



Bhaura Upgrading

CASE STUDIES OF COLLECTIVE HOUSING IN ASIAN CITIES SERIES • JANUARY 2023

In the remote city of Kalaiya, Nepal, numerous poor families live in mud and thatch houses without basic services. However, in the community of Bhaura, a remarkable transformation occurred. Through the collective endeavors of the community, the municipality, and supporting organizations, 30 families rebuilt their homes from scratch on the same land. This project became a catalyst for innovation, by embracing cost-effective and sustainable construction techniques, such as compressed earth blocks. The success of the Bhaura housing project has not gone unnoticed, inspiring similar initiatives in different corners of the city.

- Project Bhaura Community Upgrading
- Location Kalaiya Sub Metropolitan City, Bara District, Nepal
- Size 30 households
- Finished 2021
- Type On-site upgrading of a low-income marginalized community, with secure land use rights

CONTEXT, PROCESS AND PARTNERS

The city:

Kalaiya Sub-metropolitan City rests in the southeastern region of Nepal's Bara District, located in Province 2. With a population of 140,000, the city encompasses 27 wards, of which only nine are considered urban areas. Around 44% of Kalaiya's residents are Dalit families from the lowest stratum in the caste system, often referred to as "untouchables." These marginalized inhabitants endure precarious living conditions, with some communities existing entirely off the grid. Many of them lack proper documentation due to their parents' failure to obtain identification cards and the tendency for home births to go unregistered. Consequently, these communities face significant vulnerability, as they are denied access to education, healthcare, and social benefits enjoyed by other citizens.

Moreover, they are deprived of essential services such as clean drinking water, adequate sanitation facilities, suitable housing, and decent employment opportunities. Additionally, because commercial banks deem the poor "uncreditworthy," acquiring affordable and flexible financing becomes an arduous task. As a result, these individuals resort to high-interest loans from local merchants, leading to an ever-increasing burden of debt. These circumstances have driven a considerable number of young people to seek employment in Gulf countries, while those who remain in Kalaiya typically work as agricultural laborers or rely on daily wages. Despite the city government's efforts to enhance the road and drainage network, finding sustainable solutions to address the more complex needs and demands of impoverished communities has proven challenging.

The community:

Within this context, a project was initiated in 2020 with the primary objective of improving housing conditions in the Bhaura community, located in Ward 14 of Kalaiya Municipality. Bhaura represents one of the most marginalized communities in the city, comprising only 30 households. Its members belong to the Mushahar community, a Dalit group historically known as "rat-eaters" due to their reliance on catching rats for survival during difficult times. Presently, most families work as low-wage agricultural laborers on land owned by others.

Despite the legal prohibition of caste discrimination, the experiences of the Mushahar community reveal a different reality. Many individuals within the community lack proper documentation and access to employment opportunities. The majority of Bhaura's residents work as farm laborers and engage in construction or other daily-wage jobs during the off-farming season. With typically only one family member generating income, many households struggle to put two nutritious meals on the table each day. For many mothers in the community, this means skipping meals to ensure their children are fed.

Under such challenging circumstances, housing improvement naturally takes a backseat. The residents of Bhaura inhabit small houses constructed from bamboo, thatch, and mud, which offer limited or no ventilation. These structures are in dire need of regular maintenance. Typically, the houses get plastered before major religious festivals like Holi, Dashain, Tihar, and Chhath. During these festivals, yellow mud (Piyari Matti) is applied to the walls and floors, on which the residents paint colorful murals depicting animals, birds, or flowers. Red and white mud handprints painted on the outer walls are also a common sight and are supposed to ward off evil spirits and enhance the house's aesthetics. However, every year, this essential house maintenance incurs costs ranging from 30,000 to 40,000 rupees (US\$ 246-328), prompting people to get to high-interest loans to preserve their homes' safety and appearance.

Initiating the project:

In 2011, a Kathmandu-based NGO called Lumanti Support Group for Shelter, or simply Lumanti, introduced an innovative approach to address the challenges faced by communities and uplift their status within the city. With funding from a foreign development organization, Lumanti embarked on a project that mobilized women in the city's poorest neighborhoods, encouraging them to save collectively and form a cooperative network. The initial phase involved bringing together women from ten communities, teaching them the concept of collective savings. Empowered by this knowledge, these women then spread across the city, mapping other impoverished settlements and mobilizing more women. Eventually, their efforts culminated in the establishment of the Deepshikha Saving and Credit Cooperative.

Simultaneously, educated youths from these underprivileged communities came together to form the Urban Poverty Alleviation Forum (UPAF). Their aim was to assist the women's cooperative by developing project proposals and planning interventions that would address the specific needs of Kalaiya. Over the past decade, Lumanti, Deepshikha Cooperative, and UPAF have actively participated in citywide development processes, with ongoing support from different organizations and stakeholders, most notably the municipal government.

One of their noteworthy achievements was the establishment of the Urban Community Support Fund (UCSF) in 2012. Lumanti, the Municipality, the District Federation of the Chamber of Commerce, the women's cooperative, and UPAF collaborated to pool seed funding, an annual budget from the municipality's development budget, and community savings. This collective effort enabled UCSF to provide soft loans to impoverished families in Kalaiya's communities, addressing their housing improvement needs, toilet construction, water tap and hand pump installations, as well as livelihood investments. Functioning as a revolving fund, UCSF utilizes the repayment of loans and interest to finance a diverse range of projects throughout the city. The UCSF is chaired by the mayor but the primary roles in managing the fund are held by community organizations: UPAF serves as the secretary and the Deepshika Cooperative acts as the treasurer.

These collaborative processes laid the groundwork for the Bhaura collective housing project, which commenced in 2020. Lumanti partnered with a funding organization to support meaningful initiatives for truly disadvantaged communities. Given the presence of robust civil society organizations and highly marginalized communities, Kalaiya was deemed an ideal location to launch this new partnership. Lumanti and its partners based in Kalaiya conducted surveys to identify the most vulnerable communities and families, visiting their homes to document their living conditions and challenges. Following careful consideration, the small community of Bhaura was unanimously selected as the site for the housing upgrading project, marking a significant step forward in their collective efforts.

Process:

As the initial step in the process, the women of the Bhaura community were introduced to the concept of collective savings. Since they were not previously part of the city's savings network, Lumanti organized visits for the community women to other locations in Kalaiya where active collective savings groups were already engaged in housing upgrading projects. During these visits, the women had the opportunity to meet members of the Deepshika cooperative, who provided practical insights into the logistics and benefits of saving together. Inspired by these interactions, the 30 women from Bhaura formed their own savings group, committing to contribute 50 rupees (US\$ 0.41) per month.

In addition to the newly formed savings group, seven active women and men from the Bhaura community formed the Community User Committee (CUC). The committee's primary role was to establish connections between the residents and various stakeholders within the city. They took charge of managing the project's finances and overseeing construction activities. It was the responsibility of the CUC to ensure that each household had at least one member contributing labor as a form of sweat equity during the house construction process.

In parallel, a preparatory meeting took place between the UCSF committee and the municipality. The objective was to discuss the specific types of assistance that could be directed toward the Bhaura families, enabling them to build safe and affordable housing. After extensive negotiations, the municipality agreed to allocate an additional budget to supplement donor funds for housing construction. They also committed to providing technical assistance and carrying out certain infrastructure projects on the site. Next, Lumanti, the CUC, UCSF, and the Municipality formalized their partnership by signing a Memorandum of Understanding. This document outlined the roles and responsibilities of each party involved in the project. With this important milestone achieved, the project could officially move forward with its implementation.

Support groups and partners in the project:

- **Kalaiya Sub-Metropolitan City** has actively supported the citywide development process since 2011. They have implemented regulations and guidelines aimed at improving living conditions in impoverished communities and have provided training in areas such as livelihood development. The Municipality has also facilitated the establishment of a citywide community development fund, to which they allocate funds from their annual development budget. In this project, the municipal authorities have provided assistance in the form of housing subsidies, infrastructure implementation, technical support, and funds for establishing local enterprises.
- **Deepshika Women's Saving and Credit Cooperative** was established in 2011 by women from low-income communities in Kalaiya. The cooperative, currently consisting of 1,133 members, has amassed funds exceeding 26 million rupees (US\$ 213,617) through members' savings and interest. These funds are channeled as loans to cooperative members for housing, livelihood, education, and medical purposes.
- **Community User Committee (CUC)** was formed by members of the Bhaura community to oversee the construction process, ensure balanced participation, manage material purchases, and resolve any internal disputes that may arise during the project.
- **Urban Poverty Alleviation Forum (UPAF)** is a community-based youth group established in 2011, advocating for the rights of poor communities. With municipal support, UPAF actively operates a Child

Learning Center and an Urban Resource Center in Kalaiya. They assist communities in gaining access to essential services and have worked closely with Lumanti in coordinating the project.

- **Lumanti Support Group for Shelter** is an NGO based in Kathmandu that has been supporting community-led housing and community finance processes in Kalaiya since 2011. They have facilitated the formation of savings groups and cooperatives, as well as the implementation of water supply and sanitation projects and other community development activities. Lumanti has played a crucial role in bridging the gap between the city government and poor communities.
- **Urban Community Support Fund (UCSF)** is a joint city-level fund established to improve access to finance for communities. The fund's primary goal is to help communities enhance their economic situation, housing, and access to basic services. UCSF manages a total amount of nearly six million rupees (US\$ 49,081), of which the municipality contributed 1.59 million (US\$ 13,033).
- **Misereor** is a German non-profit organization that has collaborated with Lumanti since 2005 to strengthen, build, and promote collective community processes aimed at supporting low-income and marginalized individuals. Misereor has played a crucial role in assisting the community-driven process in Kalaiya and two other cities in Nepal.
- **Build Up Nepal** is a social enterprise dedicated to producing environmentally friendly and affordable bricks. Their interlocking earth bricks, made locally from sand, soil, and 10% cement, enable poor families to construct affordable, disaster-resistant homes. They have assisted approximately 25,000 earthquake-affected families across the country. In Kalaiya, they provided training to local youth and masons on using earth blocks in housing construction and helped establish a brick-manufacturing enterprise.
- **Abbe Pierre Foundation (APF)** is a French non-profit organization established in 1987, working to ensure that disadvantaged people have access to decent housing and a dignified life, regardless of their financial or social situation. APF supported this housing project by providing funds to the community through Lumanti.

LEGAL FRAMEWORK OF THE PROJECT

Land status:

Unlike most Dalit communities, the 30 families residing in Bhaura possess official land ownership documents and have been living on the same land for the past 50 years. This significant advantage played a crucial role in facilitating the successful implementation of the project.

Government support:

The local government played a vital role in implementing this small-scale housing project. Initially, they showed their support by signing a Memorandum of Understanding, which served as the official agreement to commence the project. Additionally, the municipality extended assistance to each family by offering a partial housing subsidy to help cover the costs of constructing their new homes. Furthermore, the government agreed to undertake essential infrastructure works on the project site, including filling the land to above-flood levels, paving the main road adjacent to the plot, and constructing open drainage systems.

PROJECT FINANCING

(Exchange rate in 2021: 122 Nepali rupees = US\$ 1)

Project costs and who paid for what:

The construction cost of each house amounted to 300,000 rupees (US\$ 2,460), which was meticulously covered by combining funds from various sources. Here is a breakdown of how each family financed their home:

- 150,000 rupees (US\$ 1,230) came from the project budget provided by the APF.
- 60,000 rupees (US\$ 492) were granted by the Municipality as a financial contribution.
- 50,000 rupees (US\$ 410) were provided by Build Up Nepal.
- 40,000 rupees (US\$ 328) was obtained as a loan from the UCSF.

The UCSF loans of 40,000 rupees were offered to each family at a favorable low-interest rate of 5% and are repayable through small monthly installments of 1,500 rupees (US\$ 12.30) over a three-year period. The Deepshikha Women's Saving and Credit Cooperative manages the loan repayments to the UCSF. The funds for the housing project were channeled through the CUC in three installments. Before each subsequent installment was released, regular monitoring was conducted to observe the progress of house construction and

carefully scrutinize the financial aspects. Lumanti played a supportive role in assisting the User Committee in maintaining accurate fund accounts.

DESIGN AND CONSTRUCTION

Design process:

Before commencing construction, it was crucial to accurately identify the land parcels occupied by each family to avoid conflicts. To ensure the validity of land ownership and plot boundaries, a municipal surveyor was involved in the process. When everything was put on paper, it became clear that most families had tiny plots of land, averaging around 350-400 square feet (32-37 square meters). Designing new houses in such limited space while considering people's needs and family sizes posed a significant challenge. To address this, ten families with the smallest plots opted for a vertical approach, constructing two-story homes with one room on each floor. The remaining families agreed on a simple two-room design with a front veranda. In an effort to save money and materials, some families decided to share walls. Additionally, all houses were built with raised plinths to prevent water damage during the monsoon season.

Innovation in the project:

By the time construction was about to start, the cost of conventional building materials such as brick was rising, so Lumanti's technical team and community members began looking into more affordable and sustainable alternatives. A new alliance was formed out of this need, and the community members joined forces with Build Up Nepal, a social enterprise specializing in manufacturing bricks from compressed earth. In Nepal, compressed stabilized earth block (CSEB) technology has been increasingly used as a low-cost alternative building material and it was adopted for the Bhaura housing project as well.

Build Up Nepal generously shared this alternative technology with the Kalaiya residents. First, it identified a group of active youth from UPAF and provided them with intensive training in CSEB brick production and construction. The youth learned about the proper proportions of the block components, how to mix them properly, and how to cure the bricks. Local masons were also trained in using CSEB blocks, covering topics such as foundation reinforcement and superstructure construction. Finally, the newly qualified youth and masons could practice their skills on a prototype house built in the community to showcase the design and construction techniques.

Seeing everyone's enthusiasm for these compressed earth blocks and wanting to create a solid opportunity for long-term impact in the community, the municipality encouraged young people in the area to start a CSEB business. The city provided 200,000 rupees (US\$ 1,639) for the youth to purchase a brick-making machine and set up a proper workshop. The youth wasted no time and set up their production site near the Bhaura community, dramatically increasing the daily production rate from 40 to 400-500 bricks.

Construction of the houses:

The User Committee, in consultation with community members, determined which families were ready to commence construction. To facilitate the process, the houses were built in stages. The first ten families had their old homes demolished and the debris cleared. With approval from the Municipality, temporary shelters were set up on nearby public land to accommodate families during construction. Lumanti's technical team and Build Up Nepal's technicians assisted the families in laying out the foundations and provided guidance throughout the construction process. The families themselves actively participated in the labor-intensive tasks of digging, mixing, carrying, and building, significantly reducing labor costs. The choice of the primary construction material had a substantial impact on the budget, as a two-room house constructed with conventional materials would cost approximately 800,000 rupees (US\$ 6,557). However, using locally made CSEB bricks brought the cost down to 300,000 rupees (US\$ 2,460), offering substantial relief to the families.

PROJECT IMPACTS

Changes in the community:

The project had a transformative impact on the community, providing 30 families with financial and technical support to construct safe and resilient homes. Through this community-led approach, they were able to address a range of issues including finance, livelihood, infrastructure, and citizenship, in addition to housing. The upgrading process allowed them to tap into the municipality's development budget and improve basic community facilities. It also established a flexible financing mechanism for housing improvement in low-income neighborhoods across the city.

The Bhaura project placed the community at the forefront of the entire housing development process, emphasizing the importance of participation. Through the CUC, the community had full ownership of the project from start to finish. This approach increased their confidence and capacity for home improvement, strengthened their connections with local governments and other stakeholders, and fostered a sense of pride in their own identity.

The project promoted the utilization of local skills, knowledge, and resources, creating economic opportunities for the community. For instance, Build Up Nepal and the municipality assisted local youth in establishing their own block production workshop. With growing interest in this technique, the newly trained youth and masons began sharing their knowledge with others in Kalaiya, resulting in the formation of a thriving business that supplies compressed earth blocks to other communities. This not only brings profit to the community but also contributes to the expansion of low-cost housing in Kalaiya, reflecting the overall prosperity of the community.

Changes in Kalaiya:

The project has brought about a shift in priorities for local governments, highlighting the significance of secure tenure and decent housing for low-income families to live with dignity. This realization prompted the municipality to provide moral, financial, and technical support to the communities and the youth group. Their commitment to such operations in impoverished communities is evident, as two more house upgrading projects have followed, building upon the partnerships formed during the Bhaura project.

Finally, this small housing project played a crucial role in challenging deep-rooted caste stereotypes that continue to shape the realities of many individuals in the city and beyond. By promoting collaboration, it created numerous opportunities for poor communities, municipal governments, local businesses, and organizations to come together, negotiate, and plan collectively. The inclusion of poor communities in the municipality's development plans is uncommon, making this process even more significant. Through collaboration, these diverse stakeholders gained a better understanding of one another, leading to the recognition of poor communities as equal and valuable partners in development. This highlights the potential for gradual progress in overcoming taboos and marginalization through collective efforts for development.

FOR MORE INFORMATION ABOUT THE PROJECT

This case study was written in January 2023 by Lumanti Joshi and the team in Kalaiya.

For more information about the housing project in Kalaiya or about other community-driven housing and disaster-rehabilitation projects around Nepal, please contact Lumanti:

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PHOTOS



Kalaiya is a small remote town in south-eastern Nepal, where many poor communities live in mud and thatch houses.



Many settlements in Kalaiya suffer from a lack of essential services, including clean water, sanitation, roads, and drainage.



Approximately 44% of Kalaiya's population consists of Dalit families, often referred to as "untouchables." They face discrimination and are the most marginalized residents in the city. Many of them lack proper documentation and face multiple challenges.



The majority of the city's poor residents engage in farming, vending, construction, and various day-to-day jobs to make a living.



Due to the deteriorated state of their houses and lack of heating facilities, people rely on lighting fires to stay warm during the winter.



In 2012, poor women in Kalaiya formed the Deepshika Women's Saving and Credit Cooperative with support from Lumanti. Simultaneously, local youth established the Urban Poverty Alleviation Forum (UPAF). These groups started collaborating on various development issues and established a citywide community fund.



In 2020, the Bhaura community, consisting of 30 families, was chosen to undergo a house upgrading process with help from these groups.

Tenure was not a concern as all families had ownership documents dating back over 50 years. However, their homes were in dire need of repair.



After visiting other communities in Kalaiya to learn about their collective development processes, the women of Bhaura took immediate action by establishing a savings group. Meanwhile, a diverse group of active residents formed a Community User Committee (CUC) to oversee the project and manage its finances.

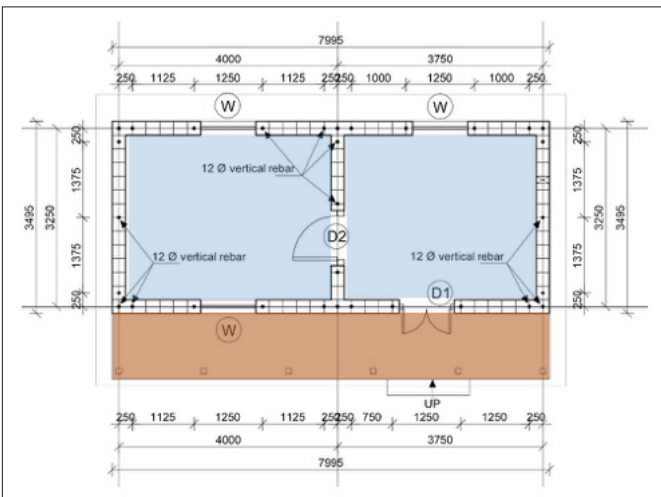


Several community meetings were conducted to clarify the roles and responsibilities of each stakeholder involved in the process. Committing to a collaborative upgrading approach, a Memorandum of Understanding was signed between the Municipality, Lumanti, the CUC, and the city-level fund.



Before planning commenced, a municipal land surveyor verified land ownership and boundaries for each family's plot.

Lumanti architects and engineers assisted the community in developing a reconstruction plan and simple housing designs.



During the design workshop, a consensus was reached on a simple two-room layout with a veranda and raised plinth to prevent flooding. To address the limited space of ten families with very small plots, a modified design was proposed, involving the construction of two-story houses to accommodate their needs.



Due to the rising costs of conventional construction materials, Lumanti and the community started exploring affordable and sustainable alternatives. They reached out to and sealed a partnership with Build Up Nepal, a social enterprise specializing in compressed earth bricks.



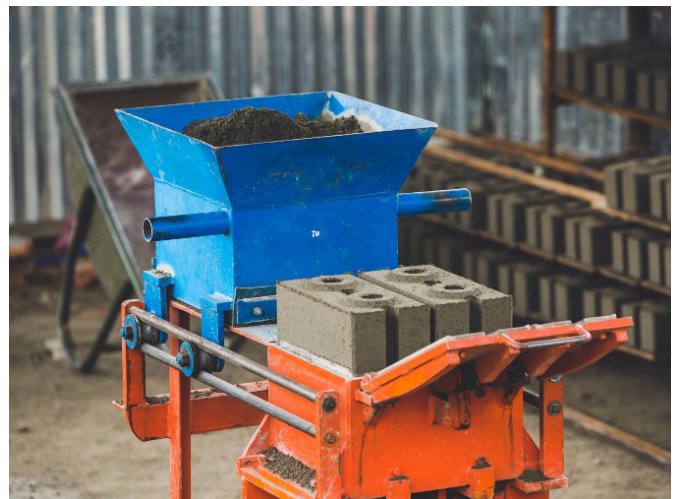
Local youth and masons underwent training by Build Up Nepal to learn the process of mixing, shaping, and curing compressed earth bricks.



During a site visit to assess the progress, the Mayor was greatly impressed by the viability of earth blocks as an alternative building material.



In fact, the Municipality allocated additional funds for the community's youth to buy a brick-making machine and set up a workshop.



To facilitate material transport, local youth set up a small production site near the Bhaura community.



With the necessary inputs and resources, the daily brick production skyrocketed from 40 to 400-500 bricks within a short span of time.



Meanwhile, mixed groups of construction workers and residents started laying the foundations of the new homes.



The construction method adhered to government building standards, incorporating earthquake-safe techniques.



Women went beyond saving, planning, and discussing by actively participating in the physical construction work.



The community was fully engaged throughout the construction process, mixing cement, applying mortar, and laying bricks.



In order to have two adequately sized rooms per house, the construction continued with the addition of a second floor for ten of the families.



Following roof installation, low-cost iron doors and window frames were added, and the houses were painted in vibrant colors.



At dawn, the Bhaura settlement showcases its remarkable transformation, with children gathering and playing outside their homes.



A couple poses in front of their new home, which accommodates their family of seven, providing them with a secure living space.



Up close, the finished houses exhibit a vibrant appearance, with children turning the narrow corridors between houses into their playground.



This project, led by the women of Bhaura, has provided their families with dignified and secure homes for years to come.