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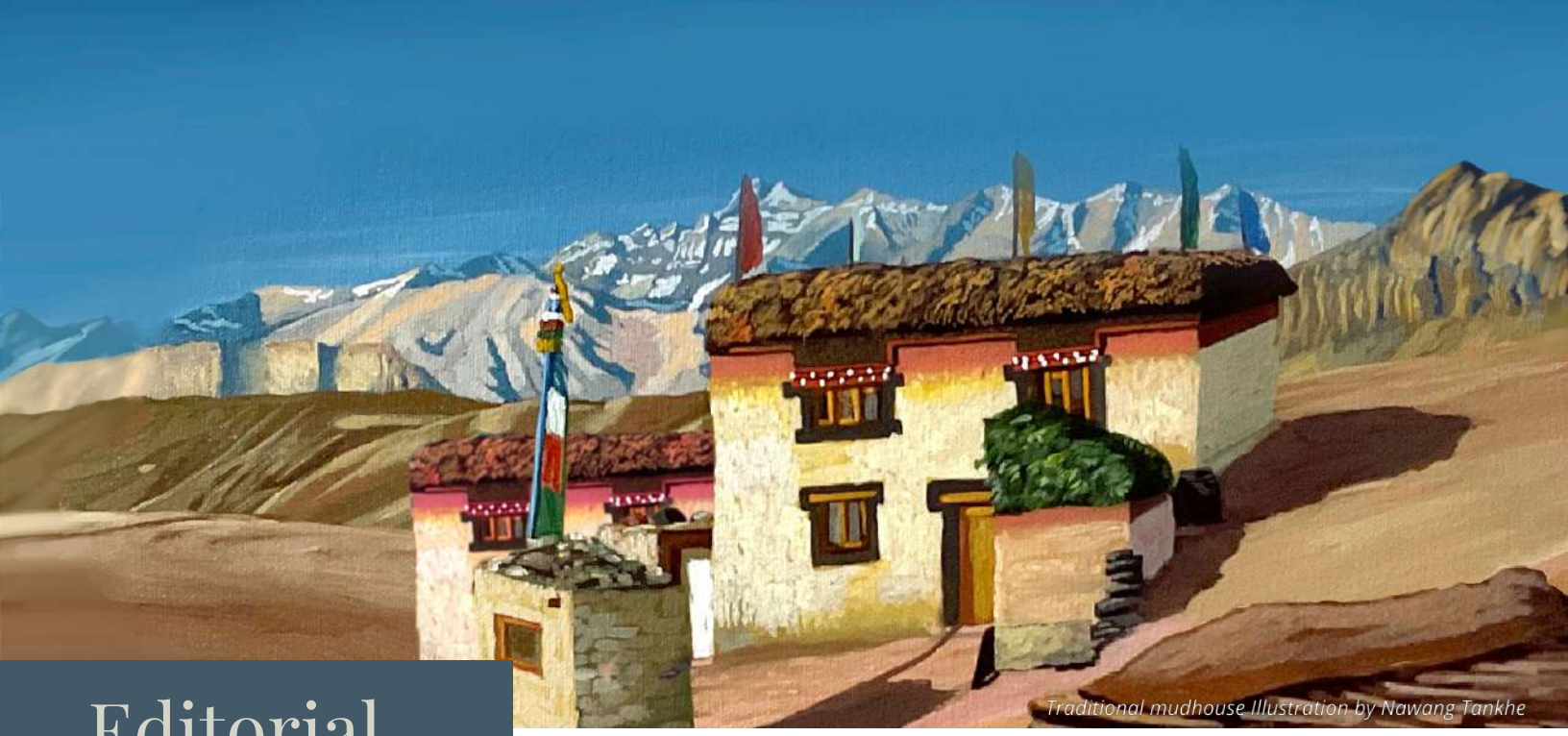
HimKatha

Celebrating human-nature relationships

Vol.4, Issue 1
Spring, 2023



Traditional mudhouse illustration by Nawang Tankhe



Traditional mudhouse Illustration by Nawang Tankhe

Editorial

The high-altitude region in Himachal Pradesh is home to some of the most unique, spectacular traditional architecture in India. The region possesses an invaluable repository of vernacular building practices that emerged as a response to the challenging mountainous terrain, harsh climatic conditions, and socio-cultural expressions.

The indigenous knowledge around vernacular design systems, and local architecture reflects the intimate relationship the community shares with its land, natural resources, and the larger ecosystem around it. The architectural heritage of the high-Himalayan region, like other rural tribal communities in India, is symbolic of the ingenuity and resourcefulness of the community.

By experimenting with the physical, and structural behavior of local materials and incorporating bio-climatic design and form, they have found innovative solutions to address critical factors like durability and seismic vulnerability of the regional architecture. Their experiences, tacit knowledge, and traditional wisdom inspire us to rethink the way we approach construction and design and remind us of the importance of merging local knowledge and resilience in our building practices.

The Spring 2023 issue of HimKatha is a celebration of local voices and traditional artisans of the high Himalayas who have played a vital role in preserving the ancient building heritage through their crafts and expertise. We hope to bring light to their narratives, stories, unique perspectives, and traditional wisdom that often go underrepresented and contribute to the immaterial cultural heritage of the local architecture.

With ongoing, fast-paced, unprecedented rapid development across the high Himalayan landscape, preservation, and thoughtful building practices have become an urgent appeal.

We hope this issue of HimKatha sparks discussions, conversations around it, opens up the space for dialogue, and moves the needle in that direction.

Kadrin-che!

Chemi Lhamo, Kaza, Spiti
Nature Conservation Foundation

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Illustrated by Nawang Tankhe(Kaza, Spiti)





Photo by Chemi Lhamo

An Insight into Traditional Spitian Architecture

Chemi Lhamo in conversation with Namgial Lhundup

Spiti is a cold, dry desert with a vast expanse of land and with limited scope of vegetation and productivity. Nevertheless, there's an oasis of human settlement, small but scattered along the river valley depending upon it for sustenance. Some of these remote ancient villages have existed in this harsh terrain for at least a thousand years and the local houses, architecture, building techniques, materials, and design sensibilities reflect conscious choices that take into consideration the unique topography and natural environment around them. Most traditional houses in Spiti are double-storeyed with flat roofs, and thick walls, with multiple rooms and structures that beautifully suit our agro-pastoral way of life. I remember my father nostalgically remember how in the olden times when winters were long and harsh, snow piles high, and seasonal migration to warmer places wasn't as convenient as these days, they found ingenious ways to accommodate their daily needs. *"Snowstorm or drought, we had our granaries filled to last at least two years and hardly had to move out of the house!"* he told me excitedly. Spitians – despite being people of slender means, were quite inventive and it is tactfully reflected in the vernacular design systems of the houses.

Upon entering any Spitian village, the most striking aspect is the cluster of white mud houses dotted beautifully against the blue sky and gigantic barren mountains. The design, aesthetics, and material composition of the houses are uniquely Spitian – evolved and adapted to suit the cold mountain desert. Primarily natural materials are used for construction; with stones as the foundation, mud for walls, and various kinds of wood for ceilings, door, window, and other support structures. Some of the common materials used are listed below:

- *Thalwa/Dambak* (Mud): For the construction of walls and boundaries. A particular type of soil colloquially called *Dambak* with the right proportion of clay is preferred over black soil and others.

- *Duwa* (Stone): Big natural stones chiseled to uniform sizes are preferred for building foundations and structures on the ground floor like *Lukra* (sheep pen) and *Chaksa* (dry toilet), as mud tends to lose its structural integrity over time due to excessive dampness from the snowfall.

- *Dhuwa* (Clay): Clayey soil is used for waterproofing the roof and plastering the outer walls.

- *Kova* (leather): Leather, when braided, is called *Dangbha* and is used for door handles, locks, and door bolts called *Korchok.*

- *Shukpa* (juniper): For *Dri-lu,* door, and window panels.

- *Changma (*willow): Willow sticks of two varieties: *Gyalchang*, used for doors and window frames as it is hard and durable, and *Chulshing*, a leaner variety of willow used mostly for *Dri-lu* which is used for the internal structure of a roof.

- *Mal* (poplar): Poplar wood for two giant support structures called *Makdung* and Burdung for roofing, support beam, window, and door panels.

- *Kirsi* (lime): For whitewashing and plastering outer walls. Mostly sourced from Losar and other upper valley sides while for lower Spiti valley, it is brought from Gue and Hurling villages.

- *Pema* (wild shrub): Primarily used as a protective structure for wood panels of the window and to prevent mud walls and outer paint from rain and snow.



Photo by Mr. Janhwij Sharma, Additional DG, ASI



Photo by Tsering Lhundup

Natural building techniques like rammed earth building are used for construction which is suitable due to its durability, low maintenance, and thermally optimal characteristics which protect the houses from extreme climate and help retain stable temperatures inside the building.

Since most of the houses are hand-built, there are specific traditional tools used for constructing particular aspects of a house. It is startling how even for building seemingly simple structures like a wall, multiple tools are used as listed below:

1. *Gyang Shing:* Gyang means a wall, and Shing means wood, thus *Gyang-Shing* is a wooden plank, used to encase the mud to help build the structure of the wall.

2. *grDu:* It is used to support the *Gyanshing* from the inside, and is placed in between the planks to prevent it from collapsing.

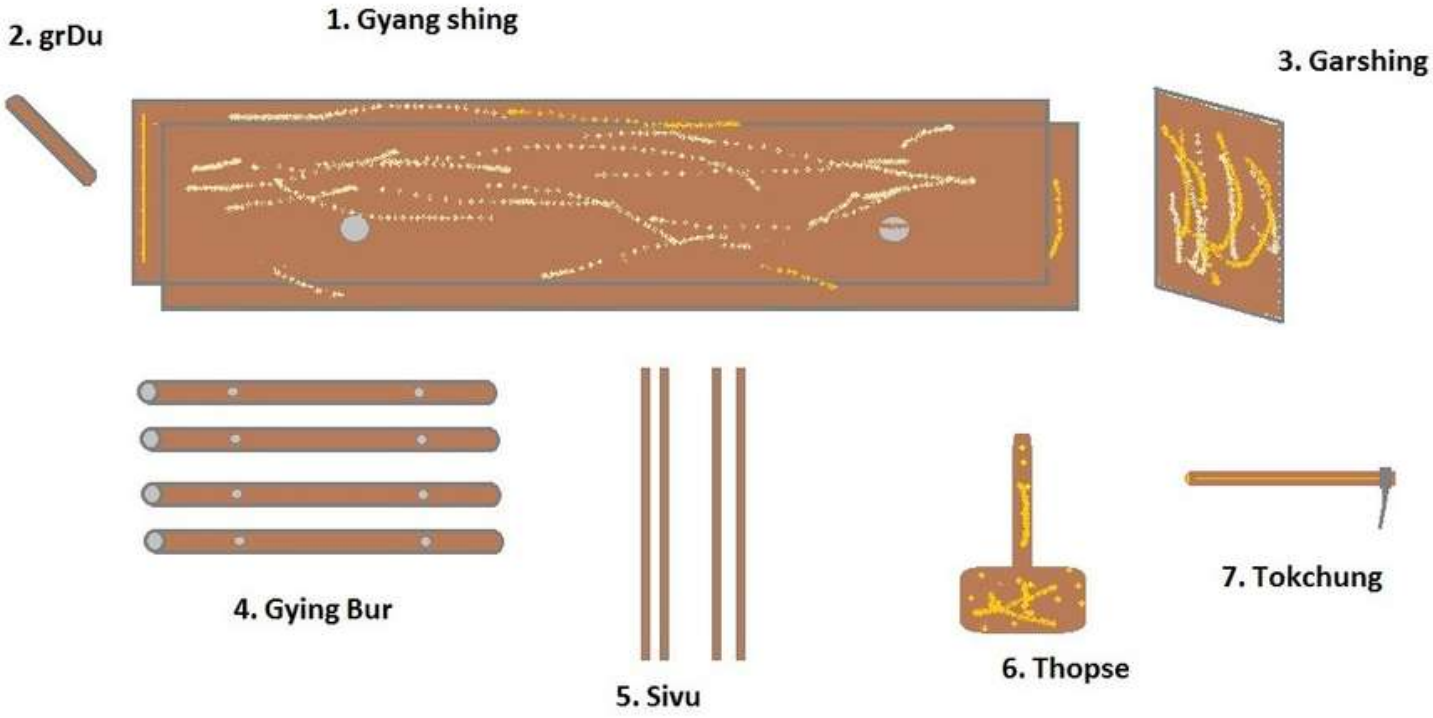
3. *Garshing:* Garshing is used to enclose either side of the *Gyang-Shing* to mark the beginning and the end of a wall being built.

4. *Gyingbur:* It consists of two pairs of wooden sticks, with two holes in each stick, used to provide support to the *Gyang-Shing* from the outside.

5. *Sivu:* it also consists of two pairs of sticks, used with *Gyingbur* to support the wooden plank.

6. *Thopse:* It is a wooden hammer used to thump the mud placed in between the plank to make it structurally more solid and to rid of air spaces and bubbles in the mud.

7. *Tokchung:* It is a construction hoe with a short wooden handle, used to scratch out uneven surfaces, and small stones from the walls before it gets solidifies.



Traditional tools for construction in Spiti. Representative illustration by Tsering Lhundup



Photo by Kesang Chunit, NCF, Kibber

Agriculture and livestock rearing used to be the primary sources of livelihood for people in Spiti and our old houses are constructed to incorporate those needs in the vernacular design. Each house comprises at-least 8-10 rooms with unique functions and features.

Elaborate storehouses can be seen in older houses - *"Zot"* colloquially means storeroom and there are different types of Zot used for different purposes: families' dry meats are stored in *"sham-zot"*, agricultural tools are stored in *"lak-zot"* whereas, alcoholic beverages like chaang and aarak are kept in "*chang-zot*".

Apart from that, some families have an additional room called *"Tiwang"* where foodgrains and other edible items are stored, the room is divided into multiple subsections used to keep various items.

Within *Tiwang*, there's a small compartmentalised room called *bhaang* where the family's essential items are stored and access to it is only from a narrow window from the upper floor.

Dhaa is a granary on the ground floor where *fungma* (hay) for livestock is stocked for winter and it has a small window-like aperture to stack grasses.

As for the livestock enclosures, most Spitian households have at least two kinds of livestock pen; *Luk-raa/Raa* is a cattle house placed inside the house on the ground floor while *Dhang-raa* is an open corral placed outside of the house right at the main entry gate.

Apart from that, the family's winter room *Yok-Khang* is structurally always in close quarters with the *Luk-raah* as the room draws insulation from *Luk-raah* making it warmer and easier to tend livestock during heavy snowfall, in case of livestock sickness or during birthing. On the upper floor, the key rooms are *Ma-khang* (main living room), *Shal-khang* (solar room). *Chot-khang* (prayer room), *Don-Khang* (guest room), and *Dhang-zey* an open courtyard on the upper floor that serves as a functional space for many community activities and which also has a small window-like access point for all the ground storerooms.

The most unique aspect of natural building techniques prevalent in high-altitude regions like Spiti is the communal nature of the work.

An individual seeks support from the community in terms of resources as well as labor so it is not unusual to have members of your family, relatives, friends, and other community members involved in building a house.


Photo by Deepshikha Sharma

Elaborate rituals are performed to seek blessings and forgiveness for causing a disturbance in the surroundings during construction. The use of local resources, awareness about the material composition, familiarity with the natural building techniques, and use of local intelligence renders them capable to build a house locally without seeking any help from outsiders. Apart from master artisans like stone masons, mud builders, and carpenters under whose guidance the whole construction takes place, there's a huge contribution from community members.

The one in particular I remember is an offering of *Sichu Bhumpa* to the local land deity *Sa-dak*- It involves placing a pot full of precious, semi-precious stones, coins, and scriptures in the foundation to invoke their auspicious blessings.

During particularly laborious aspects like roofing works, the entire village gathers to help finish it on time and after finishing all the construction works, villagers take turns to visit the family, offer gifts (like barley, butter, grains, and other delicacies) and congratulate the owner. In certain cases, a close friend or a relative even hosts meals for the entire family including the chief mason and his men. Similarly, when a newlywed couple builds their first house, villagers help by pooling important resources like wood logs.


Photo by Tsering Lhundup

These cultural practices help ease the logistical burden on the host family where the community becomes one's greatest support system.

In the olden times when importing materials was not possible, people often exchanged raw materials or traded labor for raw materials. I remember many such instances where milking animals like cows, *Dzomo*, sheep, goats, or draught animals like horses, yak, and donkeys are exchanged for important construction materials like *dungma* (willow log) and timbers.

Other commonly traded materials are butter, iron, honey, *sitpa* (yak thread rope) from which one can buy construction materials of equal monetary value. Iron and honey are not easily found in Spiti and hence were a coveted commodity, *sitpa* also fetched equal importance but gradually with the emergence of nylon ropes in the local shops and improved accessibility, there was a huge impact on overall trading practices around it. There was a time when it was also possible to pay for construction labor works through materials or any other resources.

One popular example of this unique labor v/s resource exchange is the payment of one goat to a master artisan for helping build a house. With development, these practices have undergone massive changes and are no longer practiced but it was fascinating to recount such stories and ponder upon various means of material procurement for construction works.



Namgial Lhundup

Namgial Lhundup is from Poh village in Spiti and he is 69 years old. He nurtures deep love and appreciation for nature and grew up keenly observing, and learning from his natural surroundings. He studied at Tabo monastery - one of the oldest centers of learning for Buddhism in Western Himalaya. He grew up marvelling the beautiful earthen structures, wall murals, sculptures of the Tabo monastery and attributes his fascination for natural building to it.

He is a skilled horse rider and won many trophies during local celebrations including one from annual *Ladarcha* celebration in Spiti. He loves collecting coins, other items of antiquities and finds joy in it's beauty. We are grateful to Tsering Lhundup (his son) in helping us bring out his story.



Photo by Tanvi Dutta

Conversation with a *Gyangon-da :* a mud house builder & stone mason

An Interview with Chhuldim Pempa

Demul is a remote high-altitude village in Spiti known for its beautiful meadows and pastures. The villagers are agro-pastoralists and still actively practice their traditional ways of agriculture, livestock rearing, and herding. This village is also home to many Spitian artisans skilled in building traditional mud houses, *Dor-si* (stone mason), *Shingso-wa* (carpenter), and *Gyanghon-da* (earthen wall builder). We spoke to Mr. Chhuldim Pempa from Demul who has been in the trade for decades and is a master craftsman skilled in stone masonry and rammed earth building.

HimKatha: Julley and Tashi Delek. Chhuldim ji, we heard you have spent many years building traditional mud houses in Spiti and are an expert Dor-si (stone mason). Can you tell us more about yourself and how you started?

Chhuldim Pempa: Yes. I have been working in traditional construction for over 30 years in Spiti and my primary work is building houses using mud and stones. I started in the early 90s when I was around 18-20 years old. I stumbled upon it quite unexpectedly - I grew up herding and working in my family field but once there was an opportunity to work as a construction helper to a house *mistri* (chief mason) in my village. The work seemed pretty doable, it includes working under a master craftsman and helping him in manual works like carrying stones, digging works, making mud mixtures, and doing all the preparatory works before the chief mason starts laying the stone foundation for a house. It was paying a minimal amount for the labor work, so I took it up along with a few friends.

Back then, there wasn't much to do, so I continued as a labor helper in traditional constructions for a few years before I began focusing exclusively on stonemasonry and rammed earth-building techniques. Looking back, I realize, my apprenticeship days were difficult but it's there amid the mud, stones, and under the guidance of a skilled mason that I learned the most and picked up the skills of the trade before I started practicing it independently in my village.

HimKatha: How was the overall experience of working on traditional construction sites in Spiti and how did your work evolve over the years?

Chhuldim Pempa: To build a traditional mud house in Spiti, one needs to seek a chief artisan skilled in building mud wall structures, stone masonry, or carpentry works. The master craftsman undertakes the entire work and is usually accompanied by a team of apprentices, laborers, and mason helpers to assist in various aspects of the construction. When I initially started as a laborer, the work was an odd mix of manual work like carrying stones, stacking them, making mud bricks, putting them for sun drying, watering the mud blocks, and doing all the other preparatory works that ease the load of a master craftsman.



Photo by Deepshikha Sharma

I remember carrying stones on my back for months before the use of donkeys and machinery became popular. I used to visit different villages in Spiti like Kaza, Lalung, Kewling, Mane, and places as far as Tabo and help with all sorts of traditional constructions.

The initial hard labor works exposed me to different elements of the trade and made me more confident to learn and take up more skilled works like stone masonry and rammed earth building which require greater discipline and precision.

A Dor-si is a craftsman who identifies and assesses stone quality, shapes it, chisels it and lays it according to the structural plans. A seasoned mason knows how to procure natural rocks, the difference between *kachha* stones, and *pukka* stones, and which one to use for the traditional building. He is extremely cautious about picking up stones easily available on the surface of the ground but is of little use for construction due to its brittleness.

Stones are one of the most durable building materials and it should be hard, and free from cracks, and cavities. This is where the skill of an experienced mason comes into play - right from selecting the stones for particular construction and being able to visualize the entire structure before the first cut is made.

HimKatha: What changes have you seen in natural building techniques over the years?

Chhuldim Pempa: In Spiti, rammed earth building has traditionally been practiced for centuries, it is used for building residential houses and monasteries - most of the old mud buildings in Spiti like *Tabo Gonpa* (built-in 10th C) and the old *Tengyud Gonpa* are built in that form. To a large extent, it is still preferred in higher Spitian villages like Demul, Komic, Chicham, and Kibber for its durability and inherent thermal capabilities. Architectural changes are definitely taking place in Spiti and with that, there is a stark shift in natural building techniques, resource



Photo by Mr. Janhwij Sharma, Additional DG, ASI



usage, and general treatment of vernacular design systems. There's increased usage of industrial materials like cement, metals, ready-mix concretes, glass, plywood, plastics, and artificial stones which were not accessible in earlier times. Houses were built with a lot of care and even the smallest details were incorporated with a lot of structural integrity. For eg earlier, all mud houses have *"Kyorma"* on the upper roof which is a protective boundary made of wild shrubs, it looks aesthetic as well as does a great job of protecting the mud walls from sun and rain. The use of such designs is declining.

Walls are built with *Gyang-sa* - a specific soil type carefully selected by the master mason, it is mixed with grass chaffs, straw, or small wood chips, and the mixture is then kneaded with water two days before building a wall. It is done to allow better water absorption in the mixture and adding grass chaffs provides warmth once it is built.

Thick double walls of about 18 inches are built using a cross-joint technique where one wall is built from right to left and another from left to right.

The structure is then plastered with the same mud mix or tied on the two sides with wooden planks (*dungma*) on the two sides of the walls and the mud mix is filled in. Once filled, it is slowly pushed in by walking on it which makes the wall structures more cohesive. Such designs are crack resistant and have better resilience towards earthquakes as compared to straight cement pillars that are adopted in new houses these days. Thoughtful building methods like this are slowly fading and I am afraid soon people won't require artisans like us.





Photo by Deepshikha Sharma

HimKatha: What tools are used to build houses in the olden days?

Chhuldim Pempa: We used very minimal tools as there was no access to any resources. Most tools were handmade by Spitian blacksmith artisans from the *Dzo* community who were experts in making agricultural and field tools used for construction. We used only 2-3 tools like *Tokse*, *Teo*, and *basal* used for digging mud, pulling stones, handling mortar, and other wooden tools for building walls.

Since houses were built communally among villagers, tools were also shared locally among people. For measurements, we relied heavily on the ancient technique of using the body as a tool - fingers, elbows, and arms were used to measure walls and base construction. For eg: *"Thu"* is a measuring length from the middle finger to the elbow while *"Dhompa"* is the length from one's right hand to the left once we spread it widely and apparently one *Dhompa* equals five feet. Such measurements are used for building smaller structures in the house like *Chaksa* (dry toilets) and *Raah* (Sheep house).

HimKatha: Are there any community practices and traditional rituals around building houses?

Chhuldim Pempa: Yes. In Spiti, building houses is a community activity. Everyone pools in the resources and volunteers to help during various phases of construction. It is quite common for 3-4 households to get together and help each other and it is colloquially called the *"Bhey"* system where the community forms an internal support structure and relies on each other for resources and labor.

In a place like Spiti where resources are scarce and sustenance difficult, it proves more feasible and affordable. Many auspicious rituals are performed to bring good luck and prosperity to the host family.

The one, in particular, I remember is called *"Saney-Doney"* where the host family consults *Rinpoche* (venerable lamas) and he places a pot containing soil and pebbles from Buddhist pilgrimage sites like Varanasi and Nepal in the four directions of the foundation to ward off evil energies on the land and to bring prosperity for the host family.

Another ritual is called *Jinshak* ceremony which is done on empty barren land to check the suitability of the land for construction.

Apart from that, there are local belief systems that imbibe respect for human-nature relations and value natural surroundings. For eg: stones are never excavated from *Chumik* - the spring water areas for construction as it causes ecological disturbance in the area.



Photo by Deepshikha Sharma

HimKatha: Thank you for sharing your experience with us.

Chhuldim Pempa: *Zang-song!* (Thank you)



Chhuldim Pempa

Chhuldim Pempa is from Demul village in Spiti and he is a master artisan skilled in rammed earth building and stone masonry. He has been in traditional construction work for about 30 years and helped build many mud houses in different villages of Spiti. He devotes his time to farming, building traditional houses, and looking after his granddaughter *Tsomo*. We are grateful to his entire family members for supporting us in telling his story.



Photo by Chemi Lhamo

Blending Traditional Architecture with Contemporary Design

Swaroopa Damle in conversation with Gopal Negi

Houses are intrinsically tied to the cultural landscape of the region and in the olden times in Kinnaur, great value is placed on the following traditional uniformity in house designs. A stark resemblance between houses built in the valley and the overall architectural homogeneity creates a strong sense of belonging among community members. Kinnaur district in Himachal is known for its woodworking heritage and detailed ornamentation of traditional homes. Usage of Himalyan cedar tree is popular for building homes due to its termite resistant properties and it's ability to accept meticulous carvings on the surface but very few of these structures exist today. In the lower Kinnaur villages like Kalpa, Sanghla, Pooh, and Baba Nagar, the Kath-Kuni technique that uses a combination of wood and stone is traditionally practiced while in the upper Kinnaur side covering Hangrang valley, building with mud - adobe, and rammed earth is more popular.

Many changes are taking place in Kinnaur and growing access to the market, connectivity is certainly impacting how we build houses these days and RCC-based buildings are becoming more wide-spread. When I decided to build my house in Hango a few years back, I was very conscious of building it in a way that amalgamates traditional wisdom, and vernacular designing techniques with a modern sensibility. The traditional construction methods are easy, economical, ecologically sensitive, provides cultural utility and thermal functionality and I was determined to preserve

that essence. Any changes in these designs should aim for aesthetic needs, comfort, and suitability to modern-day needs at the lowest possible ecological cost. The primary material used for the construction was stone, adobe bricks, and wood, and special focus was placed on the building structure given the hilly terrain of the village to ensure it takes into consideration the geographical peculiarities and is climate-responsive. Building with adobe is an ancient, low-cost technique that mixes clay, and sand with organic materials like husk, and sawdust.

Adobe bricks are mud bricks that are sun-dried and take about a month to dry and are more durable than kiln-fired mud bricks. The advantages of these bricks are that they are fireproof, biodegradable, and also are great at insulation, which is an important factor when building in a place like Hango. These bricks are to shrink beforehand which also ensures a strong structure. Building with adobe is easier and faster than the rammed earth technique, once sufficient stock of adobe bricks is made, wall construction progresses quickly.

The kitchen and living room are on the ground floor and are structurally joined like the traditional mud houses in Kinnaur. Co-designing spaces like this is a popular practice in most high Himalayan villages as it is warmer and I have given a slight tweak to the traditional heating system to make it aesthetically pleasing and more energy efficient. Stone layering is done for the foundation as it is moisture-resistant and helps preserve the structure from deteriorating over time. Adobe walls are load-bearing and thick hence there was no need for load-bearing beams.

For the flooring, pine woods were brought from Solan and Chandigarh as the availability of local woods has shrunk and pine was a more cost-friendly option as compared to deodar. I was determined to ensure maximum usage of natural materials and hence the use of cement, iron, plywood, or other popular industrial materials was avoided.

The house is built in the traditional Kinnauri style with multiple spaces to store fodder and firewood.


Photo by Gopal Negi


Photo by Deepshikha Sharma


Photo by Deepshikha Sharma









Photos by Deepshikha Sharma

Big, well-framed windows are installed to allow maximum sunlight, and double doors to retain the heat inside.

Hand-built mud fireplace with mud chimneys was made to suit the structure of the house and the walls draw heat from the mud-burning structure. The overall living room l ayout is in such a way that the family can have the space for cooking as well as a common space to sit, and have conversations and everyone can comfortably utilize the space.

Unlike the traditional mud house designs in Kinnaur, the roof has a slanted design with stone slate layering which eases the burden of shoveling snow from the roof during winter as the slanting helps glide snow.
A smaller structure of a dry toilet is also made outside the house which doesn't require water. It took about one and a half years to complete the double-story mud building and once it was completed, I was happy to receive many inquiries regarding the earthen building - the process, techniques, materials, and many other aspects that garnered curiosity from both locals and outsiders alike.

I wanted to demonstrate that durable, aesthetic, eco-friendly houses can be built from natural materials and create a dialogue around a sustainable buildings in general. With every keen look and every curious engagement, I feel I am one step closer to my goal.



Gopal Negi

Gopal Negi is from Chuling village in Hangrang valley in Kinnaur. His family belongs to a small nomadic household and has now shifted to apple cultivation. He is an engineer with a deep passion for natural farming, natural building techniques, and issues of ecological sustainability.

Additionally, he nurtures curiosity for alternative forms of medicine and nature-based healing. He is associated with Sahjivan Eco Farms - a non-profit focusing on natural farming and sustainable living in Himachal Pradesh. He consults individuals and institutions across India on sustainable architecture and spreads the message of sustainable living by practicing it in his daily life.



An old photo from family album. Photo by Chhering Phuntsok

Pearls of wisdom from a master artisan

In conversation with Lobzang Choephel & Chhering Phuntsok

Building with an earthen material is a craft, a philosophy where nature is at the center of the entire life cycle of a building. From its conception, sourcing, material usage, and construction till the inevitable end when the material returns to earth as compost, there's a balance, harmonious unison with nature. The renewable nature of the natural material renders it environmentally more sensitive and less disruptive to the land and ecosystems around it. Lobzang Choephel also known as *Lama Thamo ji* the master artisan known throughout the Spiti valley for his expertise in rammed earth building and understanding of natural material feels that the journey of the natural building is rooted in the ethics of care. Being a skillful craftsman, he opines that care frames your relation with the land you are building on, the material used, the people/community you are building for, and their relation with nature.

We rarely talk about intention and mindset when it comes to the trade of building but he thinks this is critical and is inevitably tied to the entire process of building. In Buddhism, there's a huge emphasis on "*kun-long sangpo*"- having a righteous mind and kind

motivation that dictates one's action.

Reflecting on the same, he quietly utters *"When it comes to natural building, at the most primal level it means creating a human habitat that reflects brilliant functionality of natural material, inherently sustainable design, and one where care for the nature is there from which we draw so much"*. In the daily experience of building, this reflects on being mindful, being responsible in places you excavate stones, dig soil, paying attention to the character of the material whether it is harmful or good for nature, and the overall approach you take in construction. With all the heavy lifting of stones, digging the ground, and building with mud, construction is physically very strenuous, and while construction, a lot of microorganisms get killed in the process.

Therefore in ancient Spitian tradition, much like a farmer would recite prayers before plowing, the local artisans offer prayers before construction and express their remorse, their guilt for engaging in what is considered a sinful activity that harms other sentient being including microorganisms which are barely visible through our naked eyes.



Photo by Kesang Chunit, NCF, Kibber



Photo by Deepshikha Sharma



Photo by Kesang Chunit, NCF, Kibber

Tashi Monlam - prayers for the auspicious building process and fewer obstacles for the artisans, the laborers, and the host family are also recited. Another prayer earnestly seeks the blessings of local deities for a productive building experience and appeals to them for strength and diligence to undertake construction works. It can be aptly summarized as *"May give us the strength to build this house as if built by god himself, May construction work be easy and fruitful".*

Many indigenous building approaches and such unique cultural practices are rapidly getting substituted with more modern, industrial building techniques which are devoid of ethical essence and are proving more unsustainable. The natural environment sustains the life of all living beings and it is crucial to acknowledge the basic interconnectedness and relation between humans and nature.

In an age where haphazard development and construction activities are surging up, it is all the more important to evoke traditional wisdom and reflect on the significance of traditional materials, techniques, their implementation, and their relevance in contemporary building practice. Being a skillful natural builder for over 55 years and having spent a lifetime devoted to this trade, mindfulness is the guiding philosophy, and his learnings in Buddhist scriptures and meditation often drive his groundwork as an artisan, a builder, and a seasoned mason.

There are so many ways to handcraft with natural material but one thing common across different geographies and contexts is the use of soil - the earth beneath our feet. No two sites have the exact composition of soil and as a builder, it is important to immerse oneself in these materials to gain experience, understand how to work with

available soil in a given site, and be aware of the particular qualities, and limitations of soil that gives us scope for experimentation. For instance, deep yellow, orange, and red soil found in villages like Kaza is good for construction, especially for foundations whereas black and clayey soil found in higher villages like Demul, Chicham, and Komic is not good for foundations as it can cause dampness in the foundation. Hence understanding material adaptation is important otherwise it will be risky to build a structure without sufficient attention to detail.



Traditional mudhouse in Mane village, Spiti. Photo by Pema Khando

"When I began construction, I worked closely with elder Spitian artisans to build and renovate many monastic structures - especially Dha-shak (monk's residence), there was hardly any material available apart from the ones you get in your village sites. Even wood materials like willow, poplar, and timber were scarce so it was used judiciously for roofing structures, and most roof structures were made of smaller woods of shorter length which was mostly gathered from the village pastures".

With accessibility, the struggle has lessened a lot but it has changed the architectural integrity of a place.

The use of natural materials, responsible building methods, and the shared ethos of love and care for natural surroundings is fast disappearing and the preservation of traditional wisdom has become an urgent responsibility.



Lobsang Choephel

Lobsang Choephel also lovingly known as *Lama Thamo* is a self-taught natural builder from Spiti's Chicham village. He first started building when he was 15 years old and helped renovate and rebuild many structures of Kee monastery apart from helping build residential mudhouses in Spiti. He devoted his life to working on traditional construction and worked till the age of 73. He is now retired and has ceased actively building but still engages with everyone who seeks his wisdom, and lifetime experience in traditional building and consults younger mudhouse artisans in Spiti. We are grateful to his son Mr. Chhering Phuntsok for helping us capture his story and experiences and to many others who contributed to the story.



Chhering Phuntsok

Young Explorers

A day at my uncle's old mud house

- Tanzin Chhonzom

I live with my parents in a beautiful mountainous village called Kaza in Spiti, the original name is *"Kar-zey"* which means white beauty referring to the snowcapped mountains surrounding our village. Up until I visited some neighboring Himachal towns like Rampur, Rewalsar, and Shimla, I never realized how unique our culture, language, and traditions are - even the houses we live in look different from the other parts of our state. Many questions arise in my mind when I look at the gigantic mountains and the mudhouses in my village.



Mudhouse drawing by Tanzin Chhonzom



When I visited my uncle's village in Chicham, my curiosity even grew bigger witnessing very old big mudhouses. I could not resist thinking about it and asked many questions to my uncle and relatives living there.

One fine day my uncle took me to his old ancestral mud house in Chicham and explained its structures. It was exciting to learn about the ancient houses built in Spiti and I want to share my experience.

When we stepped into the house, my uncle explained that the ground floor consists of a small cozy room for winter called Yokhang and a few cowsheds called *Raah.*







There was a separate room for goats and sheep called *luk-raah.* On the adjacent side, there was a big two-storey room called *Dhaa* to store the fodder for the livestock. When you follow the stairs leading to the first floor, there is a local dry toilet called *Chaksa*.

On the upper floor, there was a huge open courtyard called *Thang-tsey.* My uncle told me that during summer, some families used to sleep in the courtyard under the stars.



All Photos by Tanzin Chhonzom



There was another room called Tsom opposite Makhang where daily necessary edible items are kept. There was a separate prayer room called Chot-khang, guest room called Don-khang, and a chamber called Che-khang for keeping fuel like dry dung, wood, and dry twigs. Every house also has an open corral for livestock outside the house called Dhangra and this home had one too.

The traditional houses in Spiti are painted with whitewash - the white color of the house symbolizes the compassion of Bodhisattva Avalokiteshwara who is often depicted in white colors

The window frames are painted saffron with a wider black color. The saffron color symbolizes *bodhisattva Manjushiri* which stands for purity.
The houses are color-coordinated like that for auspicious purposes and to bring harmony to the home.

My uncle further explained about the ground foundation when we walked out of the house. Big stones were used in the foundation floors which were locally available. Rammed earth walls with mud and timber were used to construct the roof, the window frames, and the doors. The mud house is best for cold places like Spiti because mud houses are warm in winter and cold in summer. Mud can be used many times for construction and has a lifespan of over 100 years while cement houses cannot sustain that long.



Tanzin Chhonzom is 12 years old and she studies at Jawaharlal Navodya Vidhyala school, Lari. She is in sixth grade and loves drawing, painting and observing her natural surroundings. She is an avid reader and likes writing about her curious observations and adventures in her diary. When she comes back to her home for holidays, she loves spending time doing art and craft or visiting her relatives in Kibber and Chicham village.

Tanzin Chhonzom

Why Development?

Pema Khando



Julley and Tashi Delek. I am Khando, a local resident of Spiti Valley. I once read a quote *"change is a law of nature"* and it made me think a lot. While thinking and planning to write about architectural changes in my hometown, I kept reflecting on it and it made me want to share my thoughts. Since my childhood, I have witnessed a lot of ancient traditional houses renovated into modern houses and I always felt upset seeing beautiful Spitian mudhouses being replaced. It is interesting to think about the merits and demerits of architectural changes and the reasons compelling it in Spiti. When I go to the market and see new cement buildings getting constructed, It makes me miss my childhood days and my grandmother's house which is a simple, beautiful mudhouse with rooms for our cows.

It had a big flat roof where we play and sit under the sun during winter. The hay for our goats is also kept there in one corner and the other fodder stock for winter is kept in a storeroom called *Dhaa* which has a small window for ventilation. Since the ventilation known as *Numhar* was built on the roof, we keep it open the whole day and during the night, cover it with a piece of cloth to prevent cold wind.



Photos by Tsering Dolker, Kaza



Houses like this built during my grandmother's time are made of mud and wood and one special thing about those houses is that it keeps cool during summer and warm during winter. Building houses during those times was not a big task, it was more like a gathering of relatives, and villagers to help each other. Everyone works with so much passion, enthusiasm, and fun as if it is their own house they are building.

Gradually things changed around me and now houses are constructed from inorganic materials like cement and a lot of metal pillars. Building a house has become very expensive and a huge task nowadays. Our relatives and villagers no longer build houses together and it is now designed and constructed by laborers and architects from different states who travel very far to reach Spiti.

I am not against development as we have to rise and be part of development changes around the world but why change? Why not improve? Improvements can be made to ancient traditional houses according to our desire and needs. Spiti houses now have western toilets, cement flooring, and smooth tiles but it is not healthy. Western toilets waste a lot of water and it is scarce. Living in cement houses gives joint pains, and back aches and I have seen my many relatives suffering from it. I hope people appreciate the old style and can adopt it in new design.



Pema Khando

Pema Khando is born and brought up in Kaza. She recently finished her 12th grade studies from S.C.H.S Munselling in Rangrik village. She is currently preparing for medical entrance exams and loves reading, writing and exploring. She is deeply interested in archeology and natural history of Spiti valley and wants to uncover the fascinating mysteries of gigantic mountains surrounding her hometown. She loves observing fossils, visiting ancient unknown caves and marvelling at the rockarts.



Photo by Angdui Phuntsok

Conversation with a *Shing-zowa:* master wood craftsman

Rinchen Tobge in conversation with Angdui Phuntsok

Rinchen Tobge: Julley Angdui Phuntsok ji, When it comes to building houses and wood crafting, a lot of the people from Kibber village consult you and rely on you to undertake the work. Can you please tell us more about yourself?

Angdui Phuntsok: *Julley, Namaste,* and *Tashi Delek* to all HimKatha readers. My name is Angdui Phuntsok, I am from Spiti's Kibber village and I am 46 years old. I grew up helping my family herd livestock (sheep, goat, cow, yak, *Dzomo*) in our village pastures and plough in our barely fields. I took up carpentry work when I was 20 years old and I learned to make windows, door frames, and *Kawa* (wooden pillars) for traditional mud houses. I worked very closely with Spitian mud-house builders and artisans who were skilled in stone masonry. I eventually self-taught and picked up the skills and started implementing them in my work as a house *mistri* (chief artisan). I have been building traditional houses and doing carpentry work in Spiti for about 27 years now. I spend my summers building mud houses, consulting, and helping locals undertake various renovation works, and devote my time to carpentry during winters.

Rinchen Tobge: How do you undertake building works in Spiti and how is it different regionally?

Angdui Phuntsok: It mostly depends on the host family, and individuals commissioning the

work. Earlier traditional mud houses are preferred but these days cement houses are becoming popular and people even go for mixed structures where the walls, the foundation, roof, and the internal structures of a house are of earthen material and mud while the outer plastering of the house is done with RCC. The choice of material is also dependent on local conditions and regional variations. In the *todh* valley side (upper Spiti side), the raw materials are scarce whether it is wood, good quality soil, mud, stones, or iron, hence the design and structure of a house are mostly just mud based with minimal use of resources that isn't available locally. As you move to the *Sham* valley side (lower Spiti villages) access and availability of raw materials becomes easier hence earth is used extensively from walls to roofs and stone is used widely in lower portions of a building for stability. When you reach the neighboring villages in Kinnaur like *Nako, Malling, and Chango*, stone-dominated structures and dry stone houses will be visible.



Photo by Angdui Phuntsok



Photo by Tanvi Dutta

Rinchen Tobge: From your experience how have people's livelihoods, and developmental changes in the region impacted local architecture in Spiti?

Angdui Phuntsok: There is a deep connection between people's livelihood, their way of life, development changes that happen in the region, and how it shapes the local architecture. Spiti's architectural changes have certainly undertaken an interesting trajectory and as a local artisan, I am still grappling to find balance and navigate the changes. Earlier Spitians are primarily dependent on agriculture and livestock rearing and the local houses, the architectural designs are built to accommodate the agro-pastoral needs of the household and the community/ suit agropastoral needs. Incorporating separate structures for cattle like corrals, livestock pens, and storage rooms for grains, tools, dry toilets, *Dhangtsey* (open courtyard), and flat-roofs are all an integral part of the local architecture and function beautifully to fulfill the unique needs of an agricultural family. With accessibility, better connectivity, tourism, and development changes, alternate livelihood opportunities are arising for locals and that utter dependency on agriculture-based livelihood is changing.



Construction in Spiti, Photo by Tanvi Dutta





Many people are employed in government services, and tourism-based livelihoods are increasingly becoming easier options for people. This is all dynamically changing people's relationship with their land, their resources, and the local architecture. Vernacular house designs, traditional structures, spaces used for agropastoral-based livelihood, and local materials are losing their relevance. Many households own a lesser number of cattle nowadays and rearing large-bodied livestock like *yaks* have also shrunk a lot. Only in *Todh* valley (upper Spiti) it is practiced and hence erstwhile spaces, and structures dedicated to these needs are falling out of use. Modern, cement-based hotels, guesthouses, and giant commercial buildings completely contrast with the local architecture are cropping up. The changes were more prominent in lower Spiti villages like Kaza, Rangrik, and Tabo earlier but in the past 3-4 years, such structures are also becoming more prominent in remote villages like Hansa, Hull, Pangmo too and many of these hotels remain nonfunctional during winters. Like many fragile places, development changes in Spiti are at the cost of the environment, and resource stress, and are slowly changing the architectural integrity of the place.

Rinchen Tobge: How is it impacting local artisans and local knowledge around indigenous architecture in Spiti?

Angdui Phuntsok: The traditional building technique using natural materials found locally is an easy, affordable, locally suited, and eco-friendly way of building. People are familiar with the local resources, materials used for construction and leverage traditional knowledge, and intelligence to design houses. It doesn't involve unnecessarily complex methods and tools to implement it. It's very intuitive, immersive, and experiment-based and most people have a working knowledge of the same. The shift to non-traditional, industrial raw materials like cement, steel, glass, and other concrete materials has alienated locals from their own land, own resources, and indigenous knowledge about building systems as it requires specialized masons, and craftspeople to build cement structures.

The dependency on non-local craftsmanship is increasing which in turn triggers the migration of workers, artisans, and laborers from lower Himachal districts like Mandi, Kangra, Shimla and some even come from as far as Rajasthan, Bihar, Odisha, Jharkhand

and Maharashtra. More and more locals from lower Spitian villages like Kaza, Tabo, Rangrik, Losar, Khurik, Shego, Lara which are hot spots for tourism are outsourcing the construction works to migrant workers from other parts of the country who have no knowledge of the local context and are probably themselves struggling to work in such harsh climatic conditions. Earlier local artisans like *Gyangon-da* (rammed earth mud builder), *Piti Dor-si* (Stonemason), *Piti Shingzo-wa* (wood crafter/carpenters) play an integral role among community members, and their skills, their knowledge, their experiences about the landscape shapes the local architecture. The large-scale tourism and development-based constructions are creating a new social order which is posing multiple threats to the environment, local ecology, wildlife, and architectural heritage. Natural heritage.

Rinchen Tobge: As a local mudhouse builder, and an artisan, what are some of the challenges you experience daily?

Angdui Phuntsok: *Ghawo minang yokak!* (... there are many challenges!) Construction is essentially labor intensive and physically very strenuous work. As an artisan whether you are involved in stonemasonry rammed earth building, or are undertaking other works like carrying stones, mud, bricks, breaking stones, or digging earth, it takes a heavy toll physically. Knee, back, and joint pains are very common, and injuries due to construction work is a common experience too. But all that pain goes away if your host, and the individuals commissioning the work are kind and generous, and there's a sense of solidarity, and camaraderie among workers, villagers, and community members. We all work together, help each other, eat meals together, enjoy the process of building, sing songs, drink copious amounts of tea, tell stories, and within no time, work gets done!

Rinchen Tobge: Thank you for patiently sharing your experiences with us.

Angdui Phuntsok: Thank you.



Angdui Phuntsok

Angdui Phuntsok is a self-taught wood crafter, carpenter and traditional mudhouse builder from Spiti's Kibber village. He is passionate about wooden handicrafts and has spent close to three decades working on building traditional mudhouses in his village.

Over the years, tremendous changes occurred in Spiti valley due to development and he is keen on preserving traditional architectural heritage and finding balanced approaches to it. Rinchen Tobge works with NCF's high altitude programme and assists in various research and conservation initiatives.



Rinchen Tobge



Photo Courtesy Auroville Earth Institute (earth-auroville.com)

Spiti Valley Architecture – a Lesson in Sustainable Design

Kimberly Moyle

Spiti valley's villages are home to a relatively intact vernacular architectural tradition. Rammed earth Tibetan-style architecture dots the awe-inspiring landscape through a series of scattered settlements. The intelligent bio-climatic design has enabled the local people to inhabit this harsh landscape for thousands of years. Surrounded by snow capped peaks on all sides with the Spiti river meandering along the wide river valley, the region has gained a reputation for stunning scenery and is now a popular tourist destination. The influx of tourism however is bringing rapid changes both economically and culturally. Economic development is welcomed, however, the loss of precious cultural heritage through the destruction of traditional architecture is of concern.

The traditional architecture of the region evolved to make use of abundantly available resources for construction along with an in-depth understanding of their thermal properties. Materials were combined with intelligent design to ensure the creation of living spaces that provided optimum thermal comfort to residents throughout the changing seasons. All of which required a thorough understanding of the natural world around them. The shift towards modern industrial systems of construction can be seen as a rupturing of that direct connection with nature. Construction materials are now purchased from stores and sourced from distant lands. The knowledge on how to use them is sought from architects and engineers.



Photo Courtesy Auroville Earth Institute



Photo Courtesy Auroville Earth Institute



Photo Courtesy Auroville Earth Institute

The traditional wisdom of elder Master Artisans is on the brink of being lost as people transition to the industrial system. Now is the time to reflect and consider whether it is the right path.

Architecture is an expression of culture and in Spiti Valley, it reflects Spitian culture whilst identifying their inclusion in a much larger Tibetan ethnic community scattered across the Trans Himalayas in the region now known as India and Tibet. Historically, however, for almost 900 years they were connected as part of the great Tibetan Kingdom of Guge*.

Materials & Construction Methods

Spiti Valley is classified as a hyper-arid desert wherein precipitation is predominantly received as snowfall in the winter*. Trees are scarce and as a consequence timber is used sparingly in construction. Stone and soil are found in varying abundance and are employed using different construction techniques according to their prevalence in a specific location. In the lower Spiti Valley, in Nako village, stones are prolific, and timber is more accessible from the forests of nearby Kinnaur. Here homes are typically made of stone masonry with mud mortar and often incorporate ornate timber balconies or sunrooms. In the villages of the upper regions of the valley such as those in and around Kaza rammed earth is dominant and the use of timber is much more frugal. Pin Valley experiences higher levels of snowfall and as such their homes feature dry stone masonry on the ground level. To prevent damage to the home from snow melt.

The arid desert climate in combination with scarce timber availability has resulted in the use of flat mud roofs across the entire region. Rammed earth as a construction method requires very little water compared to other earthen construction techniques such as adobe or cob, It is no coincidence that this is the favored technique in this desert region. The use of adobe for the building fabric can also be seen, though infrequent as it is recognized as being more labor-intensive.

Seasonal Migration Indoors

Typically homes are large and spread over multiple levels. Seasonal migration within the home occurs as an adaptation to the extreme climatic variation experienced between summer (+30°C) and winter (-30°C). In the summer months, families inhabit the upstairs portion of their homes. Larger windows on this level allow for the penetration of the bright summer sun and views of the fields outside. A large room known as a Makang (summer room) is the summer socializing space where cooking and entertaining take place side by side. Ceilings are typically higher and families may have separate rooms for sleeping.

In the winter the entire family migrates downstairs to one room known as the Yokang (winter room). For the entire winter period, the family will sleep, socialize, cook, and eat together in this one room. Cooking and heating occur simultaneously on a Tandoor that takes center place in the room. Efficient use of scarce timber resources for heating is essential and this practice has evolved in response. Cohousing with animals in adjacent rooms is another design aspect that takes advantage of the natural warmth produced by the animals, generating warmth inside the house whilst at the same time providing shelter and protection for the animals from the extreme climate outdoors.



Photo by Kimberly Moyle







Photo Courtesy : Deepshikha Sharma

Bio-Climatic Design

The need to survive the harsh winters in this remote location has seen the evolution of a highly intelligent system of bio-climatic design. Traditional homes have been constructed with a deep understanding of the regional climate as well as the specific site conditions. Certain design elements can be seen replicated in homes throughout the entire valley. Where possible homes are located on hillsides with a south-to-southwest facing orientation in order to take advantage of passive solar gains. Winter rooms have lower ceilings to ensure the precious heat generated remains close to the inhabitants. In the oldest of homes, winter rooms do not have any windows, instead, they would have a single ventilation point in the ceiling through which both light and smoke would enter and exit respectively. In more modern homes small windows are common. The northern aspect generally receives cold winds, as such openings on this wall are avoided. Wall thickness is generally between 18 and 24 inches. The thick thermal mass provides a thermal lag preventing the extreme cold from being transmitted inside the home.

Case Study of a 150-year-old Home in Kwang Village, Spiti

Located in Kwang village on the southern bank of the Spiti river directly opposite the main town of Kaza Sonam Tashi's ancestral home provides an excellent example of intelligent bio-climatic design. The following case study will be used to demonstrate key elements incorporated to ensure the highest level of thermal comfort for the occupants.
The Yokang is located in the center of the ground floor and is insulated from the extreme cold outdoors on all four sides by a series of rooms. On the northern side is the Thaah, a cavity of a few meters occupying the full height of the home. This is utilized as storage for fodder such as dry grass and crop residue. Serving the dual purpose of feeding the livestock through the winter whilst also providing excellent insulation to the Yokang. The western side of the house was used for housing livestock during the winter.

Strategically chosen according to the westerly sun trajectory, providing warmth for the animals, in turn, the warmth generated by the animals provides yet another layer of insulation to the inner Yokang.
The main entrance and stairwell to the first floor are housed on the southern side as is the Chak-sa the traditional dry toilet system, with the catchment on the ground floor in a sealed room accessible only from the exterior of the house. The eastern side incorporates a small room for making aarak – the local alcohol made from barley, next to which is a granary room accessed only from a hole in the first floor above, it is utilized for storing barley grains. To the south of that lies another small room used as a nursery for young livestock. Being surrounded on all sides the central Yokang does not have any windows to the outside. The only ventilation comes from a single hole in the center of the ceiling used for both daylighting and ventilation for the tandoor.



Ancient mudhouse representative illustration by Nawang Tankhe

Before the introduction of modern time keeping devices, the beam of light projected through the ventilation shaft was also used to tell the time. Limited ventilation to the exterior ensures the least amount of heat loss.

The first floor is home to the Makang and the Zot (store room). Both of these rooms are located on the western side. The zot on the northwestern corner is traditionally used for storage and the Makang on the southwestern side as a summer living room and kitchen. The area directly outside the southwest room was also used as a kitchen with a cavity for storing dried animal manure, a precious fuel source for cooking and heating along with timber. The dry toilet room is located on the southeast corner of the house. On the eastern side running between the fodder storage and the Chak-sa (dry toilet) is the Kanmo, a covered sitting area with the western side fully open to the uncovered central courtyard. This space was often used for recreation, to enjoy the warm summer sun, for drying grains, and for sleeping outdoors on warm summer nights

Development & Change

Despite having such a sophisticated and rich architectural heritage there is currently a mad rush for modernity that is taking place in Kaza the main town in Spiti. A reinforced cement concrete (RCC) home is viewed as a sign of social mobility, and cement plasters are a fashion trend. The last five years have seen significant change throughout the valley. The tourism sector is booming. So is the construction industry as people race to take advantage of the short but hectic summer season that at its peak struggles to cater to all of the tourists passing through.

In Kaza the main town, traditional earthen homes are being torn down and replaced with multistoried RCC buildings. Pride in traditional architecture is being lost as some desire to show their success and social mobility through their capacity to build a modern 'Pukka' Ghar or Hotel just like those in the cities.

Most people are all too aware of the unsuitability of RCC structures to the extreme cold. This has led many to a hybrid system with an RCC frame and mud block infill. However, the durability of RCC under extreme climate is questionable. Already cracking and powdering of cement are visible on areas exposed to freeze and thaw cycles of snowmelt.



Photo by Kimberly Mayle

This leads to the question: what if this grand experiment with cement fails? Where will all of that waste material go in this pristine, yet fragile mountain landscape?

One of the most astounding aspects of traditional architecture in Spiti is its recyclable and biodegradable nature. It is normal for an old house to be torn down only for all of the materials to be reused once again in the new house. Rammed earth is considered to be even stronger the second time around. In the dry climate of Spiti even Tillu (timber beams) and Thap, the shrubs used in the flat mud roofs remain in good condition even after 60+ years of use, and may be reused in the new build. Even if they can't be they offer a good source of fuel for the fire. Nothing is wasted.

Sustainable construction with a low ecological footprint was mastered by the people of Spiti centuries ago. The world has a lot to learn from them.

Sadly, as the younger generation moves towards industrial materials and hybrid systems the traditional wisdom honed over centuries and handed down over generations is at risk of being lost. Now is the time to learn from the experienced elders and ensure this precious intangible cultural heritage remains alive and not just a pretty picture captured in vintage photos of a time long ago.

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KimberlyMoyle

Kim is a founder & facilitator of Indi Architecture - a social business with an aim to raise awareness and appreciation for indigenous architecture. The firm works closely with local artisans from Spiti, Rajasthan, Ahmedabad, Punjab, and Kerela on various aspects of traditional architecture. Kim grew up in Asutralia but left in her mid 20s to travel the world and has since cycled across seventy plus countries and has plans to visit many more.

Her learnings from across the world have inspired a commitment to promoting sustainable living while conserving culture & traditional skills through the lens of vernacular architecture. She first visited Spiti in 2015 and fell in love with the landscape, it's people, the natural beauty and found her calling in doing her bit to preserve it. She is planning to host an earthen architecture restoration workshop in Spiti this year (June, 2023). Check www.indiarchitecture.com/ for more details.

The Artist



Nawang Tankhe

Nawang Tankhe is an independent artist based in Kaza (Spiti) and he has studied visual art from Himachal Pradesh University. He likes oil paintings and has participated in many art fairs and exhibitions to showcase his skills. He regularly contributes to Himkatha through his artwork.

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The Team



Chemi Lhamo

Chemi hails from Kowang village in Spiti and she has finished her post-graduate studies from the University of Delhi. She has worked in the Indian development and wildlife conservation sector as a communication professional for about five years and currently works with NCF's high altitude program.

She is passionate about storytelling, documenting human-nature stories, and bringing lesser-known community stories from the high Himalayas.

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Deepshikha Sharma

She has a master's degree in Development from Azim Premji University and is currently working as a conservation coordinator at Nature Conservation Foundation.

She facilitates community-led conservation in upper Kinnaur, Lahaul, and Spiti in Himachal Pradesh and in parts of Ladakh. She has been involved in trying to improve community involvement in conservation by involving local youth.

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