: Mrs. Dhanmaya in front of her newly built house

Mrs. Dhanmaya Phuyal, 67, recalls of being in the balcony of her house and see the neighbors working. She had kitchen, bedroom, guest room and store room in her 3-story house. Her son-in-law and other guests had enough space to stay and sleep in. Dhanmaya's house which once was a beautiful house in the village now has no any indications. Gorkha Earthquake – 2015 looted her aspiration of being in the same house till her last breath. Though she has now earthquake resistant 1- roomed house, she says she misses her previous house vehemently. According to her soul has not entered the house yet.

Dhanmaya remembers the terrible earthquake that collapsed her house. She could survive only because she was at the meadow in

front of her house. Her son and daughter-in-law were out for field works. So there was no human casualties in her family but some of her neighbors lost their beloved ones. Dhanmaya often misses her previous house and makes her eyes watery. "A person like me who stayed in large and ventilated rooms is compelled to remain in a single room, especially at night I cannot control myself and tears roll down my eyes."

### Single room house; a subject of headache in sustainable reconstruction

Single room house has been seen common in earthquake-hit districts and it has become a hotcake issue in reconstruction process. Assumed as interference in sustainable reconstruction, single room house has been a subject of headache for the government authorities and concerned organizations. According to the concerned authorities, beneficiaries who have been rebuilding just a room to receive government grant now are expected to build other structures within short period of time to fulfill their family needs and requirements. And the subject to get worried is, they would not care about resiliency in building other annexes.



Figure 38: Phuyal Family



Dhanmaya is a single women who has 2 sons and they have their own house rebuilt. She may not build other supporting structures but as she says she is need of extra room for kitchen which she is planning to build later. Beneficiaries like Dhanmaya, who have rebuilt just a room will need more annexes in short period of time because in agrarian society, the agricultural products would definitely need extra rooms for storage. Dhanmaya may build kitchen in the days to come, but it's not sure she may consider the earthquake resistant techniques. Because she will be provided with all 3 tranches of government grant just inspecting a single room which is earthquake safe house in itself. There will be no technical professionals there to inspect and supporting organizations working in her village after the reconstruction campaign is over.

But Mr. Balkrishna Sharma, ex-chair of Chyama denies the assumption. "It's all about self-realization, most of the earthquake beneficiaries have internalized the importance of earthquake safe house though some may ignore it," Mr. Sharma says.

Mr. Tilak Phuyal, son of Mrs. Dhanmaya is a Baliyo Ghar trained mason who himself was involved in rebuilding her mother's house. Just beside mother's he has been rebuilding his own house. He is aware of applying the ideas, technics he learnt during the mason training. One room house for his mother was a necessity rather than just to meet the government deadline. "I am very much aware and committed in building earthquake resistant structures when in need after the reconstruction campaign is over too," Mr. Phuyal claimed.



## Masons from Other Districts Helping Rebuild Jhule Faster

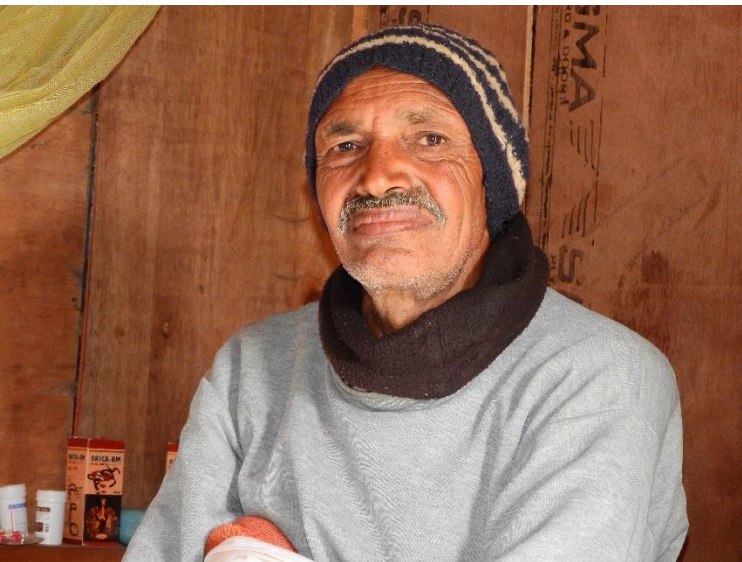


Figure 39: Ex-chair of Chyama Mr. Balkrishna Sharma

reconstruction works in different parts of Jhule, Dolakha. The masons from non-quake-hit districts are being deployed by contractors. "Those who have come from other districts are non-trained masons but are supervised under the leadership of trained masons like me," – Mr. Govinda Raj Karki, one of the trained masons under Baliyo Ghar said.

### "Nor we would have been lagged behind"

Jhule witnessed very low progress in reconstruction till the 24 months after Gorkha Earthquake. Now, among the total of 842 household beneficiaries in Jhule, more than 200 houses have been reconstructed, 180 houses have received 3<sup>rd</sup> tranche of government grant and 500 more houses were under construction in the days of mid-March 2018. President of Tamakoshi Rural Municipality-ward 2, Mr. Harka Bahadur Yonjan believes that the speedy reconstruction progress is due to availability of those non-trained masons who arrived from other districts. "The reconstruction process began only after the mason training conducted by Baliyo Ghar program, but due to unavailability of adequate masons, reconstruction works didn't proceed significantly. But when the contractors started getting with other masons from other districts, the process expedited. Nor we would have been lagged behind in reconstructing our Jhule," Mr. Yonjan claimed. The masons from out of district are reluctant to participate in mason trainings. They say it's because they have to spend 7 days with low incentive and if they get engaged in house reconstruction they can earn more.

Mr. Ram Lal Jaisi, 41, resident of Chedagada Municipality, Jajarkot found to be working as mason in Angeri Dada of Tamakoshi Rural Municipality-2, Jhule Dolakha. He was assisted by young mason Mr. Khadgasingh Thakuri who is also from Jajarkot. They have spent 3 months in Jhule rebuilding the damaged houses and have already built 3 houses in the village.

Mr. Bol Bahadur Karki, who has finished rebuilding his flattened house receiving 3 tranches of government grant and is back to his normal life also hired 2 masons from Salyan district who have been deployed in the village by a contractor. Neighbors of Mr. Karki also have contracted with a team of masons who have reached Jhule from western part of Nepal.

These are only the examples, one can see more than 4-5 group of masons those came from Bardiya, Dang, Salyan and Jajarkot being engaged in



Figure 40: Mr. Ram Lal Jaisi and Khadgasingh Thakuri resident of Jajarkot involved in reconstruction works in Jhule Dolakha





According to Mr. Yonjan, the representatives have been supportive to the organizations providing technical assistance and to the engineers involved in housing inspection. "We have heard in some places municipal representatives have been forcing technical professionals to approve the houses erected though they may have technical errors, but we have left them free. Houses with technical errors would not be recommended for grant receiving process," he said.

### Masons in Parma System

Ramite Gaun of Jhule, the same ward of Tamakoshi Rural Municipality is witnessing the significant progress in reconstruction. A group of masons can be

seen involved in reconstruction works from the very morning to the late evening. Mr. Ganga Bahadur Bhujel and Mr. Krishna Bahadur Bhujel are two brothers who have been constructing their flattened houses simultaneously. The masons working on both houses are the same. Many of them are untrained but are under supervision of trained mason Mr. Govinda Raj Karki. The group of masons are reconstructing Ramite Gaun in Parma System, a system of exchanging labors. "We are rebuilding our village on Parma basis, every household has at least one mason and all of them are engaged in rebuilding houses of all," Mr. Govinda informed. In fact Parma system has led for speedy reconstruction as all of the masons work with same spirit and with equal efforts. The reconstruction works are being supervised regularly by mobile team of Baliyo Ghar and government technical professionals.



Figure 41: Two brothers Mr. Ganga and Krishna working as labor in their under construction house



## The first Earthquake Safe House in Jyamrung, Dhading



Mr. Krishna Bahadur Gurung, 66, is a social influencing leader of GairiGaun, Jyamrung - ward 11 of Nilkantha Municipality Dhading. He was elected as the Chair of Jyamrung VDC during 2049 B.S. local elections. He spent last 25 years advocating about the development of Jyamrung area, social works and household works. He is now advocating safer and better reconstruction.

Gurung family is the first beneficiary to rebuild earthquake resistant house in Jyamrung, earlier a VDC before the federal system came into force. He received technical assistance from NSET implemented and USAID supported Baliyo Ghar program in rebuilding his house 15 months ago.

### "Stones, timbers of previous house worked for new one"

Mrs. Tika Kumari Gurung, spouse of Mr. Gurung brought the framed photo of previous house, which they lost in Gorkha Earthquake. The new one looks a lot like the older; bars in terrace, color and design almost the same except the roofing. "The house before the Gorkha Earthquake was beautiful but it wasn't strong enough as got collapsed during the shakings. Now we have built earthquake resistant house with earthquake resistant elements incorporated, it won't collapse again," Mr. Gurung said.

Remarkably, Gurung family have used the stones, timbers collected from the collapsed house to rebuild new one. "I saw they could work, we had well-designed doors and windows, so why should I left them unused? Even the railing bars have been used from the previous house. Indeed these were the precious materials buried in the debris," Mr. Gurung stated.



Figure 42: Gurung's house before Gorkha Earthquake



## Orientation and Mason Training Concreted the Safe house Aspiration



Figure 43: Trained Mason Mr. Bel Bahadur Gurung and his friends in under construction house next to Gurung Family

10 months after the Gorkha Earthquake, Baliyo Ghar conducted community orientations regarding earthquake safety, preparedness and safer reconstruction in Jyamrung, where Mr. Gurung was one of the participants. He says he participated the orientations of BaliyoGhar thrice. "I learnt a lot about the earthquake cause and effect along with safer reconstruction techniques. We lacked the bands and corner stiches in our previous houses. Later, rural mason training was conducted in Jyamrung where Mr. Bel Bahadur Gurung and his friends enhanced their knowledge and skills regarding rural housing reconstruction. Soon after the mason

training, Gurung family deployed Mr. Bel and his friends in rebuilding their house.

"During the orientations Mr. Gurung was a keen participant who raised several questions regarding safe houses, his aspiration to build earthquake safe home was concreted by both orientations and mason training that we conducted 17 months ago. He was the first beneficiary to rebuild earthquake resistant in Jyamrung area," Bhim Nepali, Social Development Officer of BaliyoGhar said. As Mr. Gurung says he used to visit mason training venue and tried to observe what exactly the masons were learning. Also he had been to the demonstration model built during mason training several times to notice the earthquake elements incorporated.

### Pleased to receive all tranches of govt. grant and being in safe home

Mr. Gurung family is now happy to be in strong house and delighted to receive all 3 tranches of government grant worth Rs. 3 hundred thousand. "As per my experience, stone masonry house should not be tall enough, now I am advising neighbors and villagers to build houses by using trained masons and based on set standards," Mr. Gurung said. Mrs. Gurung is also pleased to be in safe home, the house exactly same as previous. She said, "By seeing its appearance, I have forgotten the miseries we passed through soon after the earthquake."





Figure 44: Mr. and Mrs. Gurung in front of their newly built house



## 16. Successful Journey to Mason from a Housewife



Not so long ago, Ms. Nirmala Shrestha of Simle village, Jyamrung-11 of Nilkantha Municipality of Dhading District was a house wife confining herself within the four walls of her house. Nirmala, a mother of three children; one son and two daughters is a professional mason now. Credit solely goes particularly to the On-the-Job Training (OJT) conducted by Baliyo Ghar program as part of ongoing reconstruction campaign underway at the earthquake-hit districts.

Jyamrung is a remote village some 23 kilometers north of Dhading Besi, the district headquarters. The 2015 Gorkha Earthquake made devastating impact in the village. A total 1911

houses were damaged and collapsed in earthquake while two people were killed in the village. However, only 30 percent houses have been reconstructed so far in the village. Unavailability of adequate construction workforce is one of the reasons among others for slow reconstruction process in the village. In a bid to defy the construction workforce scarcity for reconstruction of earthquake-flattened houses the 50-day OJT has been introduced in reconstruction districts.

Ms. Nirmala had never imagined that she would be a mason one day in her life. But the NSET/Baliyo Ghar Program, which provides technical assistance to the house owners and construction technicians at the village, help bring transformation in her life. "Tika Shrestha, a Construction Technician (CT) from Baliyo Ghar program, approached me and inquired about my willingness to participate in a mason training as part of OJT. I discussed it in the family and they allowed me to take part in the training," Nirmala said.

### 50-day OJT made confident mason

As we reached Simle, Ms. Nirmala Shrestha and others were working at a house-reconstruction site of Mr. Nawaraj Lamsal. She was working there with experienced as well as recently trained masons. There were altogether 6 masons where three of them including Ms. Nirmala Shrestha were trained through OJT training organized in the village some four months ago.

Ms. Shrestha involved as a trainee mason for 50 days on reconstruction of a house belonging to Mr. Kul Bahadur Rakal Magar of Simle village of Jyamrung. During the



Figure 45: Ms. Nirmala Shrestha standing in front of newly reconstruction house of Kul Bahadur Rakal where she worked as trainee mason.



period, she was provided with Rs. 300 per day as transportation cost. More than that, she learned important stone masonry skills during the training period with the guidance of head mason. After the completion of training, Ms. Nirmala has emerged as a very skillful mason now who can work confidently with minimum guidance of senior masons.

“I am carrying out masonry works alike senior masons and nobody has made complain against my works so far. I am very happy from the progress so far,” said Nirmala. Mr. Tika Shrestha, a Construction Technician of NSET/Baliyo Ghar program at Jyamrung who is monitoring the OJT program at the village said, “Despite being a newly trained mason, Ms. Nirmala can work like the experienced masons. She has learned the masonry skills very quickly and able to win the hearts of experience masons. We have seen huge transformation in her. In the last four months, she has hardly committed any mistakes so far.”



### Family Members very Helpful

Ms. Nirmala came to Jyamrung after marrying to Mr. Bisnu Kumar Shrestha some 13 years ago. In these years, she was a house wife except working at family farms occasionally. However, an OJT program was about to begin in Simley, she got interested. At first, she discussed the matter with her family. They instantly endorsed her proposal and allowed her to work in the OJT. It is because Nirmala's family too was involved in the construction sector. Her husband Bisnu Bahadur Shrestha is a carpenter by profession while her father-in-law Netra Man Shrestha himself is a mason.



Figure 46: Ms. Shrestha laying stone masonry wall in the construction site of Mr. Nawaraj Lamsal at Simle, Jyamrung.

“I took part in the OJT due to solely my personal interest. As I expressed my desire to participate in the OJT, my family happily accepted. After the training, my family is very happy now. The training has also helped me to get daily earning around Rs.1000,” Said Nirmala.

### Aim to expand skill from stone to brick masonry

Ms. Nirmala completed OJT in construction of load-bearing stone masonry house. She has acquired skills related to stone masonry during the OJT. For the past two months, she has also been applying those skills in numbers of houses that she has been associated for rebuilding. According to Tika Shrestha, the construction technician of Baliyo Ghar program in the village, Ms. Nirmala is

capable of performing various construction works like preparing foundation, laying stone masonry wall, foundation band, plinth band and preparing rods among others.

Meanwhile, Ms. Nirmala is excited to her new profession and committed to continue the profession in future. She said that she will continue the profession even after the completion of ongoing reconstruction campaign. She further said that she is also planning to learn skills about brick masonry for sustainability of profession as there has been wide practice of building load bearing brick masonry as well as Reinforced Cement Concrete (RCC) building in the village.



## 17. Water delaying the reconstruction progress in Kalleri

Pokhari Hatiya, a village in Kalleri, ward - 3 of Galchhi Rural Municipality in Dhading is facing severe problem of water after the Gorkha Earthquake. In fact, scarcity of water is delaying the reconstruction progress of Kalleri. It's been 3 years, the Pokhari Hatiya dwellers have not witnessed water in tap. To quench their thirst, they have managed to fetch water from a distant water resource, some 45 minutes walking distant from village.

According to ward member Ganesh Kumar Shakya, before Gorkha Earthquake there were surplus resources of water around the village, which they had managed to supply through pipes and taps. But now the village has turned dry due to lack of water.



Figure 47: Pokhari Hatiya now

With 70 more houses collapsed during 2015 earthquake, till the 3<sup>rd</sup> commemoration of shakings they couldn't be erected only because of lack of water for mortars, curing etc in newly built houses.

But due to the deadline of government, as they at least had to start rebuilding houses, the villagers managed tractors to fetch water from 6 kilometers away stream and Trishuli River. Paying 1250 rupees per 500 liter tank, the villagers have started rebuilding houses turn by turn.

Mr. Rajesh Durali, resident of Pokhari Hatiya has spent 8 thousand rupees just in buying water as he has laid foundation

of his house. Near to him, Purna Bahadur BK's house is almost complete and as Durali informs, altogether BK family has paid 55 thousand rupees in water.

It's not only the water in delaying the reconstruction progress in Hatiya, but is the major cause. "As government enforced the deadline to receive 2<sup>nd</sup> tranche of grant within last day of 2074 B.S., Hatians laid the foundation (DPC) in haste. Consequently some technical errors can be seen in the houses especially regarding vertical reinforcements." sub-engineer Mr. Sangib Shrestha says.





Figure 48: Pokhari Hatiya before Gorkha Earthquake



Figure 49: Immediate after the Gorkha Earthquake

Construction technician Mr. Dev Man Shrestha says, "Though expected something good in reconstruction, water problem, lack of adequate skilled manpower in the village has created difficulties in rebuilding Pokhari Hatiya." One can witness the problem of water availability not only in Pokhari Hatiya but in entire Kalleri area. Though the DPC has been laid, there is less chance of adding walls at earliest, as a result the reconstruction campaign may go through bad time in those areas.



## OJT helps Khalte man acquire masonry skill, Safe House Together



Figure 50: Mr. Krishna Dhungana (21) of Khalte-Jogidada of Dhading peeking through window of his newly built house through Baliyo Ghar OJT program. He lost his parents in the earthquake as his house caved in due to quake.

When Gorkha Earthquake struck entire central region of country in April 25, 2015, Mr. Krishna Prasad Dhungana had just sat for lunch (morning meal) in the ground floor of his house at Jogidada of erstwhile Khalte VDC of Dhading District. His mother was serving food to him and his father was about to take meal. As soon as the ground shaking started, young and agile Mr. Dhungana promptly went out of door. However, his father and mother could not do so. As the house caved in, they crushed to death by the debris and the wreckage of the house.

“As I rushed to outside of the house, I thought my parents would also follow me. But they didn’t do so and died instantly as the collapsed house buried them,” Mr. Dhungana narrated. He assumes that his parents might have thought that the shaking would be lighter one, at least not as devastating as it turned out to be.

Although, he rushed to outside of house and managed to save his life, but could not escape unhurt. He too sustained injuries in his leg.

### Quit study, inflicted depression

Mr. Dhungana, second child of his parent, was just 18 and had just completed schooling of plus 2 level at the time of earthquake. The earthquake brought a grave consequences in Dhungana’s family and his personal life as he lost his both the parents. Obviously he turned orphan, but also lost his hope of future too. Prior to the incident, his life was completely dependent on his deceased parents. They were funding the money for his education and livelihood as he was too young to earn on his own. With the death of both the parents, he lost all the hopes of his life ahead. His educational journey got derailed. The agony of losing parents inflicted him depression and mental problems too.

### 9 killed in Jogidada settlement only

Jogidada aka ‘Bahundada’ is a small settlement of the Khalte VDC where entirely Brahmin community are living in. Around 40 families are residing at the settlement. There has been very few houses got completely collapsed in the rest of the VDC. However, the Jogidada settlement went through a devastation of extreme in nature. Not a single house remained standing. Altogether 9 people lost lives while more than 15 people sustained injuries in the incident.



## Returned village, rebuilt house

After concluding the 13-day rituals of his deceased parents, Mr. Dhungana left village and went to Kathmandu and elsewhere. After living almost two years outside of village, Mr. Dhungana returned village for 2074 Dashain. Upon his arrival at the village, his elder sister, who was married long before the earthquake, insisted him to rebuild the house using government reconstruction grant.

NSET/ Baliyo Ghar Program was assisting villagers in providing technical assistance to reconstruction of earthquake flattened houses in the village. With view to produce construction workforce through training of unskilled masons, it is also organizing On the Job Training (OJT) in the program area where one each houses of all the 9 wards of erstwhile VDC are built as part of OJT. In so doing, the house-owner also contributes small amount of money to pay to trainee masons.

Mr. Dhungana's elder sister requested Baliyo Ghar program for assistance in rebuilding house of her brother as part of OJT. The ward office and elected ward representatives also unanimously recommended his name for the OJT considering his's case.



Figure 51: Mr. Dhungana with his friends standing in front of his newly built house

## Acquired construction skill and new house together

NSET - Baliyo Ghar program began the reconstruction of his house from last week of month of December 2017 as part of 50-day OJT. Mr. Dhaungana also involved in the reconstruction process as trainee mason. However, he had to play dual role; collecting all the construction materials and participate in the construction work. He, however, managed it successfully. "I would not have able to reconstruct new house, had NSET/Baliyo Ghar program not helped me," Mr. Dhungana said.



Now, he has acquired construction skill as well as a new house which can withstand the future earthquakes. "The new house is totally different from old one as I have incorporated various earthquake resistant elements such as foundation band, Plinth band, lintel band, corner stitching and vertical rods among others. I am sure that new house would not be collapsed at least immediate after shaking starts. Hopefully provides time to come out of it during the earthquakes," said Dhungana.

## Planning to marry and live in new house

After the death of his parents, he has been living his life alone. In order to kill the loneliness, Mr. Dhungana is thinking to wed in near future and live rest of the life with his wife in the house. He has also made his mind that he would not go elsewhere to seek jobs but to live in the village. "Despite the fact that I am a single, I have built two-room house as I am thinking to wed very soon," he said.

## Delay in releasing grant causing problem in repaying debt

Although a strong and new house has been rebuilt which certainly accommodates him and his would be family. But, he is worried over not getting the government grant in time. Although, the construction of the house is virtually accomplished, he has not received the house grant except first tranche of Rs. 50,000. It has been halting him to repay the loan which he used in rebuilding house.



## New house helps overcome sense of despair to a 49-year single woman

Mrs. Maya Pariyar, 49, a single woman, and her two young kids of erstwhile Nalagng VDC and now ward no 2 of Siddhalek Rural Municipality of Dhading district have recently moved to new house. It has been a dream come true for the family after they went through double-tragedy in family life one after another especially after 2015 Gorkha Earthquake. At first, Mrs. Maya lost her two-storey house by the April 25 earthquake in 2015. She lost her husband as her family was yet to be fully recovered from earthquake tragedy. These tragedies made her severe impact in her life as she went through mentally instability condition for long and gradually recovered thereafter. However, she has left behind the past tragedies now and able to fully recover as she has been resettled in new house with her two little children.

### Feeling a sense of despair about days ahead



Figure 52: Ms. Maya Pariya in her house at Nalang, Dhading

Although Ms. Maya, with 11-year-old son and 8 year-old daughter, resettled in a new house, she is often worried regarding her future. With the demise of her husband, who was sole breadwinner of the family, she is feeling a sense of despair regarding future of her small children as well as livelihoods of her family. The responsibility of education of children as well as other tasks has come under the shoulders of Ms. Pariyar. But she has very limited alternatives. Her husband has left with her leaving nothing except a small land plot which hardly can grow the food grains that can feed them for less than six months. Earlier, her husband was generating livelihoods of

her four-member family through a local tailoring shop located at Thati Bhanjyang of the Nalang village. However, Ms. Pariyar neither has such skills to give continuity to the husband's profession nor she had other permanent job. In the absence of her husband now, she is facing challenges even to keep her family of three alive. Providing good education to them has been a far-fetched dream. "I have no hope about days ahead. I am in dilemma where to go and how to fight the challenges," Pariyar said.



## Villagers' cooperation in rebuilding house

Ms. Pariyar's house was rebuilt under the 50-day On-the Job Training (OJT) by Baliyo Ghar program of National Society for Earthquake Reconstruction Technology-Nepal (NSET-Nepal). As part of the OJT, Baliyo Ghar employed a total of 7 trainee masons under one head mason for 50 full days and reconstructed the house incorporating the earthquake resistant materials. The responsibility of Maya was to gather the construction materials needed to the construction. However, it was not easy. The construction materials including bricks, cement, rods, sand, wooden materials like windows and doors among others were to be bought and transported all the way to village from Dhading Besin, Malekhu and Adam Ghat. She was not used to carry out the work other than outside of the house



Figure 53: Ms. Pariyar and her two children at her house in Nalang, Dhading.

before as her late husband used to carry out. She had no information about issues as well. On the top of that she is an illiterate. In this situation, fellow villagers and local vendors helped her and even provided construction materials in credit in a condition that Ms. Pariyar will pay back the credit once she receive the second and last tranche of the government reconstruction grant to be provided by government.

“Had the villagers not supported me in rebuilding the house, I would have not able to construct the house as I couldn't manage the reconstruction materials in time as I had neither hard cash to buy materials nor I could go to outside of the home to collect the materials,” Pariyar said.

Locals have even unanimously proposed her name for Baliyo Ghar OJT. As the Baliyo Ghar requested Ward chairman to recommend the name of a beneficiary in the ward no. 4 of the erstwhile Nalang VDC, the ward chairman called a community level meeting to finalized the name. The Maya Pariyar was called to participate in the meeting. Considering the situation, the meeting unanimously approved the name for OJT and handed over to Baliyo Ghar program.

## Delay in receiving govt. grant halting clear dues, house completion

So far Maya Pariyar has received first tranche of the government grant. That too was spent during the treatment of her ailing husband who died afterward. She is desperately waiting for second tranche. Although she had moved to new house few months ago, she couldn't fix windows and main door due to cash crunch. More than the local vendors who provided her construction materials on credit and are asking for money. But she is not in a position to repay them unless she gets government.

Ms. Pariyar has filled and submitted the forms seeking second and third tranches. However, government is yet to release the money. She has inquired several times going at the ward office. “But each time I was told by the ward secretary that my name is yet to be published in the grant disbursement list,” she said.



## Resettled in new house ahead of fellow villagers



Figure 54 : Ms. Pariyar at her residence at Nalang in Dhading.

The 2015 earthquake damaged around 2200 houses in the erstwhile Nalang VDC which now comes under Siddhalek Rural Municipality ward no. 1 and 2.. However, only 1565 enlisted in the beneficiaries' list. More than 600 households have registered in the grievances as their names were excluded for beneficiaries' list. A total 850 households have got second tranche of government grant here. Luckily, in this village very few houses got completely collapsed. Instead, most of the houses were partially damaged only. Due to this phenomenon, most of locals are still been residing at the partially

damaged houses and others are gearing up for rebuilding new houses.

Ms. Pariyar is one of the earthquake grant beneficiaries in the village whose house got completely damaged during the 2015 earthquake. As her house has been rebuilt now, she is one of very lucky villagers who resettled in new house after earthquake as very few households have been moved to new house so far in the village.

Ms. Pariyar, despite having livelihood problems, is happy and feels herself lucky for getting new house early as lot of her fellow villagers who are still living under temporary huts and partially damaged house which are vulnerable from the point of view of earthquake and other disasters. For this, she is very grateful to Baliyo Ghar program that fulfilled her dream of rebuilding the new house again.



## Trained Masons became Resilient Construction Promotors and orientation program changed perception of people in Nuwakot

Mahakali, one of the villages of Shivapuri Rural Municipality in Nuwakot is witnessing the reconstruction activities held within. Even not so far from the capital city Kathmandu, and very near to the district headquarter, Mahakali, mainly due to the geographical remoteness, copes with many difficulties to please its residents. It's one of the severely hit area by Gorkha Earthquake in 25 April, 2015 and now getting up to renovate its settlement. In this agrarian society, one of the mason Mr. Bir Bahadur Tamang lives in Batase community of Mahakali. Leading the six-member family, Mr. Tamang is working as mason in post-quake reconstruction activities. "After the 2015 earthquake, I was completely involved in reconstruction. I built more than 6/7 house in the existing Mahakali VDC", he mentions.



Figure 55: Mason Mr. Bir Bahadur Tamang in front of a house he build recently

Now the VDC has been changed to a ward of Shivapuri Rural Municipality after the new federal structure came into effect. He added, "During the period, I had no idea on earthquake resistant construction technique. When, NSET- Baliyo Ghar team came here to conduct mason training, I was one of the participants who later realized that the houses built before the training had low strength to resist quakes. I regret, why didn't I participate such training earlier?" Now-a-days, Mr. Tamang is highly motivated and encouraged to build safe houses and now working as an promotor for safer reconstruction. "I'm one of the demanded masons in our area and I am very happy to be engaged with this occupation. I have a busy schedule as I am considered very good skilled mason"- he claims.



Figure 56: Ms. Sita Devi Thapaliya waiting for her new eq. resistant house

Ms. Sita Devi Thapaliya, 69, is resident of Thanapati, a village in Shivapuri Rural Municipality, Nuwakot is a single woman blessed with three daughters who are married already. Ms. Thapaliya was staying alone in her temporary shelter after her house collapsed in Gorkha Earthquake. Rats and snakes disturbed her nights and due to seasonal difficulties, she was facing with physical and mental problems. She had neither enough money to build a new house, nor enough knowledge about the earthquake resistant house. Ms. Sita Devi was in stress. She thought the earthquake resistant house meant the concrete building and it would cost expensive which she couldn't afford. When she participated in the community orientation conducted by BaliyoGhar, she came to know that, the house could be made safe by using the locally available materials too. She was



convinced and motivated to build a safe house using locally available materials with less money to start with. "3 Lakhs grant from government and loan from neighbors will work to build a safe home, where I could live safely" – she said. Community orientation was a turning point for her, where she understood the importance of building earthquake resistant house and possibility to use local materials. Under the guidance and consultations of engineer and social mobilizer, she started to reconstruct her house using the Baliyo Ghar trained mason.

Mr. Chatra Man Gurung is one of the masons trained by Baliyo Ghar in Thanapati village. He has been involved in construction works since 1992 and built several houses in Nuwakot district. After the Gorkha Earthquake, he led the construction of 5 houses which now have been disapproved by government engineers and those are not eligible to receive government grant due to some construction errors. In the mid of 2016, Mr. Gurung participated a Mason Training organized by Baliyo Ghar at Thanapati. He enhanced his knowledge and skills regarding safe construction practice. He says, "I had no idea about the vertical reinforcements, bands, corner stiches etc. which



Figure 57: House of Ms. Sita Devi under construction



Figure 58: House of Mr. Chaturman BK built by Trained Mason Mr. Chatra Man and team

I now have been applying in houses. Indeed, Mason Training was a turning point for me to engage myself in safer reconstruction works and have good earnings too. At once, I have been involved in building 5/6 houses as a lead mason with other trained masons, hence less time to speak too." Quite remarkably, the houses built after the mason training have been approved during the inspection. Mr. Gurung is now a well-known mason in that area as he is booked by many house-owners.

Mr. Chaturman BK, earthquake affected house-owner at the area who found very pleased to work with mason Mr. Chatra Man Gurung. "I have received 2 tranches of government grant and house is now almost ready to shift

on. Along with my wife Suntali Sunar, we salute Chatra Man for building a strong house for us," – said Chaturman with a sweet smile.



## Struggle of Single Women in Rebuilding her Home



Figure 59: Mrs. Sabitri Darji in front of her temporary shelter

Often, the progress of reconstruction is measured with counting the number of households rebuild, but few go in depth that how the beneficiaries came to rebuild their houses. Were they able to build their house properly and easily? No, definitely there are many hurdles and problems they had to face. Specifically, the households with low income, single women headed family, vulnerable groups have gone through miseries to rebuild their dream house. They have faced problems like; land registration, lack of money, rate increment of construction materials, tedious process in receiving first, second and third tranches of government grant and lack of trained and local masons for reconstruction. Due to these reasons earthquake affected people are unable to reconstruct their house in time or if they are having their house rebuilt, their stories hits the heart. Mrs. Sabitri Darji, resident of Kageshwori Manahara Municipality ward -1

Gagalfedi is one of them.

Mrs. Darji, a single woman aged 50, lives in temporary shelter at Saraswoti Tole of Gagalfedi with her 3 children. She involves herself stitching the clothes of villagers to survive and better life for her children. Her misfortune, in time interval of 5 years she coped with 3 consequent mishaps in her family. 5 years ago her husband died, later her daughter's hand got fractured and at the very beginning of 2072 B.S. she lost her house in Gorkha Earthquake.

Regardless of many problems she is the first beneficiaries in Gagalfedi, who is constructing loadbearing house and again went through difficulties. When she started the excavation she asked her neighbor to help her put mud inside of underground but they denied, no one came to help her. Neither had she received loan citing she couldn't pay back. Being disheartened she took a loan from woman's group and relatives. The price hike in construction materials made her more deplorable. With the tears in her eyes she says, "Now the house is about to complete, it's time to pay all money to contractor and also shopkeeper who provided construction materials but I don't have enough money to pay."

She shares, a strong house meant a lot for her family. "I really need a house for my children, if I could complete my house my dream would be fulfilled. But I often remember of my loan which makes me cry. "

She is happy to receive technical support from the very beginning she started her house rebuilt. "Had not I received the support of Baliyo Ghar I wouldn't be encouraged to build a house, I wouldn't be able to follow government guidelines and couldn't receive grants. Loan would be paid back. Now my son shouldn't have to suffer like me," she expressed.



Figure 60: Mrs. Sabitri with her daughters in front of her under construction home



## Tipling being seismic resilient Village, A Tole named as "Baliyo Tole"



Figure 61: Sabitri Darji as a participant of orientation program organized under Baliyo Ghar Program

Tipling, one of the northern most area in Dhading lies in Ruby Valley Rural Municipality of the district, one of the tourist trail in Nepal. A village with historical and religious significance was severely damaged by 2015 Gorkha Earthquake. With no road access, no electricity and lack of awareness with low literacy but with mind blowing natural beauty, Tipling has woken up with seismic resilient houses built in.

Tipling dwellers have entitled one of the settlement as Baliyo Tole (Strong Tole). All of the houses flattened by Gorkha Earthquake have now been rebuilt to resist earthquakes, hence villagers have coined the name Baliyo Tole. "At first, we were not aware of making quake safe houses, but when NSET- Baliyo Ghar provided us 7-days mason training we have been successful to make our village seismic resilient," Bikash Ghale, a leading mason of Baliyo Tole said.

There are more than 25 houses in Baliyo Tole, almost all resembling each other and technically correct too. "If the metals cannot be found in village, we can use the pieces of zinc sheets with two or three folds-in to join vertical reinforcements with wall," Ranjan Dhungel, Manager, Baliyo Ghar said. "We have found the reconstructed houses as strong as we had expected" Dr. Ramesh Guragain, Deputy Executive Director, NSET stressed.





The villagers are pleased to receive the government grant worth Rs. Three hundred thousand timely as they have completed their houses. "We have suffered lot by rain, mice and leeches, but now we have entered in the quake safe houses, very happy to be here" Jerung Ghale, a local of Tipling said.



Majet Tole, next village to Baliyo Tole has been rebuilt as the model village. 9 houses of a single family are being rebuilt simultaneously. The family possess 10 trained masons who all have been deployed to erect flattened houses to resist future earthquakes.

"We have our sons, son-in-laws and brother-in-laws as trained masons in our family, so no worries!" Syu Tamang, a local from Baliyo Tole said. Tipling dwellers say their new houses are the government houses, as government has provided grant to rebuild.

"We all are very happy. We have not only restored our houses but also got granted with three hundred thousand rupees" Phu Ghale, local of Tipling expressed his happiness.

These houses have been the model houses for northern belt of Dhading district. After the villagers learnt earthquake resistant houses can also be made by using the locally available materials and when trained masons were available after the training of Baliyo Ghar Program, they started rebuilding earthquake resilient village which now has been a model village for other areas hit by Gorkha Earthquake.







## Bahun Dada, Dhading where Reconstruction Thrived



Bahundada, a village once known as Jogi Dada in Khalte of Nilkantha Municipality-05, Dhading has now changed its identity. All of the 35 houses in Bahun Dada got collapsed during 2015 Gorkha Earthquake. Now, almost all of them have been rebuilt to resist earthquakes.

Mrs. Gita Bidari is one of the members of quake affected families in Bahun Dada who spent 2 years of miseries after she lost her house. No skills in hand and poor economic status; she could not manage to erect her house. She used to get involved in construction works but

had no knowledge about measuring, laying the foundation, walls and other parts of house. Without skills she made the temporary shelter, rebuilt the damaged toilet.

She wished, someone would come to train her so that she could rebuild her own house by herself. Few days later she wished, NSET-Baliyo Ghar conducted mason training in her locality where she got participated.

"I tried my best to achieve all knowledge and skills during mason training. I had to do household works, look after the cattle and take care of children but I did it. Now I have planned to sell all these faunas to get fully engaged in reconstruction works. My husband earns Rs. 800 per day and I am being paid Rs. 1000" – Mrs. Gita Bidari, Trained mason said.

She plans to involve in rebuilding the houses of neighbor village as she has finished her own house and her village has been rebuilt.

The whole village has been rebuilt within 7 months. Mrs. Gita and Mr. Dil Bahadur Thapa have contributed a lot to rebuilt Bahun Dada better and safer. After the 7 days mason training, Mr. Dil Bahadur has been involved in rebuilding houses restlessly.

"Simultaneously we have rebuilt the 2 dozen houses. In parallel, I have laid the foundation of 12 houses. Lack of construction materials, timbers and other problems in every house has eased us to get involved in many houses at the same time" said Mr. Dil Bahadur Thapa, one of the Trained Masons of Bahun Dada

The trained masons have applied all of the knowledge and skills gained through mason trainings to make the every houses earthquake resistant.

Mr. Bishnu Prasad Agasti, one of the beneficiaries of Bahun Dada said, "It was like competition to reconstruct the houses. Every house-owner was very much excited and reconstruction was like celebration"



Like Agasti, every family is now feeling safe and satisfied to get earthquake resistant houses. To make the village, a seismic resilient village, mobile team of Baliyo Ghar did tireless works to aware and inspire villagers, to build capacities of local masons and continuous technical assistance in each household.

"At first, we conducted orientations on earthquake safety, preparedness and safer construction technologies. And then we organized 7-days mason training where masons enhanced their technical skills and knowledge and had regular mobile clinic in each house" says Bijesh Kaiti, Engineer to Baliyo Ghar program.

No progress is possible if one remains tongue-tied and only seeks the favor from others. But Bahun Dada did the progress by itself. The pro-activeness of villagers, the local masons like Mrs. Gita and Mr. Dil Bahadur who contributed their best and the regular supervision of Mobile Team has made possible to rebuild Bahun Dada Safer and Better.



## Purna Bahadur Gurung, a Reconstruction Leader in Dhading



Figure 62: Mr. Purna Bahadur Gurung

Mr. Purna Bahadur Gurung, 51, with fallen off teeth lives in Kafal Chaap of Khalte, ward 01 of Nilkantha Municipality, Dhading. When he was young, he worked as labor in Kathmandu for some years but being frustrated he returned back to his village and began helping his mason father. For 22 years, he got involved in construction works, building conventional individual houses. But after 2015 Gorkha Earthquake, he found his knowledge was not sufficient and skills were not satisfactory.

He had his own house tumbled down and 20 more houses were waiting to get rebuilt in his village. He was squirmed. He thought his knowledge and skills will not work to rebuilt all those house as he had no knowledge and idea about safer reconstruction.

At the meantime, NSET- Baliyo Ghar happened to conduct a mason training in his village to guide the existing masons for safer reconstruction technique. Mr. Purna participated the training. KafalChaap, a village of Gurungs in Khalte Dhading was completely destroyed during Gorkha Earthquake. But the complexion of village was changed in the leadership of Mr. Purna Bahadur. All the houses are now earthquake resistant.

After he received the technical ideas and knowledge to reconstruct earthquake resistant houses, he not only made his village, a quake safe village but only produced new masons to help him. He said, "I guide the new masons to do as per my learning during the mason training and continuously I supervise the work too. Beneficiaries have begun to live in this house"

Had Mr. Purna limited his knowledge and learnings to himself only, it's sure neither the village could not have been rebuilt so early nor the youths would have get employed. Travelling to the abroad for job opportunity was common in the village, but now it has been stopped.

"I have 2 ex-drivers working with me. Earlier they used to earn Rs. 15 thousand per month but now they are making Rs. 30 thousand, it's quite pleasing" says Mr. Purna. Almost all the youths in Kafal Chaap have skills in their hand now. The elderly parents are happy to get their sons get employed in the village and nearby on reconstruction works.

The skills developed by Mr. Purna Bahadur after the mason training has definitely helped make Kafal Chaap, a resilient village, but also new masons contributed a lot. The masons worked following the Parma System, a system of exchanging labours to expedite the reconstruction works in the village.

Tika Budhathoki, Social Development Officer to NSET-Baliyo Ghar informed, "On the leadership of Mr. Purna Bahadur Gurung, the village has now turned in to quake safe village. We have witnessed that, a trained mason in a small village has a great value"

Kafal Chaap, has now turned to be a model house after reconstruction. Mr. Purna is a part of it. There are other dozens of villages to be rebuilt within the time frame of reconstruction campaign. Mr. Purna plans to go other villages to help them rebuilt safer and better.

After being reconstructed, Kafal Chaap is seeking for better livelihood and sustainable development. And neighboring villages and other villages in the district will be rebuilt by the trained masons like Mr. Purna Bahadur Gurung.



Figure 63: Mr. Gurung at Construction Site



## OJT program transforming lives – A Story of Babulal Yogi



It has been around four months since Babulal successfully completed 50 days OJT program. A permanent resident of Jogigau-Malu; Babulal was born and raised in a family of four - A differently abled father, mother and a brother – Baburam Yogi who also completed the 50 days training. Alongside the two brothers were their childhood friends; Dinesh Yogi, Dipendra Yogi and Deepak Yogi. They grew together in the same neighborhood, played and surely built many toy mud houses too. But at their present age, they have actually completed the construction of a two room mud mortar house with 3 feet attic height above lintel band with CGI sheet roof.

Post-Earthquake, the brothers were in a dilemma of when and how to reconstruct their house. Babulal shares in his words, "The first tremor

didn't completely destroy our house. The second one did. Post-earthquake, our family resided in a temporary shelter; you can call it a cow-shed. We lived there for around two months. Later, we constructed a better temporary shelter in which we have been living till date. We plan to move in to the new house after finding a suitable day and completing the puja."

The relief received by the family was limited to food supplies and other materials such as tarps that fulfilled immediate needs post disaster. The family awaited a much better help to reconstruct their house and that's how NSET-Baliyo ghar team met Babulal and his family. The ward meeting held at Jogigau on November 14, 2017 to select the house owner for OJT unanimously recommended and selected his house. The family belonging to disadvantaged group and also economically poor fulfilled the requirement. They immediately met the Malu ward chairperson, Mr. Hom Bahadur Shrestha; who without any delay provided the recommendation and the support the family required. Likewise, the participants of the OJT also the friends of Babulal agreed on helping to rebuild the house by becoming the participating trainee masons of the 50 days On the Job training.

Mr. Dhan bahadur Sarki, the lead mason of the OJT shares his experience and happiness in his words as, "To be honestly speaking sir, I had no trust in the boys about constructing the house. Thus, for me it was a big challenge. I would have rather built the whole house all by self but as it was training and being a lead mason i had to take the responsibility. It was difficult at the beginning but eventually we got along and the boys did really well in learning and constructing the house in a resilient way." He also asked the boys to go along with him in other sites to work but the boys had different plans.





Babulal and Baburam went on to build other houses forming their own teams; Babulal shares, "I was very happy and delighted the moment when I held sixteen thousand in cash after working in someone else's house". As for Dinesh and Dipendra also brothers, went on to build a separate kitchen for their house. After building few houses the boys now are engaged in doing household works; mainly agriculture. As the major reconstruction work which was at peak has recently narrowed down. Nevertheless, they look forward to build more houses in days to come.

"The boys went under a transformation" says, Mr. Bijaya Kumar Baruwal, social development officer of Local Reconstruction Technical Centre, Malu – The field office setup to implement the "Baliyoghar" program at five VDCs of Tamakoshi Rural Municipality. Mr. Baruwal was one of the first to meet the boys, interact and orient them about the whole program. He further adds upon his initial experience with the boys as, "During the introductory session, the boys took most of the time to laugh and giggle. My primary perception about them was discomfiting and of discontent. I really doubted in their level of concentration for the days ahead". He now laughs and cherishes at those experiences of false conviction and displeasure and points



out on how the group of boys proved his initial thoughts wrong. As he had closely observed the 50 days training program, he assures the rest as, the boys really did convinced themselves and the others on and about the fact that – one can actually succeed with hard work, determination and do something meaningful after the completion of program.

Of all and everyone benefited from this OJT program, one individual, the happiest of all is Mrs. Beli Maya Yogi. A supporting wife of Mr. Ananath yogi and a loving mother of Babulal and Baburam; She had been an integral part

of the program. She was not a trainee participant but was involved in the process more than anyone. Always present in the training, preparing meals for everyone, directing the boys to work properly and carefully, negotiating with suppliers and so on. She and her husband were the motivation for Babulal and Baburam to work hard; to support their parents by building the house. All in all Mrs. Beli Maya had been a person of full support to the program and the NSET-Baliyoghar Staffs.

The 50 days training for Babulal has proved to be more than just training. A transforming process through which he has been able to gain enduring skills and a house in which he along with his brother and parents will live safely here after. As for the work, they seek houses to build.





In Malu, 188 new house owners are soon to complete their agreement as the new list of grievances is out. This surely brings out more opportunity for the likes of Babulal and his friends. At present, they stay idle as the pace of reconstruction has descended. Baburam and others have temporarily moved out of village to work. But as of Baburam, he awaits for the opportunity to work; hone his skills and build safer, earthquake resilient houses at Malu.

The 'On the Job training' is initiated and implemented by NSET- Baliyo ghar program supported by USAID in coordination with local government here in Malu of Tamakoshi rural municipality, Dolakha.

