

Stilt houses are becoming more common up and down the Atlantic coast and along the Gulf Coast. After Hurricanes Helene and Milton in 2024, for example, the number of home elevations surged in Tampa Bay, Florida.[1] In wet floodproofing, houses are lifted on piers or pilings, with fallaway walls if enclosed, allowing water to enter and exit below the house.[2] HVAC equipment and electrical panels are raised. Base Flood Elevation is the level flood waters are expected to reach in a severe storm; building an extra margin of safety or freeboard above it can reduce flood damage[3] and lower flood insurance cost.

Raising houses on stilts is not cheap. Not everyone can afford it, so flood resilience can vary from household to household. You have to climb home. Stilt houses aren't protected against unexpectedly high water levels or damage from debris, and can be more vulnerable to hurricane winds and earthquakes. Flood risk is lower, but only for so long, because sea level rise is ongoing.[4]

Structural options will vary depending on source(s) of flooding (e.g. storm surges, river overflows, tidal flows, cloudbursts) and risk level. There are many ways to elevate living spaces: extending foundations upward, raising land beneath with fill, sacrificing the ground floor, covering the floor with a new floor if the ceiling is high enough, or adding a refuge on a single-story home.[5] Dry floodproofing involves sealing your home by waterproofing walls, installing backflow valves, and shielding doors and openings. New construction can be designed with living areas on upper floors and parking or storage below.

There are larger scale elevation projects:

- After the Great Seattle Fire of 1889, Pioneer Square was rebuilt one to two stories higher to alleviate flooding. On underground tours, you can see where the old storefronts were before sidewalks and businesses were raised to the new ground level.[6]
- Tokyo is building homes, schools, and parks on top of super-levees, broad, mildly-sloped river embankments designed to withstand floods and seismic stress.[7]
- In HafenCity, arising in the old port area in Hamburg, Germany, buildings are raised 8 meters above sea level on artificial mounds. Streets and waterside promenades are floodable.[8]

Stilt houses, houseboats, and floating homes are forms of vernacular architecture using local designs and natural materials.[9] Structures adapted for monsoonal floods or seasonal heavy rainfall are suitable, too, for a shifting climate. Flash floods and heat in Zimbabwe are prompting the return of “ngazi,” traditional thatched elevated wooden huts.[10] The “Khudi Bari” or “tiny house” in Bangladesh is a modern take on a stilt house, updated for easy construction and portability.[11] Houseboats in Cambodia, Vietnam, and Thailand allow living and working on water for economies based on fishing and tourism.[12]

Floating homes can ride on rising waters, ideal for uncertain sea level rise, but are exposed to storms. Water, sanitation, and utility connections are hurdles and legal property status may be uncertain.[9] Amphibious variants such as Dutch homes in Maasbommel rise and settle with fluctuating waters, moored by guidance posts.[13] Urban settlements are advancing onto water. These range from slum to luxury[12] and face concerns about ecosystem harm and social inequities.[14] Examples are: Makoko, a Nigerian informal settlement where houses on stilts extend into the lagoon;[9] Schoonschip, Amsterdam's floating model of sustainability that incorporates solar energy, wastewater treatment, and subsurface heat exchangers;[15] and the aspirational Maldives Floating City.[16]

Rising seas and extreme precipitation make flooding worse, so step one is to do something about climate change. Cities and towns tackle flood defenses and gray and green infrastructure. When it's your house, flood management falls to you.[17] For help and inspiration, we see how people around the globe are living in flood conditions, many in stilted and floating houses, and how larger projects are possible. We improve and innovate, as we seek to (figuratively if not literally) raise up and protect our communities.



Photo: Grand Isle Louisiana, by Jon Evans, Flickr, CC BY 2.0

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