In the morning small groups of people stand shivering around bamboo-stoked fires. Children play a concentrated game with spinning tops, beating the cold in the heat of competition.

The village, built on a flat stretch of mountain valley, is kept clear of all vegetation as a fire break, and also to protect people from animal intruders like snakes. Village pigs are caught stealing the rice bran just fed to a small horse, and chased away; by the look of it they get enough to eat.

A man is preparing beams for his new house. Rosewood beams, straight and strong. The walls of all houses in Siboun Heung are made of woven bamboo. Many household and farming tools are crafted from bamboo and, because the forests surrounding Siboun Heung are thick with bamboo, it is even used as firewood.

The villagers of Siboun Heung are ethnic Khmu which means 'We, the people'. Their ancestors were the first people to migrate into what is now Laos from southern China, as early as the 10th century AD. Originally they settled in the valleys of the northern rivers, but from the 13th century onward were driven into the mountains by another wave of migrants, the Lao people.

The Khmu endured centuries of slavery under the Lao kings, as described in a traditional Khmu lament:

"The most stunted tree in the forest
Grows better than the enslaved Khmu.
The most bitter bamboo sprout in the forest
Is less bitter than the slavery of the Khmu."

Today in socialist Laos, slavery is a thing of the past. But whereas in the old days the Khmu were driven up into the mountains, the government is now trying to move them, and other groups such as the Hmong, down into the valleys. History repeated backwards. The Khmu are swidden farmers, and in an effort to protect the remaining forests of Laos, the government is trying to move them to wherever land is available which can be irrigated and permanently cultivated.

Thus it happened that in 1988 the people of Siboun Heung came down from the mountain slopes to find some land they could terrace and irrigate by diverting water from a mountain stream. They followed the irrigation system that has been common for centuries in the mountains of Laos and northern Thailand. First they selected a spot in the stream high enough above the rice fields to irrigate by gravity. Then they dammed the stream with wood, bamboo, large stones and earth. Leading away from the dam a tiny channel was dug into the side of the mountain, winding down to the fields more than one kilometre away. In the rainy season when rice is planted, the stream flows into the channel and also flows over the dam to follow its natural course. To keep the channel protected like a natural stream, plants and trees are allowed to grow on its banks. The water irrigates 10 hectares. But this was still not enough land for everyone in the village, so with help from the provincial Irrigation Department the people are now building a bigger dam in the same spot, and a second channel on the other side of the dam to irrigate another 15 hectares of land below.

The construction site is a 15 minute-walk from the village. A long caravan sets out over a well-worn path through tall scrub. In the lead are Anusak, an irrigation engineer based in Luang Prabang, Sivon, the government technician staying in the village to supervise construction, and the village leaders. A crew of some forty people follows behind, carrying sacks of Chinese cement and buckets of gravel.

On Seng is not with them. She carried 25 kilos of cement up the mountains to Siboun Heung yesterday, a three hour trek from Lat Ta Hae. Today she doesn’t feel well, too many trips up and down last week. Villagers have carried a total of ten tons of cement up to the site so far, with some help of two small horses.

Anusak, the irrigation engineer, has designed the new dam and diversion channel in accordance with the principles of traditional system. The dam is a 'gabion' structure, made of meshed steel square baskets filled with large rocks and then fastened to a concrete foundation in the streambed. The structure can withstand the swift flow of the mountain stream better than traditional dams. The gabion baskets also outstrip an
all-concrete dam, because the silt carried by the stream will be flushed through the rocks. The dam will not trap silt behind it and will have a long life, explains Anusak.

Back in the village, headman Bun Penh relates how the people of Siboun Heung had to move many times during the years up in the mountains, because it had become increasingly difficult to grow enough food. Also, they had been trying to escape a disease that killed their smallest children in every new place they settled.

"And then the government told us to settle down and stop swidden farming," says Bun Penh, sitting on the verandah of his house. "No more tree cutting to make new fields. We came here and saw that it was possible to make irrigated fields. We want to stay here now."

Since 1988 Siboun Heung has had 36 to 44 families at any given time. Not everyone has land yet so some families still go to their swidden fields in the mountains to grow rainfed upland rice.

"By building the new dam we hope to irrigate 25 hectares, and maybe even grow two crops a year," says Bun Penh. "This is the second dry season we have worked on construction and we want to get it finished in two more months, in time for the rainy season."

The construction of the dam and the preparation of new fields involves not only work, but money as well.

"We cannot grow rice on 25 hectares without one or two buffaloes," explains Bun Penh's wife Wan Thong. "But we can't buy them, the project money is gone. First we decided it was only fair to pay the villagers who carried cement up the mountains. Then one of the horses we bought to carry cement died. Now the time has come to prepare the fields and plough, and we need buffaloes to do that!"

As darkness sets in, one of the villagers lights an oil lamp and hangs it on the verandah. The discussion about money and buffaloes stops when a tray is carried up the porch, adorned with banana tree leaves and delicate red flowers. Village elders, men and women, join the circle while others gather in and around the house to chat and take part in 'baci': a traditional ceremony of good wishes.

The tray is placed in the centre of the floor. On it a bowl with mounds of cooked sticky rice, a boiled rooster, a bottle of rice wine wedged in a bowl of uncooked rice, and handfuls of white cotton threads. Everybody places their hands on the rim of the tray, while soft Khmu words arise from the circle. The night is cold, the words float upwards on small white clouds of vapour. Bun Phen takes a few threads, passes them lightly over the rooster and binds one around each of our wrists, murmuring wishes of long life, plenty of rice to eat, health, wealth and a happy mind for years to come. The village elders follow, until all threads are tied. We put our hands on the tray again, palms upward this time, and receive little balls of sticky rice from all the elders. Many more people are joining in now. The rice wine is poured and passed around. The rooster and the rice are eaten and against the verandah banner a young man teases: "We have to perform this old Lao custom, or you might not find your way back home tomorrow."
1-5. The village and villagers of Siboun Heung.

6-11. The new dam of Siboun Heung is built in a stream called Huay Yang. It springs in the mountains, at four hours walking distance above the village, and flows down to meet the Mekong tributary Nam Ou. Today's work on the dam includes carrying cement, sand and gravel to the site where it is mixed by hand to make concrete for the side walls of the dam.
12. A traditional irrigation system in Luang Prabang province. The stream is dammed with a lattice of wood and bamboo, filled with rocks, brush and earth. The dams demand regular maintenance and rebuilding after each rainy season, but construction materials are gathered free-of-charge nearby. In this stream, called Huay Khot or 'Bending Stream', there are 17 such dams irrigating rice fields.

13. "This dam on the Huay Khot belongs to five families, each family grows two crops a year on just a little more than half a hectare," explains farmer Xiang Maa. "It is an old system, it was here in the time of my father and before. For every dam there is a group of farmers who agree upon who can irrigate at what time. We only meet when there are problems, the rules are clear."