

## Problem Statement

We are addressing the extreme flooding in the Philippines due to the heavy typhoon seasons. We are designing a permanent home to adapt with the extreme climate conditions.

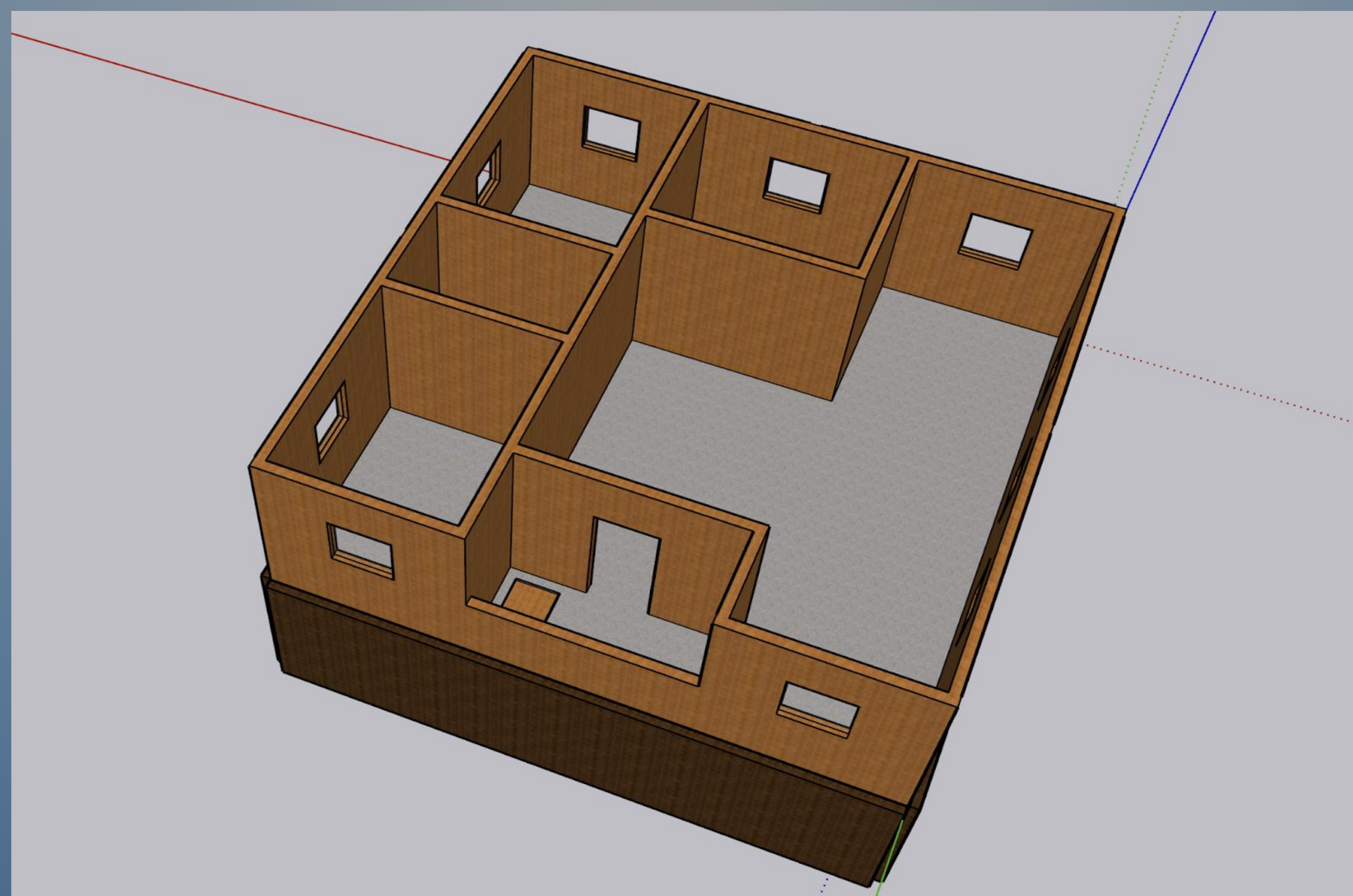
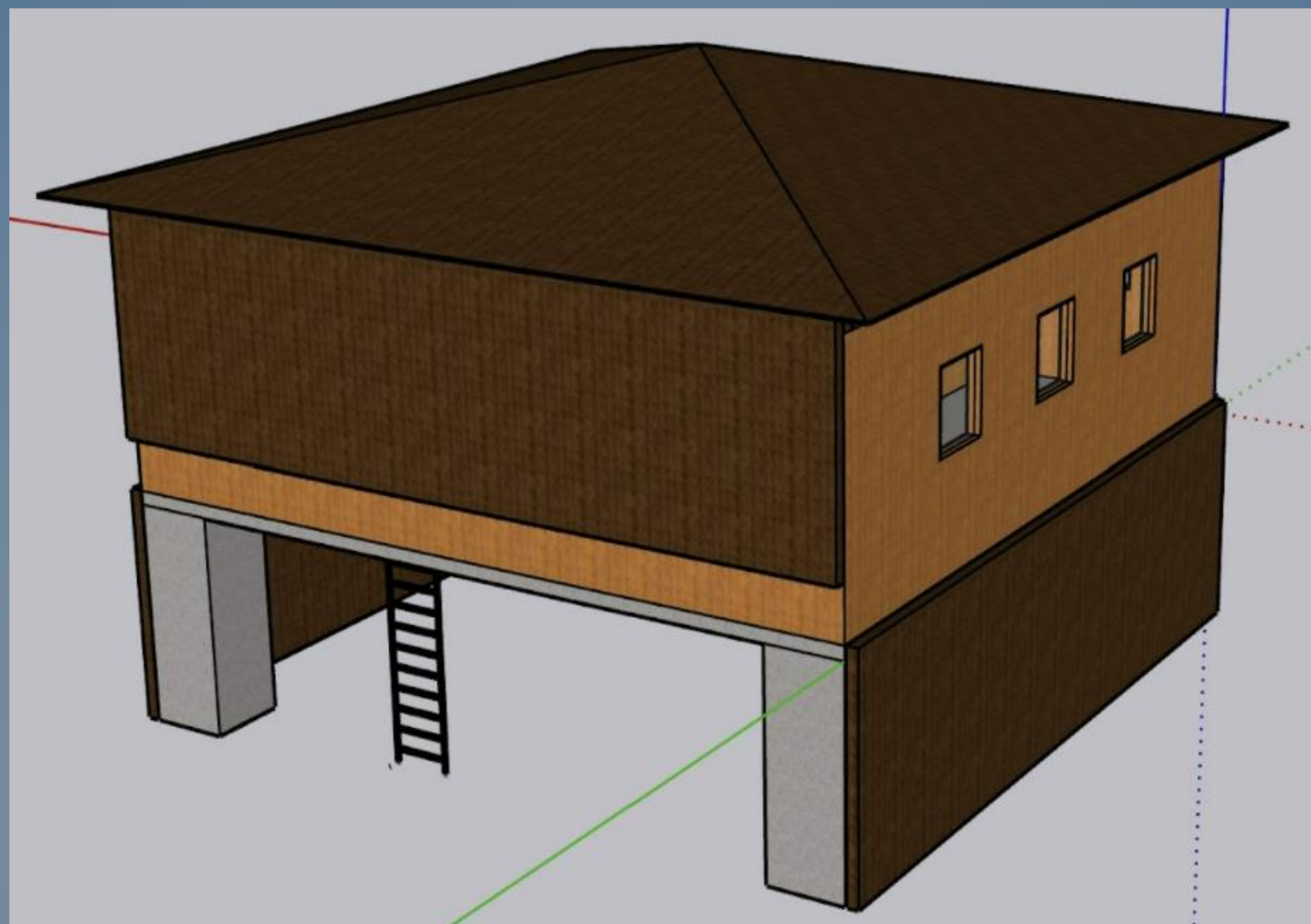


## Location

We chose to focus on the coastal region city, Malabon, which borders the Manila Bay.

## Background

- Over 60 major floods reported in the last 10 years.
- Affects over 14 million people.
- Water levels during flood season rise to 2-3 feet.



## Design Concept

- Raised home with a reinforced concrete structure
- Sliding doors allow for optional first floor space, which can be slid upwards during flood seasons
- A unique pulley system is used to transport items between floors, as well as address accessibility
- Large roof overhangs allow for rain runoff and a water collection system

## Materials

- Concrete, wood, local recycled metals
- Local abaca plant fibers used to reinforce the concrete stilts
- Sealed and weaved bamboo used for roof and sliding doors

## References:

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- Magdamo R. V. (1988). An analysis of the abaca natural fiber in reinforcing concrete composites as a construction material in developing countries, 16-30.