

# **Clima Haven: Affordable, Flood-Resilient Housing for Informal Settlements**

Presented by Team CH Minions

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# The Growing Crisis of Informal Settlements

- Over 1 billion people live in informal settlements globally.
- Urbanizing areas like Yangon, Myanmar, face severe housing challenges.
- Poverty, population growth, and lack of affordable housing drive informal settlements.
- Communities are vulnerable to natural disasters, poor sanitation, and health risks.

(UNDP, 2024)





## Poverty and Climate Disasters

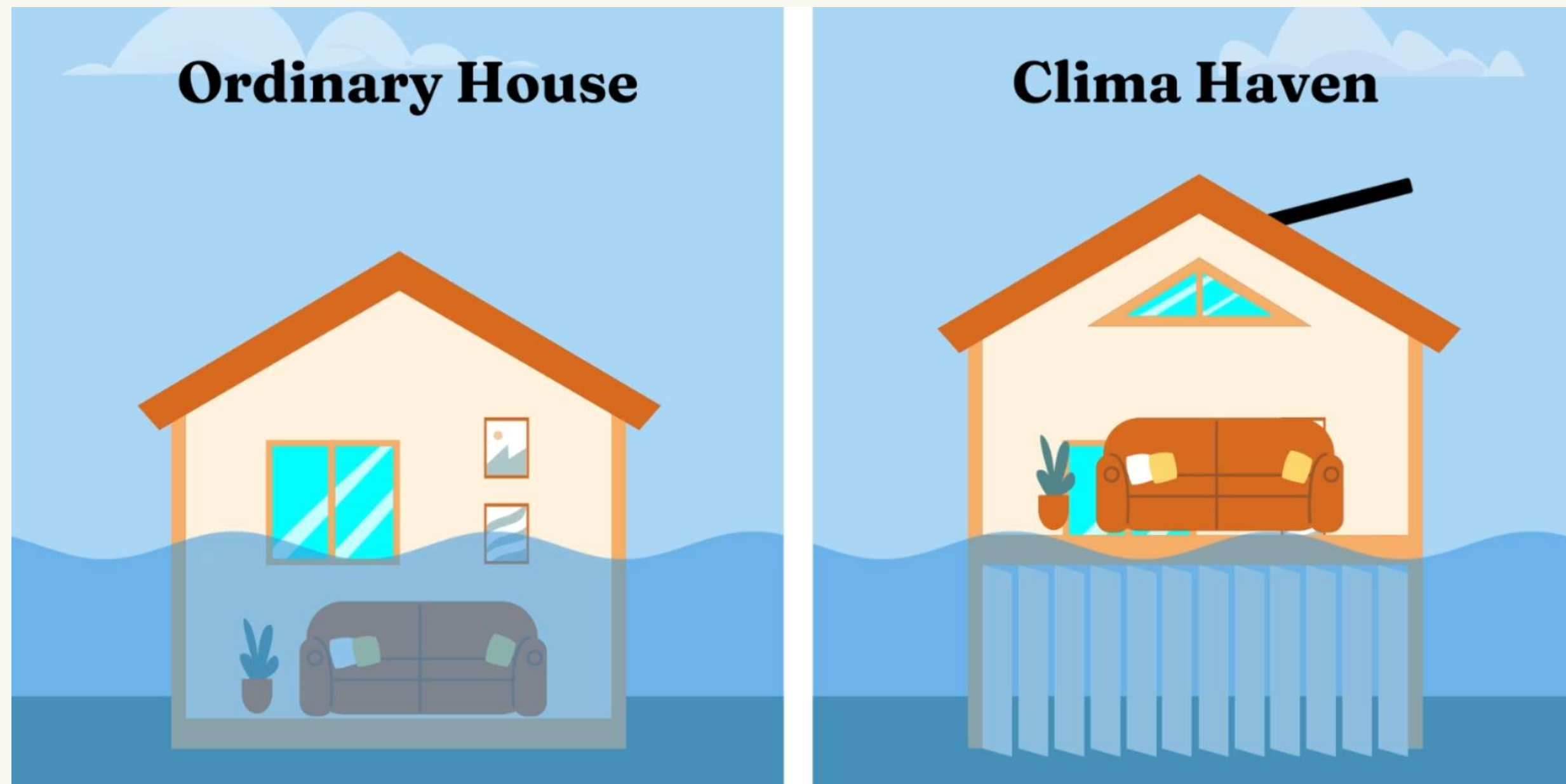
- Poverty has doubled from 2017 to 2023, with 50% of citizens affected.
- An additional 25% of the population is at risk of falling into poverty.
- Typhoon Yagi (2024) caused 226 deaths and displaced 630,000 people in Myanmar.
- Frequent flooding in Yangon exacerbates housing insecurity.



(Mizzima TV, 2024)

# Clima Haven: A Modular, Flood-Resilient Housing Solution

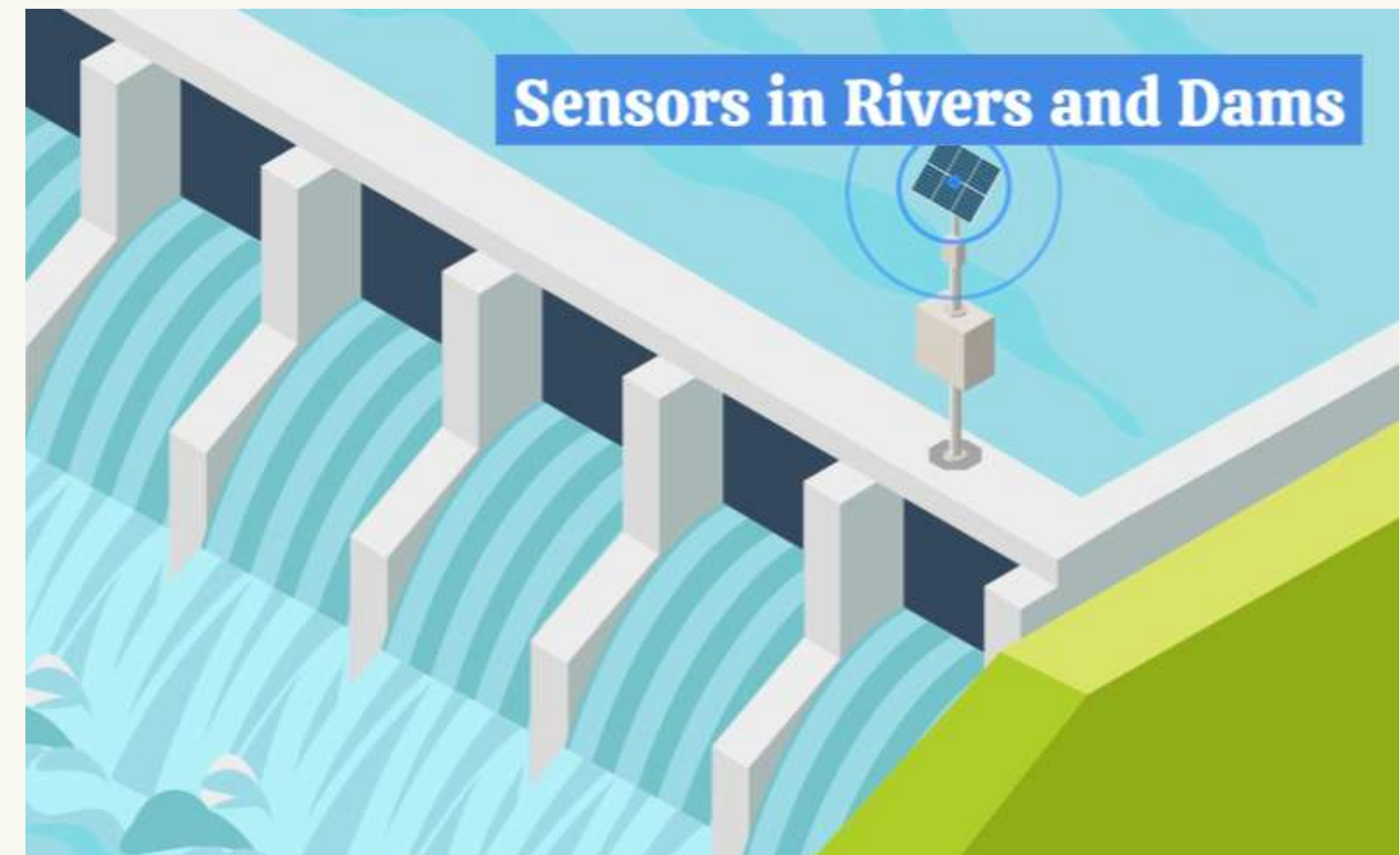
- Provides safe, affordable housing for informal settlements.
- Integrates flood adaptation measures and real-time hazard alerts.
- Improves living standards and disaster preparedness.





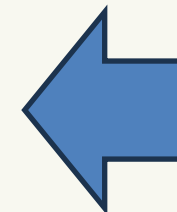
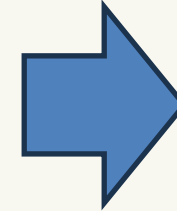
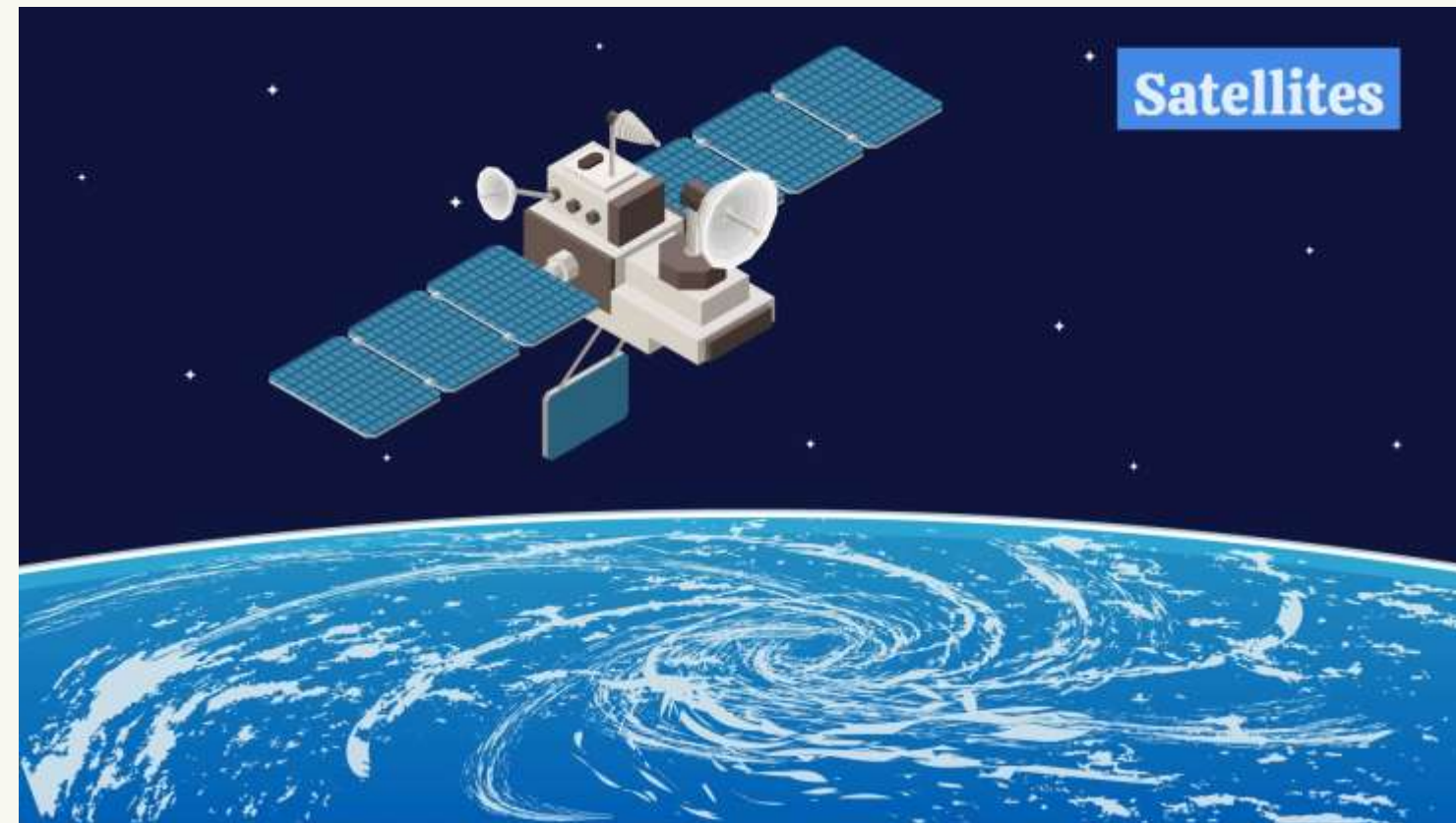
# Real-Time Hazard Monitoring and Alerts

- Data collected from meteorological stations, satellites, and sensors.
- Immediate alerts sent to control centers (e.g., government offices).
- Built in solar-powered alarm systems warn residents, even during power outages.





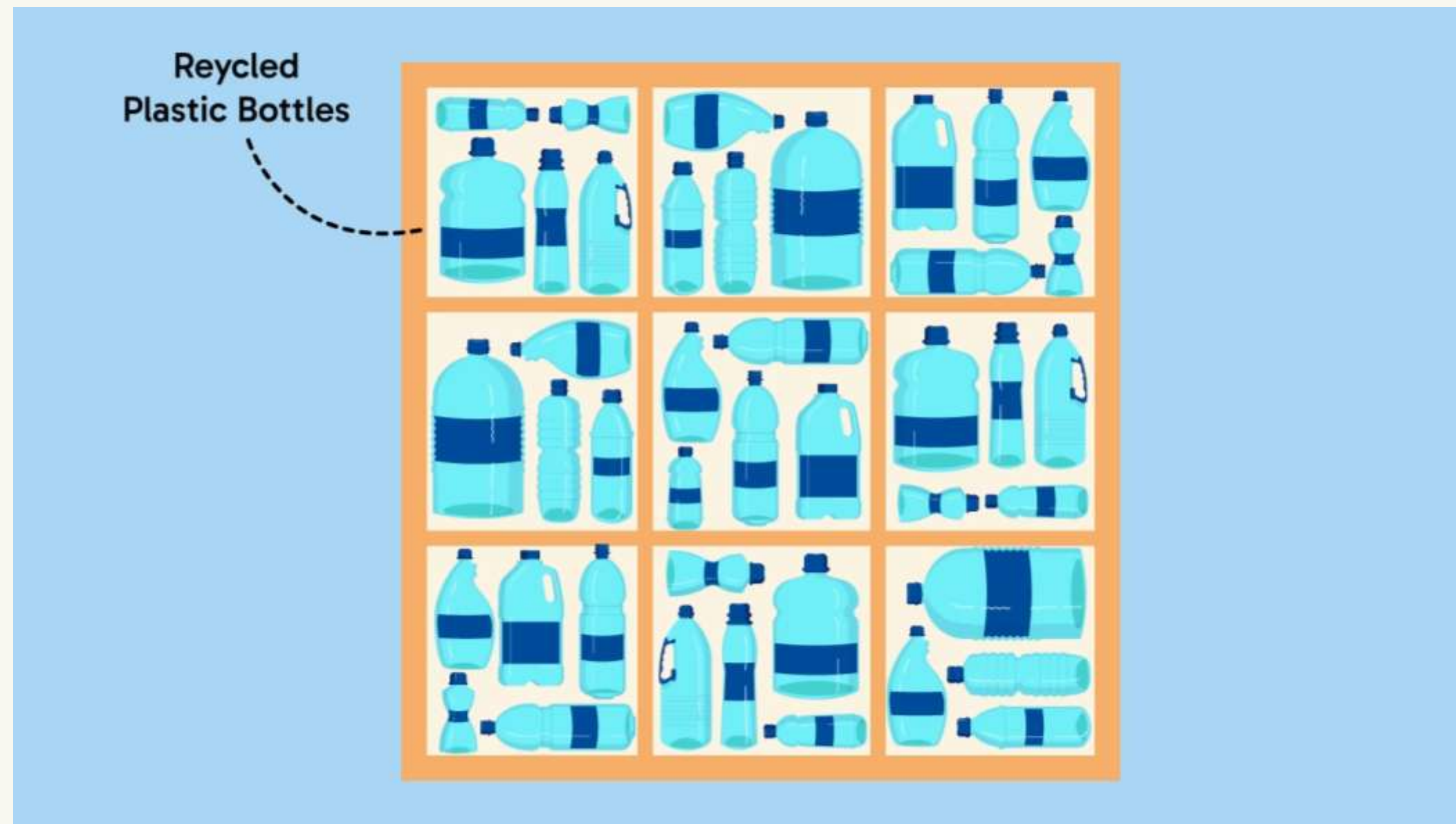
# Real-Time Hazard Monitoring and Alerts





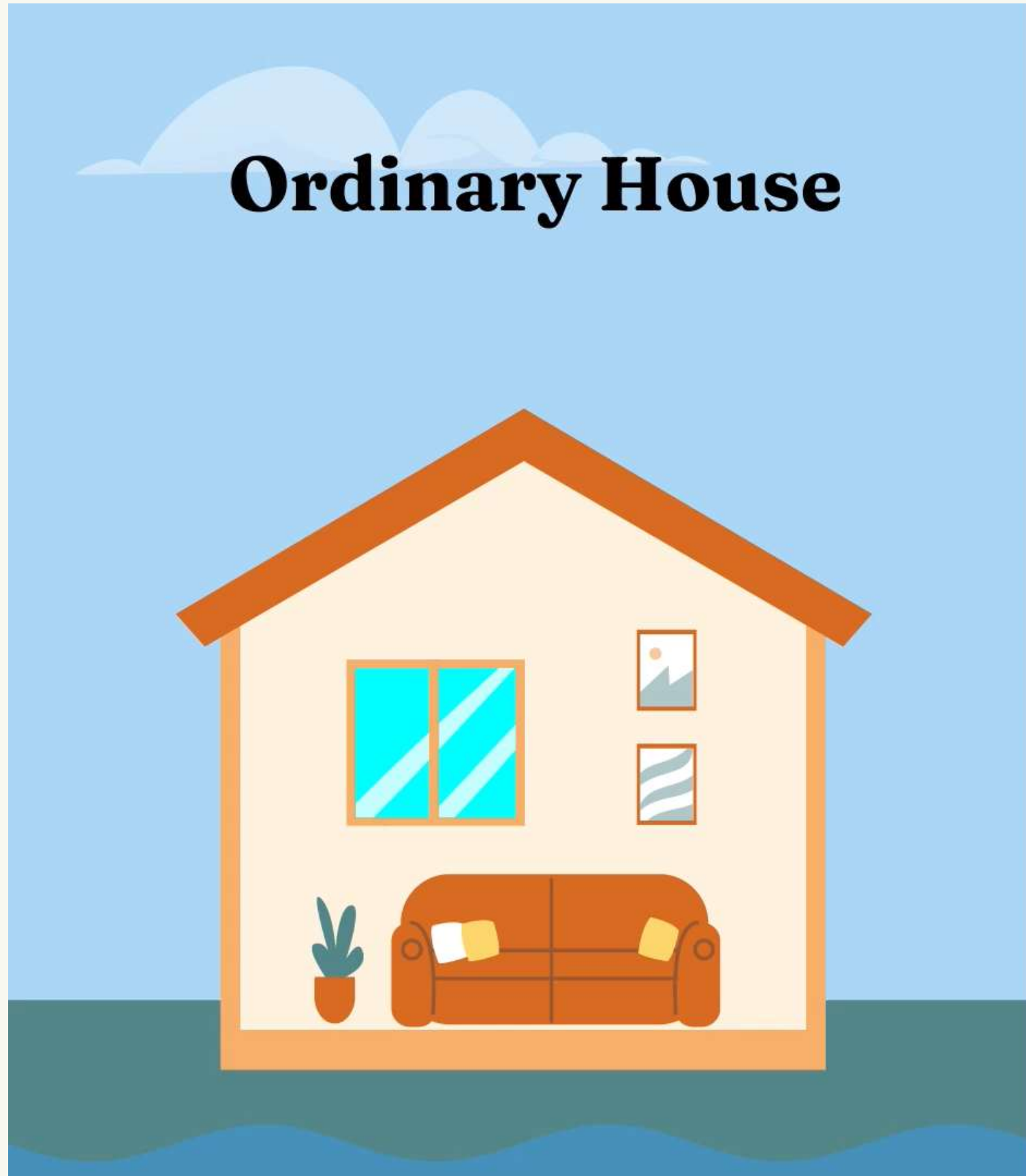
## Flood-Resilient Design Features

- Buoyant floors made from recycled plastic bottles rise with water levels.
- Higher floor design with ceiling windows for emergency escape.
- Wall panels open to allow water flow, reducing flood impact.
- Ceiling window for emergency escape from the roof



# Flood-Resilient Design Features

## Ordinary House



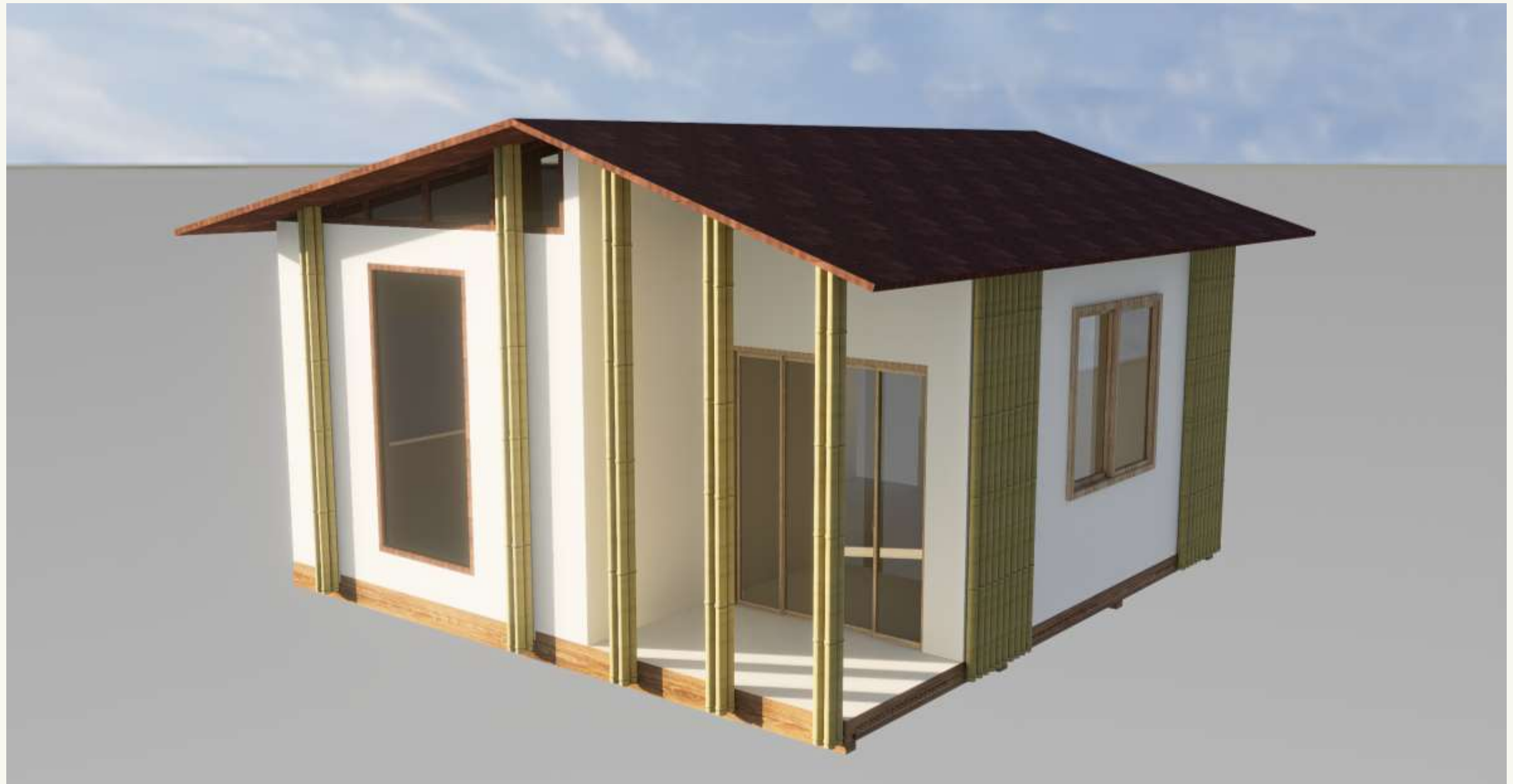
## Clima Haven





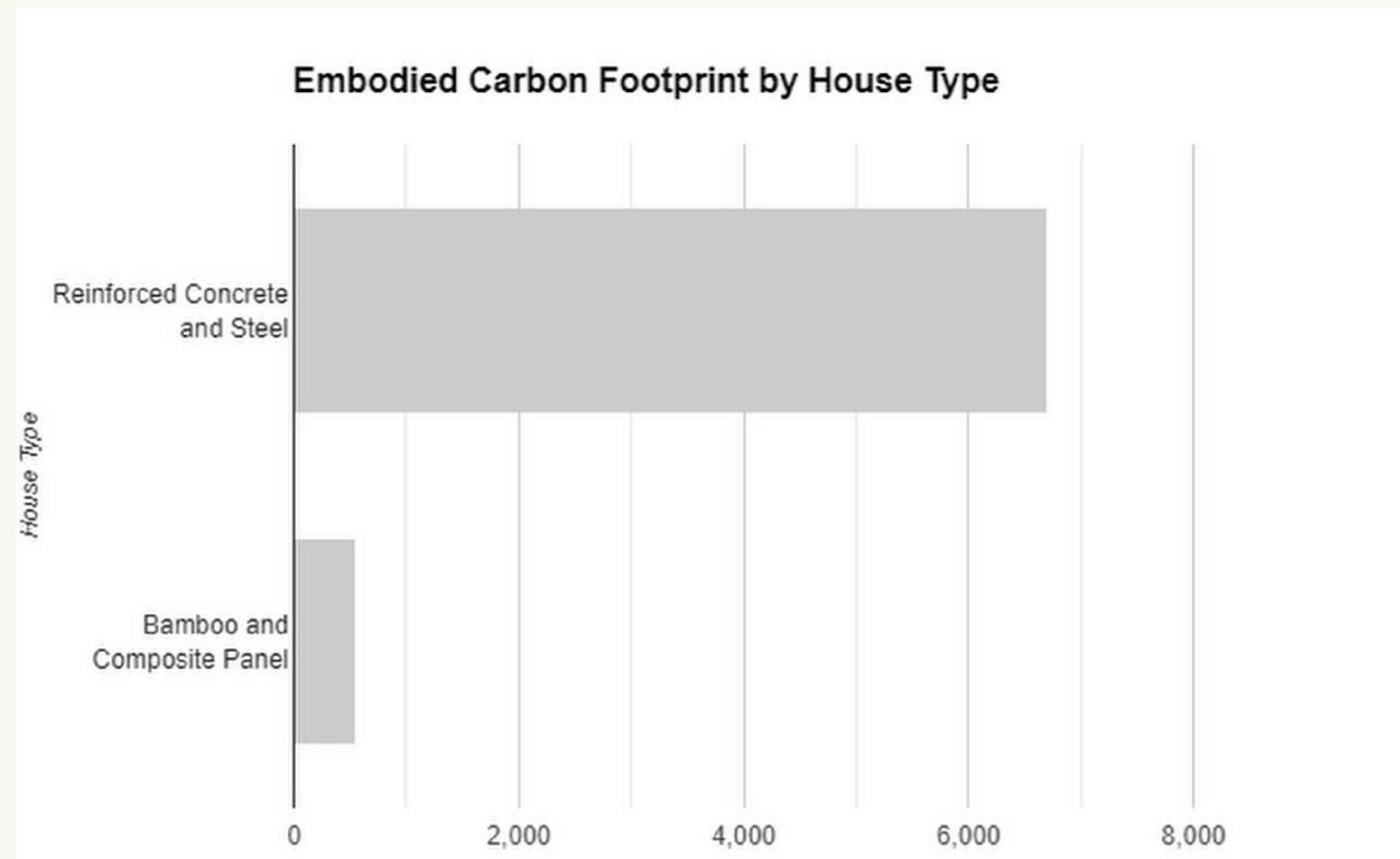
## Eco-Friendly and Cost-Effective Construction

- Building frames made from locally treated bamboo (durable and flexible).
- Wall panels use composite materials with waterproof coatings.
- Recycled materials reduce costs and environmental impact.



# Breaking the Cycle of Poverty

- Reinforced concrete: \$10,000, steel: \$8,000, Clima Haven: \$6,000.
- Savings enable low-income families to afford safe, sustainable homes.
- Reduces embodied carbon footprint by 12x compared to concrete and steel.





# Supporting the Sustainable Development Goals

- SDG 1: No Poverty
- SDG 10: Reduced Inequalities
- SDG 11: Sustainable Cities and Communities
- SDG 13: Climate Action



## A Lifeline for Communities

- Protecting families from disasters.
- Empowering communities to reinvest in education, healthcare, and livelihoods
- Building a sustainable future for all.



(Flickr, 2014)



# Together, We Can Make a Difference

- Join us in fighting poverty, inequality, and climate vulnerability.
- Let's ensure no one is left behind.



# THANK YOU