

# Housing Solution in Dolpa, Nepal

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Entire design concept in Dolpa terrain with decoration features, trees and livestock



## Abstract

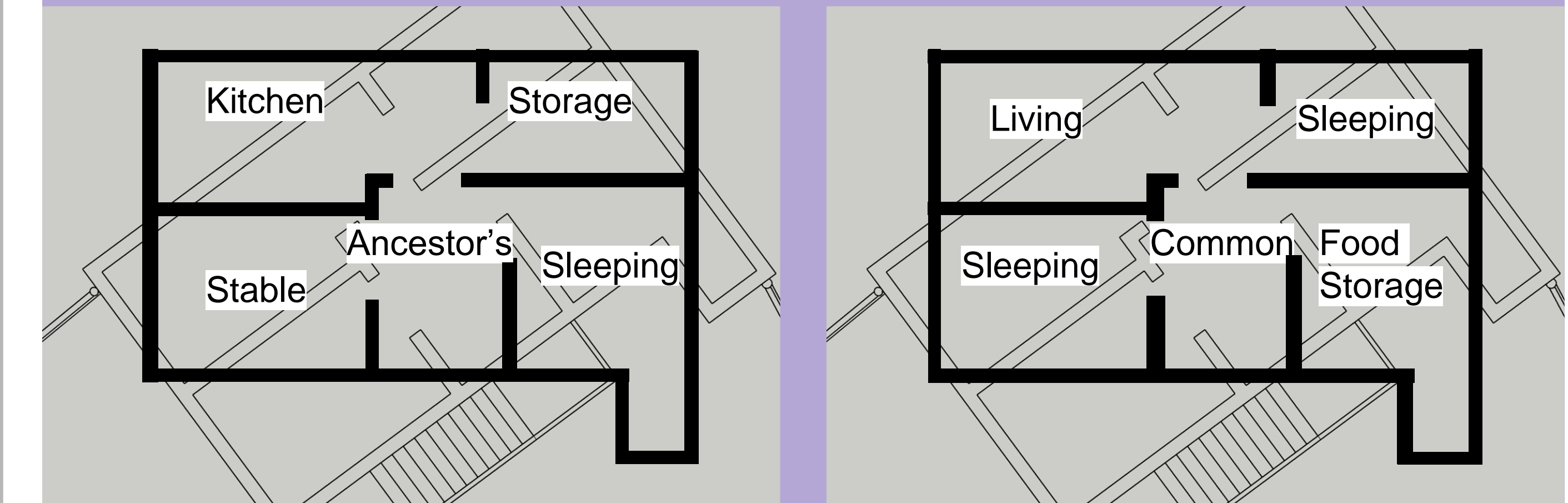
Nepal is currently in a housing crisis. Houses in Nepal are not built to be warm or to last long and suffer greatly due to common natural disasters. Many Nepali homes also do not have potable water in the homes, or an easily accessible toilet.

### Requested home improvements from a Nepali

- Potable water in the home
- Easier accessible toilet
- Better insulation from the cold than stone house

**GOAL:** to provide a housing solution in Dolpa, Nepal that is cheap, durable, and environmentally sustainable.

## Floor Plan



0-7ft

7-14ft

## Analysis/Design Concept

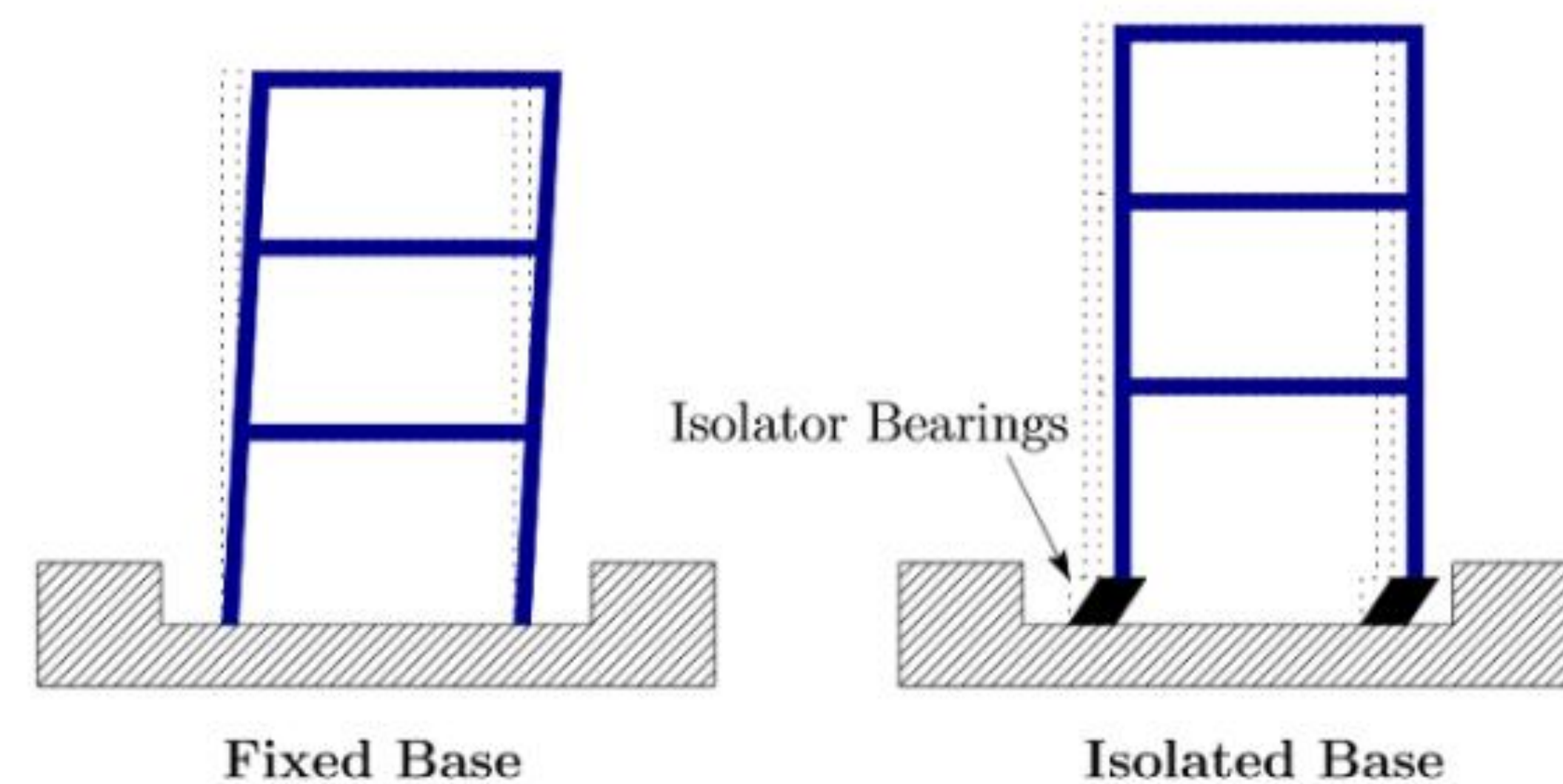
Refillable water tank in kitchen for holding potable water

Rubber disks on each corner and loadbearing sections of the home to reduce impact from earthquakes

Walls from native clay bricks with goat hair & Jute stuck together with mud mortar

Increases insulation and strength while being a native & cheap solution

Multiple outhouses for easier clean and easy disposal of waste (not pictured)

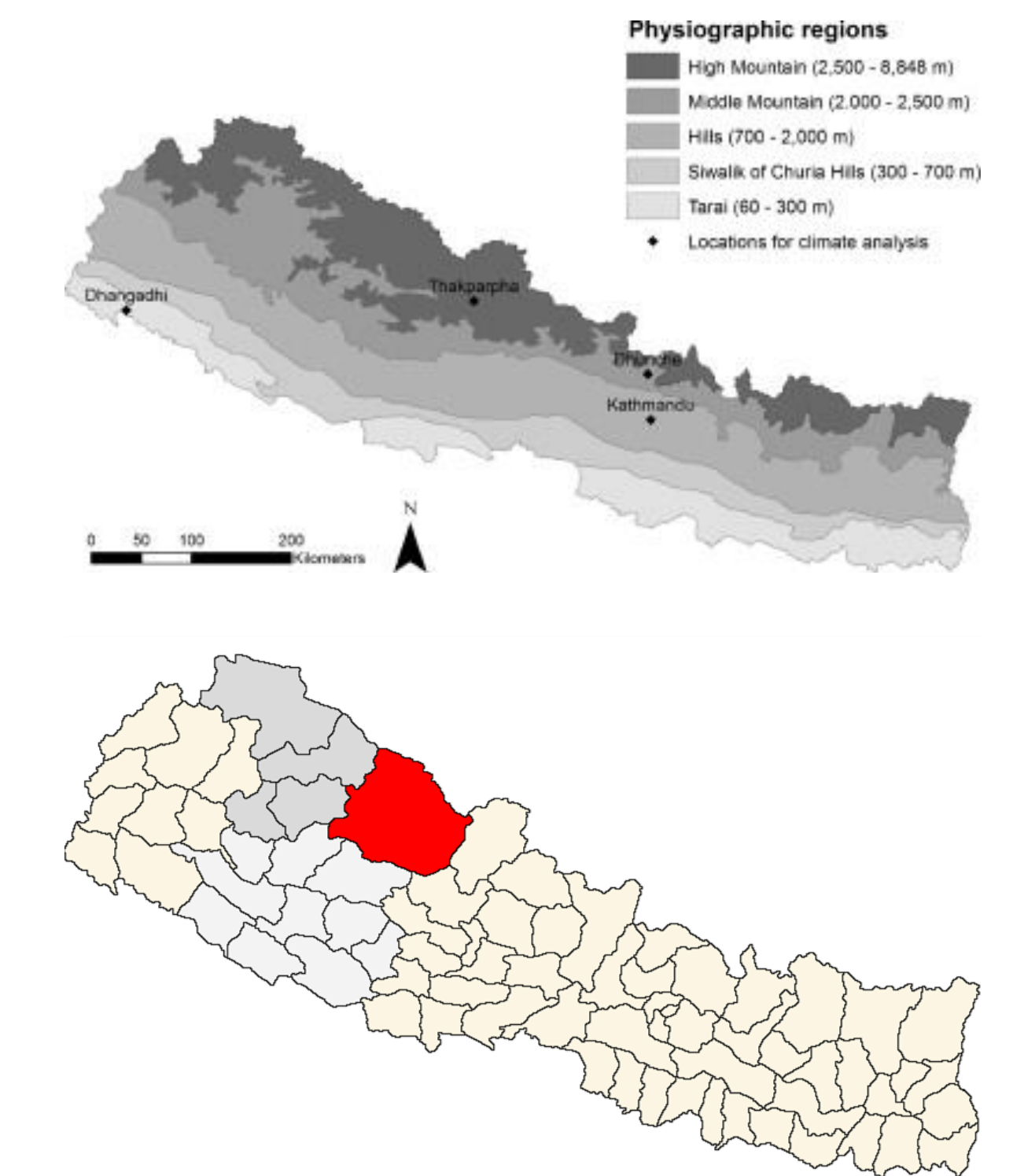


## Background

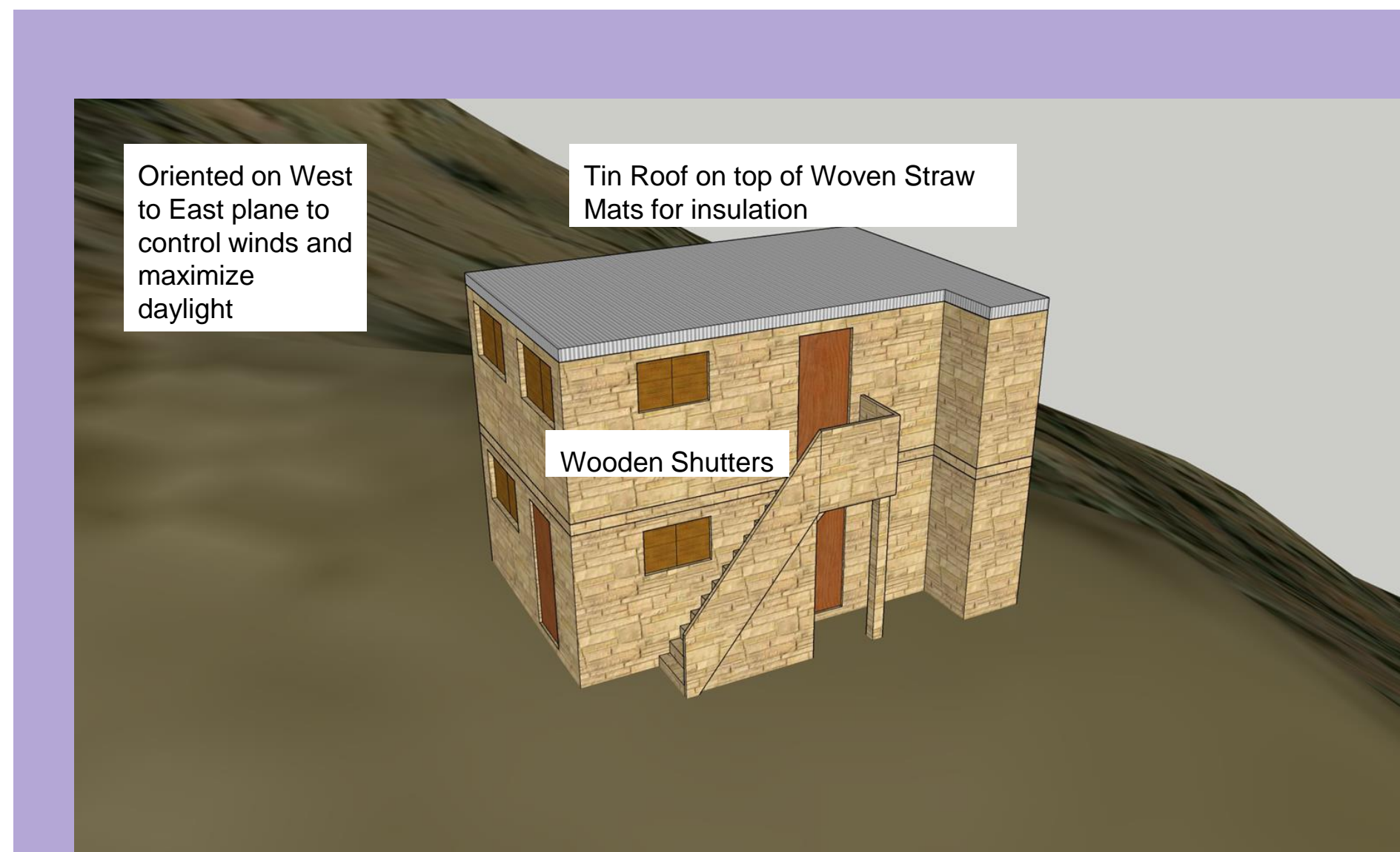
Large distance between towns in Dolpa

Villages are made up of mostly farmers who grow plants and own livestock

Earthquakes are common, causing severe damage to existing houses



| TASK                           | COST          | TIME |      |      |      |      |      |      |      |      |      |      |      |      |      |      |  |
|--------------------------------|---------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|--|
|                                |               | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May. | Jun. | Jul. | Aug. | Sep. | Oct. | Nov. | Dec. | Jan. |  |
| <b>Planning process</b>        |               |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |  |
| Meet with locals               | -----         |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |  |
| Find local material            | -----         |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |  |
| survey land                    | -----         |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |  |
| <b>Fundraising</b>             |               |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |  |
| Talk with US & Nepal Gov       | -----         |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |  |
| Find NGO's                     | -----         |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |  |
| Campaing conditions for donors | -----         |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |  |
| <b>Trasport materials</b>      |               |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |  |
| Purchase/recover materials     | \$1000-\$5000 |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |  |
| Get needed tools               | \$1000-\$5000 |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |  |
| Gather local resources         | \$3,000       |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |  |
| <b>Construction</b>            |               |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |  |
| Build prototype house          | -----         |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |  |
| Analyze problems               | -----         |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |  |
| Build more houses              | -----         |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |  |
| Cleanup & Debrief              | -----         |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |  |



Shot of the individual housing unit. In each design four of these units are connected together and will share a communal courtyard