

Navigating Climate Vulnerability: Towards Inclusive and Transparent Climate-Resilient Housing Solutions in Cyclone-Prone Villupuram, Tamil Nadu, India

India's 7500 km long coastline is one of the significant areas threatened by climatic disasters resulting in thousands of people's loss of life and property. Cyclonic storms emerging from the Bay of Bengal are well known for their destructive potential and impact on human activities in states like Andhra Pradesh, Odisha, and Tamil Nadu. Additionally, the region's susceptibility is exacerbated by its low-lying coastal zones, which experienced severe impacts during the 2004 Indian Ocean Tsunami and the 2008 Nisha cyclone.

This policy paper explores the vulnerabilities faced by cyclone-impacted communities and specifically the cyclone impacted households (CIHs) in Villupuram, Tamil Nadu and their aspirations for climate-resilient housing. It highlights the barriers hindering them from accessing government housing subsidies and proposes solutions to address these challenges, emphasizing the need for affordable loans and transparent climate-resilient funding mechanisms.



Most of the CIHs had walls and roofs that were weak and vulnerable to heavy rains and cyclones.

Vulnerability Contexts

Cyclones have direct and indirect effects on public life, affecting public health, housing, transportation, and food security. During the Thane cyclone in 2011, residents in affected areas encountered significant challenges in accessing essential services due to impassable roads and energy shortages at medical facilities. Fatalities in Villupuram were primarily attributed to incidents such as electrocution, tree

collapses, and structural damage to homes. Uprooted trees further increased danger by falling onto lamp posts and utility poles. Damage to hand pumps and bore wells led to severe water shortages lasting a week. The cyclone also heightened the risk of communicable diseases due to displacement and limited access to necessities like clean water, sanitation, shelter, and healthcare.

The majority of affected homes were kutcha houses with thatched roofs and mud walls, often constructed on weak foundations using unbaked mud bricks due to cost considerations. These structures suffered from erosion during heavy rains, and thatched roofs attracted termites, causing leaks and damage. Maintaining these substandard homes was financially burdensome for low-income households. Many families

relied on a single firewood stove for cooking, which placed an additional burden on women who had to wake up early to prepare meals, particularly during rainy seasons. Inadequate sanitation facilities were prevalent, characterised by makeshift, unsafe, and unprotected structures made from materials like tarpaulin sheets or cloth rags.

Red-tapism, Corruption, Indebtedness, and Lack of Access to Safe and Affordable Housing

In our Participatory Action Research on cyclone-impacted families' housing needs, we identified key challenges: red-tapism, corruption, indebtedness, and limited access to safe, affordable housing. Cyclone impacted vulnerable households share a common desire for climate-resilient homes but face several barriers:

- Accessing government housing subsidies is often hindered by officials demanding bribes for priority consideration. These officials indirectly signal the need for bribes, causing frustration among residents.
- Many families have given bribes but still await subsidies, resulting in futile efforts and incomplete housing structures.
- There's also suspicion that funds of government schemes are being misallocated.
- Delays in subsidy disbursement occur because funds are released only after demolishing existing homes and preparing foundations, leaving families temporarily homeless.
- Hope for housing is fuelled by encounters where officials and even strangers photograph residents and collect documents, with inclusion in the beneficiary list being a cherished dream.
- Documentation and selection processes lack standardisation.
- Extreme weather events further complicate housing vulnerability, prompting families to borrow money for construction during delays in beneficiary lists or fund releases. Government officials often misinterpret this self-reliance as a sign that households can complete construction without external aid, causing hesitancy in fund release.



A shared conversation in progress during one of our household visits.

Subsidy Shortfall: The financial strain of building a home that withstands climate shocks

Constructing climate-resilient houses requires more funds than the government subsidy provides. Local communities prefer to build their homes in one go, but their limited income and livelihood uncertainties make this challenging. Even the most basic prototype, 269 sq. ft. of housing made of conventional fire bricks, would cost more than four lakhs in a state like Tamil Nadu. The labour costs are much higher than what one would witness in north Indian states.



For most of the CIHs, their kitchen is a fuelwood stove placed in the open; and the bathroom is an open space partially covered by tarpaulin sheets.

Lack of access to formal credit

There is a pressing need for affordable and flexible loans from regulated financial institutions. Local communities prefer to undertake their housing aspirations and construction all at once rather than undertaking construction incrementally over many years as their savings pile up. The vulnerable groups we mobilise hardly can think of saving money over a long period. Instead, they are indebted to local money lenders. To bridge the funding gap, there is a pressing need for affordable and flexible loans from regulated financial institutions. However, many vulnerable households, particularly those earning less than Rs. 10,000 monthly, are excluded from traditional lending spaces. Only a few institutions, like Small Finance Banks (SFB) and microfinance institutions (MFIs), disburse loans to this segment. Within them, SFBs would disburse it to poor people with land as an asset, and MFIs would disburse it to landless poor, primarily through Joint Liability Lending. Yet, the existing credit facilities tailored for these populations are often designed for short-term, small-scale needs, like fueling a micro-enterprise's working capital. In contrast, housing loans necessitate extended repayment durations (of at least 10 years) and more favorable interest rates than what most MFIs currently provide.

Recommendations for Climate Resilient Housing for the Poor

Reforming the Housing Subsidy System

The complexities and inefficiencies community members encounter while accessing government housing subsidies highlight an urgent need for a systemic overhaul. There is a need for transparent mechanisms that ensure timely and undiluted subsidy delivery to the rightful beneficiaries.

Additionally, given the financial challenges of constructing climate-resilient homes, it's imperative for the government to reassess and adjust the subsidy amounts to more accurately reflect the real construction costs.

This should be complemented by fostering collaborations with regulated financial institutions to offer affordable and flexible loans, ensuring even those with limited assets or low incomes can access vital funds for housing.

Introduction of a Hybrid Financial Product

Considering the unique challenges faced by communities, there is a distinct opportunity to introduce a specialised financial product that seamlessly merges elements of housing finance, climate finance, and microfinance. Such a product would not only address the immediate housing construction needs of vulnerable populations but also ensure that these homes are built with resilience against future climate shocks. By integrating microfinance principles, this financial solution would be tailored to cater to the economic realities of these communities, offering flexible repayment options, lower interest rates, and minimal collateral requirements. Collaborative efforts between government agencies, civil society organisations working on climate change and housing, and microfinance institutions can pave the way for the design and dissemination of this innovative financial instrument, ensuring both housing security and climate resilience for communities.

In conclusion, addressing the housing vulnerabilities of cyclone-affected communities require a multi-faceted approach, including improved transparency in subsidy allocation, accessible loans, and the establishment of a climate-resilient fund. These measures can empower vulnerable populations to realise their aspirations for safe and affordable housing in the face of climate-related disasters.

Contributing authors: Atul Raman, Dr Devisha Sasidevan, Prof Sunil D Santha, Deepankar Panda, Gauri Shenoy, Khadecja Ali, Soofiya Yoosuf