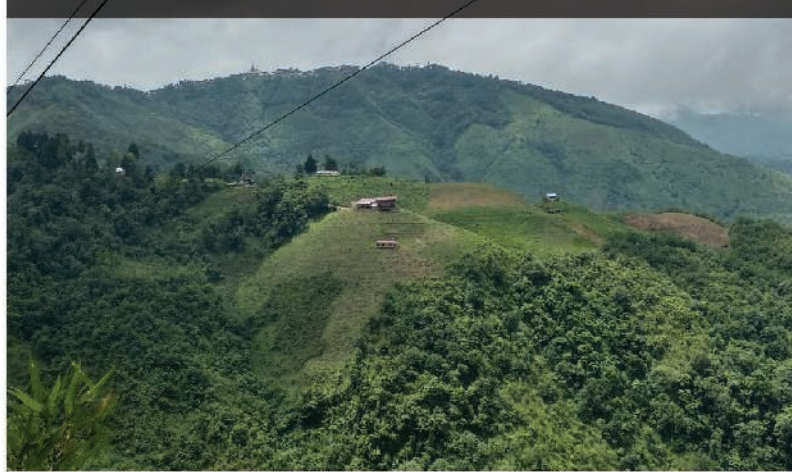


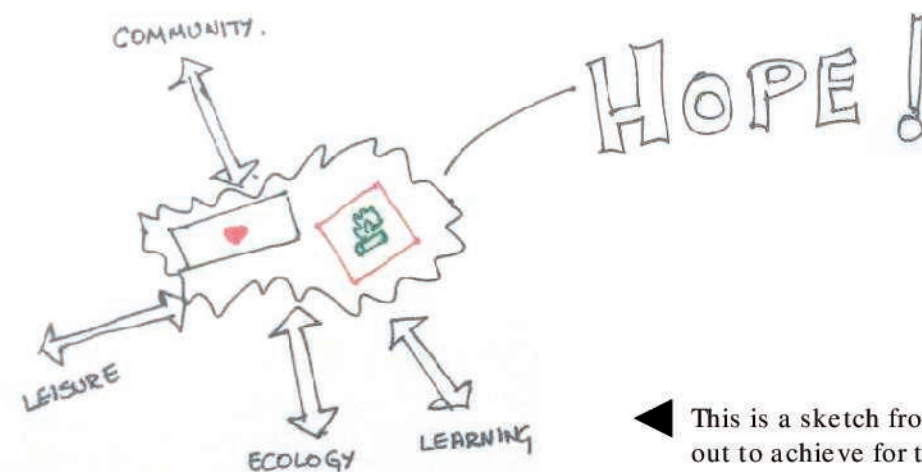
View of FIC from across the valley - a verdant paradise!



View from the permaculture terraces on the lower slopes.



View from within the FIC towards the expansive valleys!



▲ FIC from the permaculture slopes below. In foreground - the marigold blooms across the slopes in autumn!

◀ This is a sketch from the first notes on what the FIC sets out to achieve for the community - productivity & hope through a multi-pronged approach.

Architecture can strengthen ties between marginalised farming tribes and their environment, and enhance productivity and standard of living by nurturing a culture of conversation, ideation and innovation!

Farmers' Innovation Centre realizes this through its conception, design, construction and use.

- Client : Better Life Foundation (BLF) (Non-profit)
- Total Costs : USD 9,000 (INR 6,50,000)
- Funding Source : Crowdfunding + Client
- Commencement : May 2017
- Completion : Dec 2018

Farmer's Innovation Centre (FIC) is in Angangba, a village in Tuensang district of rural Nagaland in Northeast India, one of India's economically weakest and most remote districts. It is an attempt to gather generations of collective local wisdom and innovations by rooting them in a physical architectural space. It also aims to give voice to the farmers and grassroots innovators of the region.

FIC caters to the entire BLF community which comprises of up to 700 farmers and their families, offering a diverse mix of spaces which host exhibitions, demonstrations, lectures, workshops, council meetings and social celebrations. The client, a non-profit called Better Life Foundation (BLF) designs & executes community initiatives to support local economy and livelihood – the FIC is at the heart of this mission.

The structure is a contemporary interpretation of the traditional *morung* typology of the local Naga community. It is built in two levels on a plinth measuring 14 Ft by 50 Ft. The lower level is enclosed while the semi-open platform (or *machang*) offers sweeping panoramic views of the hills. Built using locally available materials and with traditional bamboo construction techniques, the design is a celebration of the context.

# FARMERS' INNOVATION CENTRE AT ANGANGBA

## UDAY GOSWAMI & JAYESH GANESH





One of the capacity building workshops where local workers are being trained to read and understand technical architectural drawings.

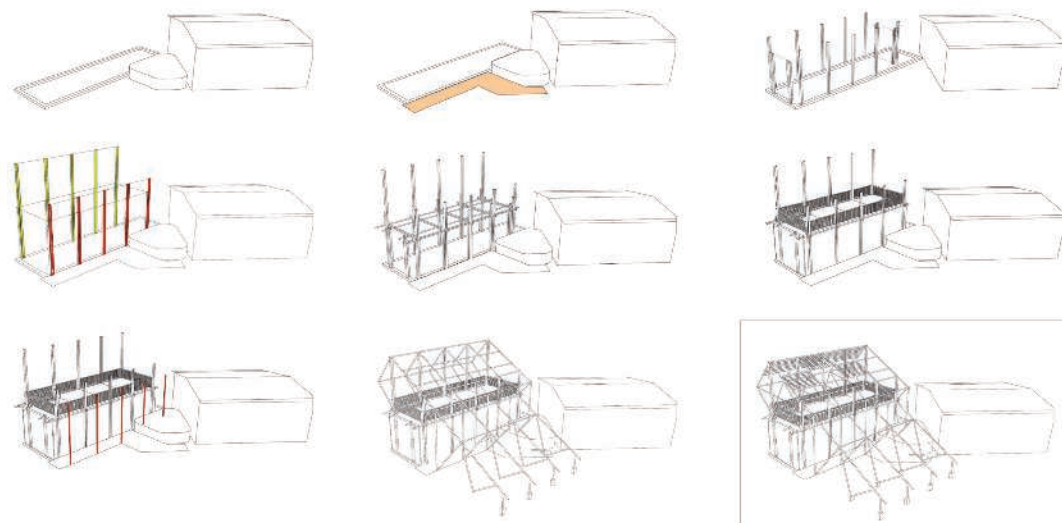


All school children participate in the BLF initiatives at FIC.

**"Cooperate for fair and sustainable development initiatives in active collaboration with disadvantaged people or communities."**

**This process shall follow principles of human solidarity, non-discrimination and will be aimed at promoting their self-sufficiency."**

**(The Hasselt Charter - Clause 01)**



Women and men work together on all tasks in BLF.

FIC embodies the belief that architecture as an inclusive intervention is crucial in facilitating positive social impact through the production and appropriation of spaces. In a community as remote and marginalized as this, it is important for action to be inclusive.

The design and construction of FIC was through a collaborative approach. Active participation was sought from the local community, artisans as well as mentors & advisors from across India. Capacity building workshops were held on site to educate and train local artisans in reading and making architectural drawings & diagrams. A scaled model was built to demonstrate the intent of the design and workshop the desired result. The goal of this capacity building was to ensure better livelihood opportunity for our artisans beyond the construction of FIC. Today FIC engages local farmers in experimental farming initiative targeted at improving local productivity.



Technical drawings were converted into simple diagrams which conveyed the construction in a step-by-step manner to the local builders.

Ascaled model was prepared on site before construction to demonstrate the design and construction details to the workers.



Centennials in the community engaging in discourse.

FIC is the result of community engagement across scales. First, masons and bamboo artisans from the local community were engaged in the construction thereby retaining traditional and well-tested methods of construction. Second, the extended community of BLF helped in the procurement of materials and goods through volunteering and donations. Third, a global online crowdfunding campaign helped secure funds.

# FARMERS' INNOVATION CENTRE AT ANGANGBA

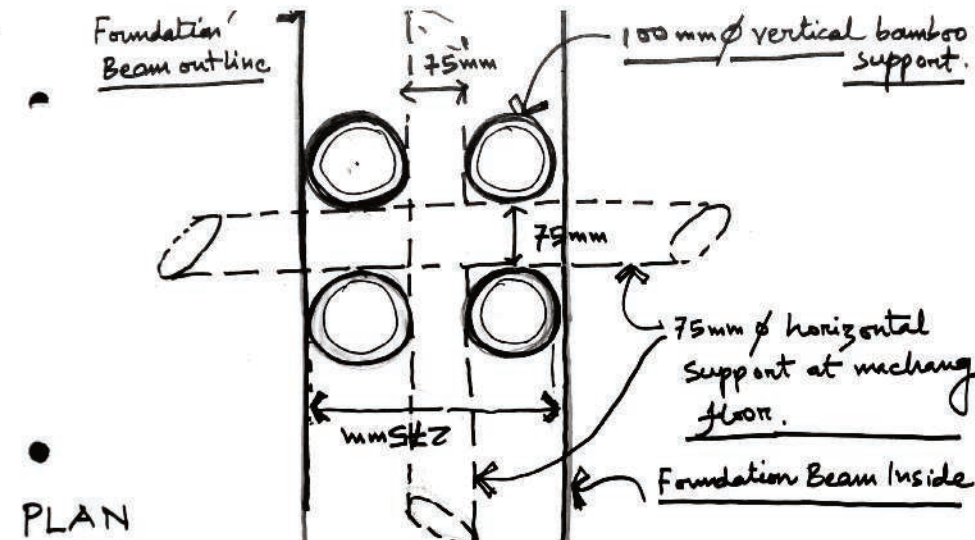
## UDAY GOSWAMI & JAYESH GANESH



The traditional Naga *morung*.



Joinery & construction details based on local material & construction know-how.



“Facilitate the use of appropriate technologies, materials and labour adequate to local values, to the cultural specificity and responsive to the natural environment.”

(The Hasselt Charter - Clause 05)

Formal inspiration from traditional architecture of *morung*.



Local workers engaged in the processing and preparation of bamboo for flooring. Bamboo was entirely sourced from Nagaland Bamboo Mission.

The landscape around FIC is comprised of local edible crops as part of a pioneering permaculture experiment.

This is an important attempt to discourage the traditional slash-&-burn / shifting cultivation practices.



Nagaland is bountiful in natural resources. The traditional architecture of the region is built from timber, bamboo, thatch and mud plaster. Rocks and clay bricks are also an essential building material. The vernacular architectural typology of the *morung* is an inspiration for the formal expression of the FIC.

The structure is built out of locally available bamboo with judicious use of clay bricks, stones and glass. Bamboo is the omnipresent material and its expression is explored in a dramatic manner across FIC. The structure employs the use of high-quality bamboo poles joined using steel bolts, and fish-mouth joints. The staircase and ceiling are framed using smaller bamboo sections as rafters on three large beams. The floor of the *machang* is paved with crushed bamboo while the ceiling below is designed as a baffle of thin bamboo reeds. The exterior wall is clad in bamboo mat, woven to resemble the geometric patterns of the tribal textiles. Stone used in the foundation was quarried from the site itself.

FIC is a pioneer site of the permaculture revolution in the region. The landscape on the site is productive and diverse with an aim to battle deforestation and establish an ecologically sustainable alternative to built environment.

# FARMERS' INNOVATION CENTRE AT ANGANGBA

## UDAY GOSWAMI & JAYESH GANESH



1. Lectures &amp; Instructional Sessions (Like 'Idea Contest')



2. Informal Gathering (Family Function, Playing Games, etc)



3. Large Gatherings for Activities (Like 'Idea Contest')



▲ The library and reading room are an integral part of the ideation lounge. Visitors from around the world leave books in the bamboo shelves for the community to read and learn from!

Local inventors demonstrate and train locals in the use and maintenance of their innovations in the demonstration area. ►

◀ These three images explain the versatile nature of the Machang.



"Share knowledge, promote discussion, reflection and awareness, and collaborate in the advancement of the 'social production of habitat';"

(The Hasselt Charter - Clause 06)

Lack of equitable access to knowledge and means of communication poses a challenge to growth in this region. With rudimentary network connections and insular social infrastructure (village council halls), important news spreads slowly and adoption of new technology and know-how takes a long time. The lack of a non-partisan gathering space for communities across valleys and the social stigma against deviating from traditions further impede the realization of the 'habitat'.

BLF's mission to improve productivity and standard of living by involving cross-community dialogue in a safe and non-judgemental democratic space encourages sharing of thoughts & actions. At the FIC, the sheer diversity of activities proposed within a handful of fluid spaces contributes towards realizing this mission.

The ideation lounge is an enclosed space with expansive views of the valley. It contains a library, reading area, innovations gallery & demonstration area and can hold up to 50 individuals at a time. The ***machang*** is a versatile semi-open public space holding up to 40 adults in various interactive configurations.

The Centre is an inclusive and welcoming space for villagers as visitors of all ages, gender & professions – it thus enshrines the value of an inclusive 'habitat' as the product of social communication.

# FARMERS' INNOVATION CENTRE AT ANGANGBA

## UDAY GOSWAMI & JAYESH GANESH