

URBAN/RURAL DISPARITY AND HUT BUILDING

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Since the end of dictator Pol Pot's three-year genocidal regime in 1979, Cambodians have been rebuilding their country, which includes making sure that all people have adequate housing. For my McMaster project, I created a manual for building decent, affordable huts in rural areas. One of my goals was to aid the dissemination of the building techniques throughout the country. As I developed my project, I learned about how Cambodia's housing crisis is affecting the culture and livelihood of rural Cambodians.

LITERATURE REVIEW

Most of the rebuilding efforts have focused on the urban areas of the country; however, the rural areas of the country are still very underdeveloped. Electricity, potable water, and indoor plumbing are the utilities that mark a modern society. Cambodians living in rural areas are unable to access electricity. Only those fortunate enough to have a car battery have access to electricity. Plumbing is virtually nonexistent outside of urban areas (CIA, 2007).

The extent of Cambodia's poverty is beyond most Americans comprehension. Cambodia's total population is around 14 million and almost 5 million, or 36%, live in poverty. 90% of those in poverty live in rural areas. Most of the poor are farmers; however, approximately 12% of those people are landless. Food shortages are a big problem for rural Cambodians. Out of 1.6 million rural households, two-thirds experience seasonal food shortages. Rice, a food staple of the culture, consumes nearly 30% of the poor's monthly income. Poor Cambodians have been moving from the more populated south and west provinces to the less populated north-east provinces. This internal migration has been caused by landlessness, rapid population growth, and a desire to escape areas plagued by cycles of drought and flood (Rural Poverty, 2007).

In addition to subsistence farmers, Cambodians living in poverty include fishermen, those without land, unemployed rural youth, internally displaced citizens, and land mine victims. Those who are the most disadvantaged are tribal peoples and women. Women lack access to education and paid employment. They also are discriminated against with regard to property rights. Geographically, poor Cambodians are widespread, although the highest poverty rates are found among people living in upland areas, near the borders with Thailand, the Lao People's Democratic Republic, and Vietnam. The least severe poverty rates are in communities around Tonle

Sap Lake and the Mekong River basin in the south. The rural poor live isolated in remote villages far from basic social services and modern facilities. They face the nearly insurmountable challenge of accessing the most basic of health and education services due in large part to distance and poor quality of roads (Rural Poverty, 2007).

The many reasons for poverty include a fast-growing population, inadequate education and skills training, few employment opportunities, low workforce productivity, and a low rice yield compared to other countries in the region. The poor quality of the infrastructure prevents rural people from accessing health, education, transportation, and employment (Ledgerwood, n.d.).

Those rural Cambodians who own land at least are able to grow enough food for themselves, with occasional surplus they can sell. When a rural citizen doesn't own land, they must find another way to earn money and obtain food. Low rates of landownership became a problem at the end of the Pol Pot regime because Khmer Rouge destroyed all legal records and seized all land. With the creation of the People's Republic of Kampuchea (PRK) a new form of land ownership was put in place. The system of Krom Samaki established groups of agricultural collectives made up of 10 to 15 families. Each family was given a small plot for a house and the rest of the land remained in the hands of the state. Three levels of collectivization determined how the work and profit was divided among the families. Krom Samaki was extremely unpopular, and by the mid-1980s the majority of farmers returned to farming private plots. However, the official ownership of the land was still in the hands of the government.

The return to private property ownership finally occurred in the spring of 1989 when Vietnamese troops withdrew and the Cambodian civil war ended. Each household was allocated between 0.5 and 2 hectares of land based on number of family members, residence in the village, and land farmed since 1979. Although the land distributions officially began in 1989, there were many farmers that didn't receive their property deeds from the government until 1996 (Ledgerwood, n.d.).

Lack of access to land has helped create a housing crisis in Cambodia. One organization that is dedicated to helping resolve the crisis is Habitat for Humanity Cambodia. However, the organization faces many obstacles. One primary obstacle is the vast difference between Habitat's definition of simple, decent, and affordable housing and Cambodians' definitions. For example, Habitat homes are designed using an American standard of three bedrooms and 1,050 square feet (97.5 square meters) of living space. In contrast, the average Cambodian home is 31.5 square meters with a living room, a

bedroom, and a kitchen. This means that a simple, decent home in America is about three times the size of a simple, decent home in Cambodia.

Finally, the cost of a Habitat home in Cambodia is too much for poor Cambodians. As a result, the areas that Habitat serves are the provinces that have the highest average income. To put this into perspective, 34% of the Cambodian population lives on less than US\$ 1 a day, which makes their monthly incomes less than US\$ 30. When 67% of the household expenses are needed for food, beverages, and tobacco, these families are left with less than US\$ 10 each month to spend on housing and other basic necessities. While Habitat for Humanity helps many families obtain homes, but it is unable to help the poorest families (Habitat for Humanity, 2007; Habitat for Humanity: Cambodia, 2007).

Many rural Cambodians have built their own huts, but many of these huts are unstable. Moreover, those that wish to build their own huts must obtain land if they don't own any and building permits. Because Cambodian land ownership policies are in a state of transition, many Cambodians resort to taking over unoccupied land (GoCambodia, 2007; I am Koh Chang, n.d.). Before building any structure, a construction permit must be obtained and signed by the government (GoCambodia, 2007). Many rural Cambodians live more than 5 km (or 3 miles) from the nearest town and often from the



nearest road. Both distance and lack of education hinder rural Cambodians' ability to readily interact with government offices to obtain construction permits or learn about building requirements.

If an individual manages to obtain the land and the construction permit, the next step is to purchase the materials needed to build the hut. The average size of a hut is four by six meters to six by ten meters and is raised up to three meters off the ground on stilts for protection from annual floods. The huts are typically constructed of a wooden frame with a gabled thatch roof and walls made of woven bamboo. If the family has enough money, the hut is divided into three rooms. The front room is common living space, one is a bedroom for the parents and the other is for the unmarried daughters (Headley, 2007).

The construction of a hut is a four step process which can take from one day to three weeks to complete depending on the number of people available. First, the land is staked out and six 30-centimeter deep holes are dug. Second, wooden supports are anchored in the holes with concrete, while wood crossbeams are attached at the floor and roof level to provide further support. The third step is to install the roof and floor. The roof materials are either gabled thatch or palm leaves overlapping enough so that they provide protection from the elements. Flooring planks are made from planked palm trees and are often installed with small gaps between planks in order to save money. The gaps can be filled in later with mud. The fourth and final step is the installation of the walls. Walls are made of either planked palm or woven bamboo. With both kinds of material, small gaps can be left and filled in later with mud (I am Koh Chang, n.d.).

In-Country Activities

While I was in Cambodia, I had to gather information about how to build a hut in order to be able to write a manual. With the help of Rex Robison, a fellow member of our learning community, I was able to compare Cambodian and American building styles and techniques. While in Phnom Penh, we researched local building supply merchants so that we could estimate the costs of building a hut with the different kinds and qualities of materials. We decided to use concrete to anchor the posts, wood posts and boards, bamboo flooring, thatch/palm leaves for the walls, and tin sheets for the roof.

CAMBODIAN HUT CONSTRUCTION

1. The frames of the three walls are constructed on the ground, two are the same size and the third has a slightly taller peak for the roof.
2. The markers for the supports must be squared off so that walls are perpendicular to one another.
3. Supports may be created to better secure the posts of the hut, bricks or formed concrete can be used for the supports.
4. The walls created in step one can now be erected onto the supports
5. The walls must be stabilized until studs can be placed connecting the three wall frames.
6. The wood boards can now be fastened to the frames at the roof, floor, and wall levels.
7. Once all the studs are in place, the roof is put up.
8. Whole bamboo is fastened across the floor studs and strips of bamboo used for the flooring.
9. The thatch/palm leaf walls must be constructed on the ground if that is the material being used.
10. The thatch/palm leaf walls are fastened to the studs in one piece, but if plywood or palm board is being used the pieces need to be fastened on at a time.
11. The last step is to construct and fasten a staircase so that one can access the hut.



RESULTS

The original plan had been to build two huts for \$400 each. Our group worked for two days with local residents of Bha Prey to construct a moderately-sized hut for a young couple and their small child. The second hut was to be built for an elderly woman and her three grandchildren. Our construction contact chose the elderly woman; the village elders chose the young couple for the second hut. After we completed the first hut, we learned that there had been pressure by the village elders to build a more expensive hut for the young couple. For this reason, we were unable to build the second hut for the elderly woman. The experience taught me a lot about working in a different culture with people whom I do not know.

The Defiance County Home Builders Association donated \$1500 towards the project. With a portion of this money, we purchased a variety of tools to donate to the local villagers. After visiting the elderly woman, our group decided to donate the remaining funds and the tools toward the construction of a new hut for her and her three grandchildren.

REFLECTION

Witnessing how rural Cambodians live was an eye opening experience for all of us in the learning community. My project taught me that rural Cambodians live communally and work together to better everyone's situation. The workers for the hut we built were all neighbors and friends of the family; we only hired one man to be in charge of getting the materials and organizing the construction of the hut. It also appeared to me that we were the first Caucasians that most of the villagers had ever seen.

I would recommend for future trips that funds be raised to purchase durable hatchets instead of hammers. After watching the men use the hatchets, I learned that with the materials they use, the hatchets are easier to work with than the hammers. Construction projects could also use non-electric hand drills and standard levels. The levels would be helpful because the villagers that we worked with don't use any kind of device to be sure the support posts are perpendicular to the ground.

Another improvement we could make is to assist them in learning how to square off the posts for the walls to be sure that the hut comes out square. In the process that we observed, the workers didn't start using a measuring stick to square the structure until after the supports were already secured in place with concrete. The men then had to lift the walls that were already erected onto the supports. We concluded that the first step in constructing a hut should be to square off markers and put the supports in place, and

then they should erect the walls. In this situation we aren't changing their methods of construction but simply the order in which portions are assembled.

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