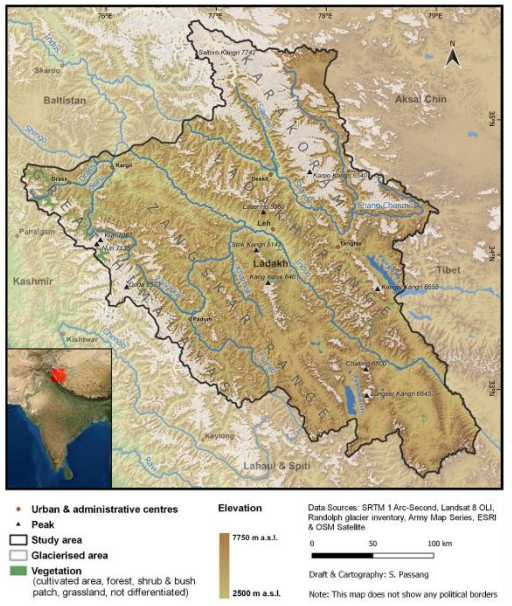
Concept Note

Insulating Tibetan Buddhist Monasteries of Ladakh, India, from Climate Change - Induced Rainfall

Ladakh and its Monasteries

Ladakh is a high mountain desert region of northwestern India, located entirely north of the Himalaya range and extending east into the Tibetan Plateau. Its highest peak reaches 7,742m while the inhabited valleys – mainly those of the Indus and Zanskar rivers – lie at altitudes between 3,000m and 3,500m asl. The mountains are completely barren; closed vegetation cover which allows agriculture can be found only in the river valleys. Precipitation occurs only during the winter months as snow.



The population is historically Ladakhis who are ethnic Tibetans following Tibetan Buddhism, and Indo-Aryan Kashmiris who are Muslims.

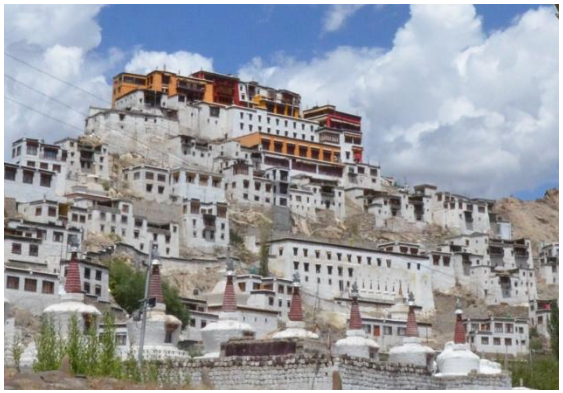
Due to its politically exposed location between Islamist insurgents from Pakistan in the West and increasing Chinese posture in the East, India has recently separated Ladakh from the larger Jammu and Kashmir region and placed it under direct rule from Delhi, improved road access and increased military presence deterring Chinese territorial ambitions.

Ladakh was closed to foreigners until 1974 but since then has seen both an influx of Kashmiris and an increasing number of international as well as Indian tourists interested in the monasteries. Nowadays, daily flights from Delhi make the region easily accessible, and the central part of the Indus Valley around Leh, the capital, has become a vibrant, quickly developing region.



Ladakh has been included in India's Tentative List of World Heritage nominations under a wider concept of "Cold Desert Cultural Landscape of India" since 2015. However, the areas or sites of this vast area to be included in the nomination have not been specified, and a short inquiry revealed that nobody either in Delhi or in Ladakh was aware of any steps taken so far towards this nomination, and no status of protection could be determined for the monasteries.

More than 100 monasteries still exist in all parts of the region, according to the All Ladakh Gonpas (= Monasteries) Association. They continue to be centers of spirituality, traditional medicine and culture. Almost all of them once a year celebrate elaborate spiritual ceremonies, attended by large parts of the population, which teach the basic values and teachings of Tibetan Buddhism. But the numbers of monks continue to drop, and the monasteries, along with traditional livelihoods of livestock grazing, are becoming islands in an environment fast modernizing due to tourism and militarization.



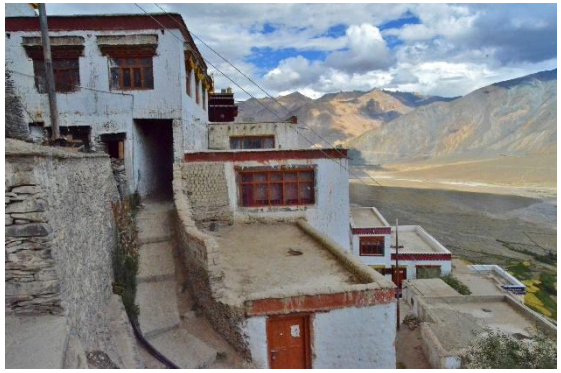
The Project

Due to climate change-related rising temperatures and increased air humidity, the region now experiences frequent rainfall and cloud bursts in summer, with devastating effect on the monasteries.



The monasteries, built by mudbricks and with flat wooden roofs covered with clay, are perfectly adapted to the cold and dry climate, keeping temperature inside warm in winter and cool in summer. The flat roofs are perfect for storing hay but their surrounding low walls act as a trap for the summer rains. Having no outflow, the water drips through the roof and runs down the walls, destroying the ancient Buddhist frescoes inside.

Asked by WHW where they needed support most, the *All Ladakh Gonpas Association* (All-Ladakh Association of Monasteries), after extensive consultation among its members, identified the insulation of the roofs against rainwater as their highest priority.



WHW has taken this request up. Considering that Ladakh has more than 100 monasteries, each with dozens of roofs, it would be clear that it would take a generation's work for an outside organization to insulate them. Instead, the task must be to identify a technology which meets three criteria:

- It must be congruent with requirements of traditional Tibetan architecture, materials, and spiritual guidelines;
- It must be applicable by local craftsmen;
- Materials must be available locally or at least in India.

The technology identified must be taught to, and implemented by, a first group of craftsmen who will then act as trainers of trainers who will each work on a second monastery and each creating a new group of trainers, and so forth, thereby creating the necessary capacities for insulating a large number of roofs in the shortest possible time. Once local craftsmen can do the work by themselves, future donors can focus financial support on wages and materials.





The Project Phases

Phase 1: In cooperation with the All Ladakh Gonpa Association, identify the most appropriate technology to insulate the monastery roofs, clarify logistics for domestic supplies, and select the first monastery for implementation.
Phase 2: Write the full project.
Phase 3: Insulate a model roof (or roofs of a model monastery), and teach teachers.
Phase 4: Write and implement a Project for scaling up, including the following: Train more teachers; select more monasteries in other parts of the region in order to build local capacities across the region (i.e. Leh, Changtang, Spiti etc.), insulate the roofs of these monasteries.

Implementing Agency

The implementing agency is Studio Nyandak (New York City / Dharamsala), led by Tibetan architects. Studio Nyandak has been recommended by Tibetan friends and cooperates with international experts. It has prior experience in working with Tibetan monasteries in Ladakh, and keeps continuing relations with the Karsha Monastery in Padum (Zanskar district of Ladakh).