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REWIRING RESILIENCE

A Market Assessment of Electrical Fire Safety Among Lapu-Lapu City's Low-Income Households

November 2026



Photo by Lapu-Lapu City DRRMO, 2026

Acknowledgements

This study was prepared by Habitat for Humanity International's Terwilliger Center for Innovation in Shelter in collaboration with the Lapu-Lapu City Disaster Risk Reduction and Management Office (DRRMO). The research, analysis, and writing were led by Van Abino as part of a collaborative effort to better understand electrical fire safety risks affecting low-income households and identify opportunities to strengthen market systems and community resilience.

The study benefited from the contributions of a diverse range of stakeholders who shared their time, expertise, and perspectives throughout the assessment process.

Acknowledgment is extended to representatives from the Local Government of Lapu-Lapu City, including the Office of the Building Official (OBO), Bureau of Fire Protection - Lapu-Lapu (BFP), City Engineering Office (CEO), and a member of the Sangguniang Panlungsod, who provided valuable insights on local policies, regulations, and development priorities related to fire safety in barangays.

The assessment also benefited from the participation of private sector actors, including Mactan Electric Company (MECO), American Wires, Jober's Electrical Supply, ELE Technical Training and Assessment Center, and One Puhunan. Their contributions informed the analysis of the availability, accessibility, and delivery of electrical products, services, financing, and technical training within the local market system.

Recognition is also extended to industry organizations, including the Mandaue Installer Group Incorporated (MIGI) and the Institute of Integrated Electrical Engineers of the Philippines, Inc. (IIEE)-Cebu Chapter, for sharing insights on industry standards, workforce development, and electrical safety practices.

The contributions of civil society and academic institutions are also acknowledged, including Pagtambayayong, the University of the Philippines Cebu Center for Environmental Informatics (UP CENVI), and Light of Hope. Their perspectives strengthened the assessment and contributed to a broader understanding of community-level challenges and opportunities.

Finally, acknowledgment is extended to the communities that participated in the assessment, including residents of Casia, Bankal, Buaya Coastal Area, Purok Caimito, St. Dominic's Place, and Barangay Gun-ob. Particular recognition is given to the 100 low-income households who participated in the survey, as well as the informal electricians and community leaders who contributed through interviews, discussions, and validation activities. Their experiences and insights were essential to the study.

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Use of Artificial Intelligence (AI)

AI technology is used to support limited editorial tasks, including grammar correction, language refinement, and improvement of document flow. All substantive content, research findings, analysis, interpretations, conclusions, and recommendations were developed, reviewed, and finalized by the author to ensure accuracy and alignment with Habitat for Humanity's mission of building more prosperous and vibrant communities by making sure everyone has a safe, affordable place to call home.

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Foreword

In an era defined by rapid urbanization and shifting climate patterns, cities worldwide face the dual challenge of sustaining economic growth while ensuring the safety and well-being of their populations. Urban resilience is no longer a theoretical milestone. It is an urgent operational necessity. Among the diverse threats that jeopardize urban centers, fire incidents represent one of the most destructive yet preventable hazards.

This research paper, focusing on the cause and effect of fire incidents in Lapu-Lapu City, offers a timely and critical examination of a pressing localized challenge with global implications. Lapu-Lapu City, a vibrant hub of economic activity, tourism, and cultural heritage, stands at a pivotal juncture. As the city expands, its vulnerabilities evolve. Dense settlements, infrastructural demands, and socio-economic pressures create a complex landscape where a single fire incident can disrupt lives, devastate livelihoods, and stall developmental momentum.

By meticulously analyzing the root causes and cascading effects of fires in the locality, this study transcends mere statistical reporting. It delves into the systemic vulnerabilities that allow these disasters to occur and examines their profound impact on the community's social fabric and economic stability.

More importantly, this work aligns its findings with the United Nations Sustainable Development Goals (SDGs) – particularly SDG 11 (Sustainable Cities and Communities) – fire safety not merely as an emergency response issue, but as a core pillar of sustainable urban planning and resilience.

The insights presented in this paper serve as both a mirror and a roadmap. They reflect the current realities faced by local administrators, urban planners, and first responders, while mapping out actionable, data-driven pathways toward risk reduction and capacity building. Achieving true urban resilience requires this exact blend of rigorous academic inquiry and practical application.

It is my hope that this research inspires stakeholders – from local government units and policymakers to community leaders and citizens – to foster a proactive culture of safety. By understanding the triggers and consequences of urban fires, Lapu-Lapu City can better fortify its infrastructure, protect its people, and pave the way for a safer, more resilient, and sustainable future.

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Executive Summary

Residential fires remain a significant threat to low-income households in Lapu-Lapu City, with 40% of surveyed households reporting having experienced a fire incident and 25% within the last two years. Between January 2024 and February 2026, electrical-related fires affected 96 households and caused an estimated ₱6.4 million (US$103,000) in property damage. At an estimated ₱248 million (US$4 million), the city's residential electrical materials and services market presents a significant opportunity to improve access to safer products and services while reducing household fire risks.

As electrical-related incidents are the leading cause of residential fires, this study examined the drivers of electrical fire risk, household safety practices, market dynamics, and opportunities for market-based interventions. The assessment combined household surveys, technical inspections, key informant interviews, focus group discussions, and a multi-stakeholder workshop, reaching 100 households across four community types, generating a robust evidence base for assessing electrical fire risks and the broader market system influencing household safety outcomes.

Key Findings

The assessment revealed several notable paradoxes within the market system



Fire risk rises with income. As households invest in their homes, more appliances and complex electrical systems add risk when safety upgrades don't keep pace.



Hardware stores and electricians are key information providers, but they assume households are cost-conscious and so tend to recommend low-cost, potentially substandard products over safer, standard-quality ones.



Low-income households trust informal electricians more than formal ones. Their proximity builds social capital and trust, and their services are often more affordable, despite frequently lacking certification.



Households are willing to invest in fire safety. Contrary to common assumptions, they have access to financial services and are willing to pay for products and services that improve electrical safety.



Women are central decisionmakers, involved in 91% of households. They influence housing and safety improvements and made up 74% of survey respondents, making them critical to electrical safety investments and behaviors.



The city has fire safety programs, but none that specifically target electrical fire risks. Given how prevalent electrical hazards are among surveyed households, this is the priority area for focused action.



Incrementally built homes face the highest fire risk. Homes expanded over time often lack regulatory oversight, so hazards accumulate through unplanned improvements.

Key Systemic Constraints

Electrical fire risks persist due to three systems constraints that reinforce unsafe practices, increasing household exposure to electrical fires:

Supply Chain Gap



a cost-driven supply chain that allows substandard and counterfeit electrical materials to remain accessible, while households, retailers, and electricians often prioritize affordability over quality and safety.

Labor Gap



formal labor gap leaves only 30 MECO-accredited electricians serving more than 129,000 households, driving reliance on informal electricians who meet critical demand but operate with limited quality assurance and oversight.

Monitoring Gaps in Existing Houses



regulatory blind spots mean that monitoring of electrical systems largely ends once a household is connected to the grid, allowing hazards from repairs, alterations, and incremental housing improvements to accumulate overtime without inspection.

Opportunities for Systemic Change

Many of the building blocks needed to improve electrical safety already exist within Lapu-Lapu City's ecosystem:

1 **Strengthening the electrical workforce.**
The city's pool of ~180 formal electricians can be complemented by upskilling ~406 informal electricians who could be upskilled through training, certification support, and alternative learning pathways. Recognition and engagement by local government can improve both quality assurance and accountability.

2 **Integrating electrical safety into existing barangay systems.**

Every barangay already maintains disaster risk reduction and management functions. Incorporating household electrical safety awareness, monitoring, and referral mechanisms into these existing structures presents a practical and scalable opportunity.

3 **Leveraging financial inclusion.**

With 55% of surveyed households already accessing financial products and strong willingness (64%) to finance electrical fire safety improvements, there is an opportunity to develop structured financing solutions for electrical safety upgrades.

4 **Institutionalizing electrical safety through local ordinance.**

With support from the Disaster Risk Reduction and Management Office and other stakeholders, a local ordinance could formalize electrical safety initiatives and encourage long-term market incentives that reward safe electrical practices.



Reducing residential electrical fire risks will require more than traditional enforcement and awareness campaigns.

By aligning government, utilities, electricians, retailers, financial institutions, and low-income households around a shared vision of prevention, Lapu-Lapu City can move beyond reactive fire response toward a sustainable system that reduces occurrence of electrical-related fires.

Recommendations

1 **Establish local electrical safety monitoring and strengthen workforce capacity.** Upskill informal electricians, strengthen quality assurance mechanisms, and employ formal electricians at the barangay level to identify and monitor household electrical risks.

2 **Institutionalize electrical safety through local ordinance.** Formalize responsibilities, standards, and programs that promote electrical safety and sustain long-term behavior and market change.

3 **Improve access to certified materials through multi-agency coordination.** Align government agencies and other stakeholders to reduce the availability of substandard and counterfeit electrical products in the city.

4 **Stimulate demand through electrical safety awareness campaigns.** Increase household awareness of safe electrical practices while creating greater demand for trained electricians and code compliant materials.

Acronyms

BFP	Bureau of Fire Protection
BPS	Bureau of Philippine Standards
CDRRMO	City Disaster Risk Reduction and Management Office
CEO	City Engineering Office
DIY	Do-It-Yourself
DTI	Department of Trade and Industry
FGD	Focus Group Discussion
HFHI	Habitat for Humanity International
ICC	Import Commodity Clearance
IIEE	Institute of Integrated Electrical Engineers of the Philippines, Inc.
KII	Key Informant Interview
LGU	Local Government Unit
MECO	Mactan Electric Company
MFI	Microfinance Institution
MIGI	Mandaue Installer Group Incorporated
NGO	Non-Governmental Organization
OBO	Office of the Building Official
PS Mark	Philippine Standard Mark
RFO	Ready for Occupancy
TCIS	Terwilliger Center for Innovation in Shelter



Photo provided by the Lapu-Lapu City DRRMO, 2026.

Introduction

Electrical issues are the leading cause of residential fire incidents in the Philippines, accounting for 38% of all cases. While access to electricity continues to expand and improve quality of life, it has also amplified one of the country's most persistent urban hazards: fire. In Lapu-Lapu City, a highly urbanized area with more than 129,000 households, fire is consistently recognized as one of the three most damaging hazards affecting communities. In the last two years, electrical-related fires affected 96 households and caused ₱6.4 million (~US$102,900) in property damage (Lapu-Lapu City BFP, 2026).

The evidence suggests that economic progress and electrical fire risk are advancing hand in hand. Across the city's diverse community typologies, 4 out of 10 households have experienced a fire incident. Twenty-five percent (25%) of these incidents occurred within the last two years, underscoring the growing urgency of the problem. Among affected households, nearly half (48%) identified electrical faults as the primary cause.

This reveals a troubling paradox: while access to electricity has become widely accessible, local systems that make electricity safe have not. The local market system continues to fall short in providing households with reliable information, standard electrical materials, skilled labor, accessible financing, and effective regulatory safeguards. As a result, many families are connected to power but disconnected from the resources needed to use it safely and sustainably.

The consequences of the systemic mismatch are catastrophic and don’t discriminate based on income class. For the affected families, fire events result in more than tangible loss but also affect psychological health where they experience displacement (85%) and trauma, paired with total loss of income and property (43%).

Both impacts take a long time to fix and effectively sets back the affected family few steps behind in their economic progress. The market analysis shows that fire incidents are not due to total lack of awareness and access, but a massive perception-reality gap exists. While 75% of households know where to buy fire-resistant materials, 76% have hired electricians, 55% have access to financial services, and 63% are getting information from public and civic societies – demonstrating that the foundations of an inclusive market system exist – environments where electrical-related fire hazards persist.

The city's residential electrical materials and services market is estimated at ₱248 million (~US$ 4M), creating a strong commercial opportunity to expand access to safer electrical products and services while reducing fire risk.

This market study argues that households from the lower- to middle-income sector, are not deliberately choosing unsafe electrical practices for their houses out of complete ignorance or lack of access to information and workmanship; they are structurally funneled into them by an environment that permits substandard materials and informal practice that offers not only affordability but convenience, enabled by regulatory blind spots. To bridge this systemic gap, this study synthesizes the empirical findings of household assessments, ocular inspections, key informal interviews, and focus group discussions, combined with the outcomes of a Fire Safety Ideation Workshop attended by enabling environment actors.

Moving away from reactive firefighting and top-down enforcement, this study outlines a framework for market-based electrical-fire safety resilience measures. By increasing the demand for standard workmanship through awareness campaigns, bridging the supply chain gap by making substandard materials undesirable to households, increasing the number of properly trained electrical workers, and community-level monitoring of household electrical systems, Lapu-Lapu City can pioneer an inclusive model that transforms electrical fire-safety from an unattainable goal into an accessible urban standard.

Research Objectives, Methodology, and Scope and Limitations

Objectives

The study aims to assess the factors contributing to electrical fire safety hazards among low-income households in Lapu-Lapu City and identify potential market-based solutions to improve household fire safety outcomes.

Specifically, the study seeks to:

1. **Identify the systemic constraints within Lapu-Lapu City that contribute to the existence and persistence of electrical fire safety hazards**, and examine how these constraints influence the behaviors, incentives, and interactions of households, service providers, market actors, and regulatory institutions.
2. **Assess the current level of household awareness and practices related to electrical safety**, including awareness of standard electrical materials and household electrical installation, maintenance, and usage practices.
3. **Identify the challenges and barriers faced by low-income households in accessing and using fire-safe electrical materials, services, and information**, including both financial and non-financial constraints that hinder adoption despite their potential availability.
4. **Gather potential market-based solutions from relevant market actors** to address electrical fire hazards and improve household access to safe electrical products, services, information, and support systems.

Methodology

This research study used mixed-methods design, combining quantitative assessments with qualitative inquiries to analyze systemic constraints and market dynamics in Lapu-Lapu City.

A structured household survey was deployed to capture housing conditions, fire risk awareness, access to services, and financial access. It posed these key questions:

- Are electricians accessible and trusted?
- Are fire-resistant materials affordable and available?
- Do financing mechanisms exist for safety upgrades?
- Are women involved in decision-making about housing fire safety?

The assessment applied purposive sampling to select communities in Lapu-Lapu City that represent common settlement types, including informal settlements, coastal areas, subdivisions, and resettlement sites. This selection ensured coverage of households with varying fire risk profiles and different levels of access to markets and services. A total of 100 households were selected by the Lapu-Lapu City Disaster Risk Reduction Management Office (DRRMO) to participate in the study. Communities were treated as strata, considering factors such as the presence of hardware stores, financial institutions, and information access points. This allowed the study to capture differences in behaviors, market barriers, and service gaps across the four community types.

Household technical ocular inspections were conducted by Mactan Electric Company-accredited electricians, with one assigned per community, to validate the actual electrical practices of households and complement the survey responses. Enumerators included eight (8) community leaders and four (4) electricians, all of whom were selected by the DRRMO and trained in using Kobo for digital data collection and familiarizing the survey tool. A validation session followed the fieldwork to address data gaps and ensure data completeness and accuracy.

Key informant interviews were conducted with a diverse range of market actors and stakeholders involved in fire safety, electrical services, governance, regulation, financing, and community development. The 16 respondents included a barangay leader, informal electrician, electrical supply hardware retailer, Mactan Electric Company (MECO) representative, Bureau of Fire Protection (BFP) representative, a city councilor, electrician organization representative, manufacturer, financial institution representative, low-income household representative, training service provider, electrician group representative, non-government organization (NGO) representative, MECO-certified electrician, Office of the Building Official (OBO) representative, and a gated community leader. The interviews explored current fire safety practices, market dynamics, service provision, regulatory issues, and opportunities for improving fire safety outcomes among low-income households.

An **ideation workshop** was conducted to validate the preliminary findings of the assessment and generate ideas for addressing the systemic constraints identified. The workshop was attended by 15 participants, representing enabling environment actors, including the public sector and regulatory agencies, the technical and academic sector, and civil society organizations. Discussions focused on validating the assessment findings, identifying root causes of fire safety challenges, and exploring potential solutions and collaborative actions to improve fire safety within low-income communities.

A **focus group discussion (FGD)** with informal electricians was conducted after the ideation workshop to further deepen the analysis. The discussion sought to better understand the practices, experiences, and challenges of this trade, recognizing that informal electricians are often the primary electrical service providers accessed by low-income households. The FGD was attended by seven (7) informal electricians from Barangay Gun-Ob, who shared their experiences, career pathways, service

delivery practices, and perspectives on the electrical needs and safety challenges faced by the communities they serve. The discussion provided valuable insights into the realities of the informal electrical services market and its influence on household fire safety.

Together, these methods enabled the study to triangulate perspectives from market actors, regulators, service providers, and household stakeholders, providing a robust understanding of the fire safety ecosystem and opportunities for future interventions.

Scope and Limitations

Scope of the Study

This study examines the electrical fire safety landscape affecting low-income households in selected communities in Lapu-Lapu City. It focuses on four key areas:

- **Household Practices:** Awareness, behaviors, and decision-making related to electrical safety.
- **Materials and Services:** Access to electrical products, installation services, and maintenance support.
- **Finance and Affordability:** Financial constraints and household investment decisions affecting the adoption of safer electrical solutions.
- **Information, Governance, and Market Systems:** Availability of electrical fire safety information, regulatory oversight, incentives, and the roles of market actors in influencing household fire safety outcomes.

The study draws on household surveys, technical ocular inspections, key informant interviews, focus group discussions, and a multi-stakeholder ideation workshop involving households, electricians, government agencies, utilities, suppliers, financial institutions, and civil society organizations.

Limitations

The study is intended to generate practical insights into electrical fire risks and market system constraints rather than statistically representative findings for all low-income households in Lapu-Lapu City or elsewhere in the Philippines. As such, the findings should be interpreted as indicative and directional. The following limitations should be considered:

1. **Potential Inspector Bias**
   Some electricians who conducted technical ocular inspections also provide electrical services within the study communities. Their prior familiarity with certain households or electrical installations may have introduced potential for observer bias.
2. **Visibility of Electrical Systems**
   The ocular inspections assessed only electrical components and hazards that were visible during site visits. Hidden elements, including concealed wiring, internal splices, circuit configurations, and other inaccessible components, could not be verified without invasive inspection methods thus, the inspections reflect visible safety conditions rather than a complete technical assessment of household electrical systems.
3. **Incomplete Inspection Coverage**
   While 100 households participated in the survey, only 95 underwent technical ocular inspection. Five households were not inspected due to access restrictions, household head absence, or relocation. Inspection findings therefore reflect observations from the 95 households assessed.

The findings are intended to inform intervention design, stakeholder engagement, and future pilots of market-based solutions to improve residential fire safety. They should be viewed as a foundation for further inquiry rather than definitive evidence for broad-scale policy or programmatic decisions.

Respondents' and Households' Profiles

A total of 100 households were surveyed across four community types in Lapu-Lapu City: 25 households from an informal settlement, 25 households from subdivision area, 25 households from a resettlement site, and 25 households from a coastal community. All surveyed households have their own electricity meters indicating that all respondents are formally connected to the electrical distribution system.

Community Types



25 informal settlement households
Represent informal housing conditions



25 coastal community households
Represent geographically constrained communities



25 resettlement households
Represent government-supported housing areas



25 subdivision households
Represent planned residential developments

Note: Community types were selected to capture variations in housing conditions and potential access to materials, services, information, financing, and fire-response support.

The households surveyed were predominantly from lower-income segments. The majority (67%) belonged to Class D households, with a monthly income ranging from ₱12,030 to ₱ 24,060 (US$195 to US$390). Meanwhile, 25% were classified as Class E, earning below ₱12,030 (US$195) monthly, while only 8% belonged to Class C2, with monthly incomes ranging from ₱ 24,060 to ₱ 48,120 (US$390 to US$779). This distribution reflects the study's focus on low-income and economically vulnerable households, which are often more exposed to electrical fire risks due to systemic constraints.

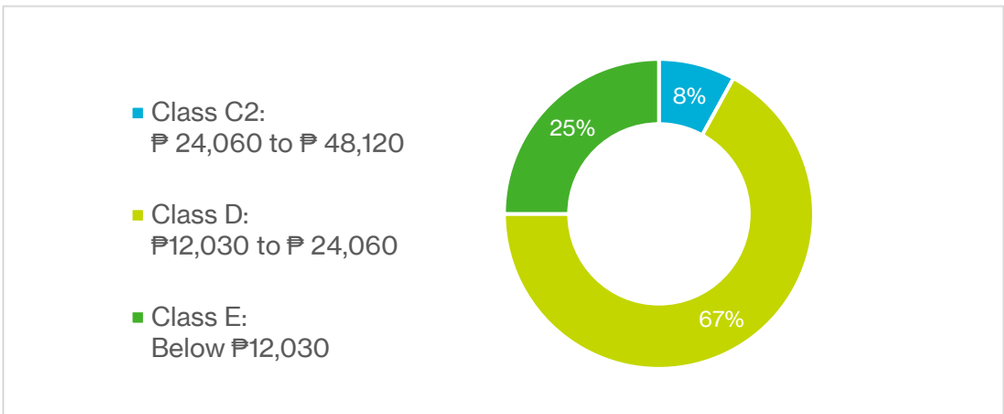


Figure 1: *Income Class of Respondents*

Across all surveyed communities, women comprised most respondents, accounting for 74% of participants, while 26% were men. The high participation rate among women may be attributed both to their greater availability during data collection and to their significant role in household management and day-to-day decision-making, signified by 45% of respondents stating the mothers are the head of the household.

The surveyed households had an average of 2.48 male members and 2.44 female members, resulting in an average household size of 4.92 persons. This household size is consistent with typical family structures in densely populated urban and peri-urban communities. The relatively balanced gender composition across households suggests that observed differences in electrical safety practices are more likely to be influenced by factors such as housing conditions, tenure arrangements, income levels, and access to services rather than household gender composition.

In terms of housing tenure, the survey found that most households (94%) resided in homes they owned. Only 5% of households reported renting their homes, while 1% lived under an informal or shared housing arrangement. Tenure patterns varied across community types. Households in coastal communities, informal settlements, and resettlement sites were exclusively owner-occupiers among the survey respondents. In contrast, subdivision communities exhibited a more diverse tenure profile, consisting of 19 owner-occupied households, five (5) renter households, and one (1) household living in an informal or shared arrangement.

The surveyed population represents predominantly low-income, owner-occupied households with formal electricity connections across diverse housing contexts. These characteristics provide an important setting for understanding household electrical safety practices, investment decisions, and the constraints that influence the adoption of safer electrical materials and services.

Respondents were predominantly women (74%), as they were more likely to be at home while other household members were engaged in work or school.



Perceived safety, hidden fire risk

The gap between perceived and actual fire safety

The study found a gap between how safe households believe their electrical systems are and the actual risks observed. Many households reported practicing fire-safety measures and believed their homes were protected from fire, yet electrical hazards remained common and fire incidents continued to occur. This disconnect suggests limited technical capacity among households to assess the safety of their electrical systems and identify hidden electrical hazards. As a result, households may be less likely to seek electrical inspections, preventative maintenance, or system upgrades, highlighting the need for greater access to trained and qualified electricians.

While 35% of households reported practicing electrical fire-safety measures, ocular inspections found that 75% demonstrated at least some visible fire-safety practices. Yet, 21% of these households had still experienced an electrical-related fire. This suggests that visible or commonly practiced safety measures do not necessarily protect households from underlying electrical risks.

Owning a fire extinguisher was the most commonly cited indicator of fire safety among households (64% overall), rising to 84%among households interviewed in both coastal and informal settlement communities, where 21 of 25 households reported owning one.

Top Causes of Fire Incidents



Safe cooking practices (49%) and proper storage of flammable materials (47%) were also frequently cited. Although households identified negligence or human error (55%) and electrical faults (48%) as leading causes of residential fires, electrical fire-safety practices ranked among their lowest priorities.

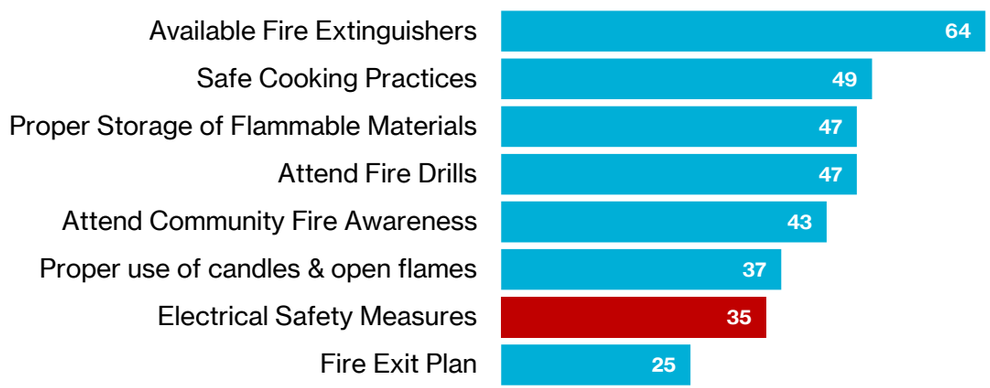


Figure 2: *Self-reported adoption of fire-safety measures among surveyed households (note: respondents could select multiple fire-safety practices; therefore, percentages do not sum to 100%)*

Fire extinguishers are widely owned, but electrical safety practices rank near the bottom, despite electrical faults being a major cause of residential fires.



A home may be electrically compliant when built, but fire risks can emerge as unsupervised additions accumulate over time.

Ocular inspection confirms key drivers of fire risk

The ocular inspection by formal electricians revealed signs of deteriorating and unsafe electrical systems. The most common issues observed were exposed, frayed, and/or cracked wiring (16%) and dangling or tangled wires (15%). A critical finding was that 26% use extension cords as a permanent substitute for fixed wirings. While extension cords are designed for temporary use, prolonged use can lead to overloading, overheating, loose connections, and physical wear, significantly increasing the risk of electrical fires.

Common Electrical Fire Hazards

15% dangling or tangled wires

16% cracked wiring

26% Permanent use of extension cords

Ready-for-occupancy homes create a false sense of electrical safety

While subdivisions and class C2 households have the highest socioeconomic standing in the four surveyed communities, they also exhibit the largest perception-reality gap in electrical safety. Living in ready-for-occupancy (RFO) homes with compliant electrical systems and reporting the highest participation in fire drills (80%) and fire awareness campaigns (80%), they generally perceive themselves to be at lower risk. Yet 35% reported experiencing a fire incident, 48% don't know where to buy fire-resistant electrical materials, and 19% would never hire a certified electrician. These findings suggest that confidence in the safety of a professional installation before occupancy may mask risks introduced by subsequent household modifications, often undertaken through DIY approaches or informal electricians.

Socioeconomic stratification of fire risk

The study reveals a socioeconomic stratification where the causes of fire evolve in tandem with household income and lifestyle progression. This illustrates that as households move towards greater asset ownership, they trade risks from basic human activity for risks born from infrastructural inadequacy.

The trajectory of vulnerability: negligence to systemic fault

The primary causes of fire incidents can be divided by household income class. The poorest households (Class E), particularly within informal settlements, classified the leading cause of fire in their community as negligence of human error which accounts for 55% of incidents.

As households gain financial capacity and shift toward higher income tiers, the risk profile pivots significantly towards electrical faults, accounting for 63% of fire causes in Lower Middle-Income class (Class D). This is especially seen in subdivision settings where 40% of households state that the fires in their community are caused by electrical faults.

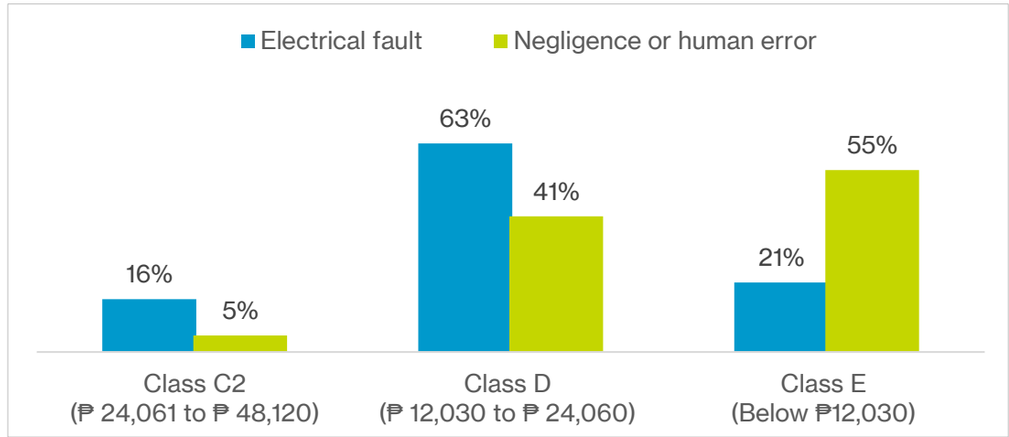


Figure 3: *Main causes of fire incidents in communities*

Note: Multiple responses were allowed. Percentages are based on households reporting causes of residential fires and therefore do not sum to 100%.

As incomes rise, fire risk shifts from behavioral to electrical hazards.

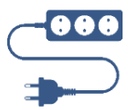


Household upgrades lead to hidden fire risks

The data sheds light on the dangerous transition point for upwardly moving families. As they acquire appliances to add comfort to their homes such as thermal cooling, electrical cooking, and multiple appliances, they upgrade their lifestyles without upgrading the capacity of their household electrical system.

The unsafe electrical practices provide further validation of the observed shift in fire risk from behavioral factors to electrical system deficiencies. The widespread use of extension cords as permanent wiring solutions (26%), the connection of major appliances through extension cords (7%), and the overloading of outlets (6%) suggest that households are adapting existing electrical systems to accommodate growing appliance ownership.

Electrical Fire Hazards Linked to Household Upgrade



26% used extension cords as a permanent substitute for fixed wiring



7% had major appliances plugged through an extension cord



6% had too many appliances plugged into a single outlet

This is a clear constraint where the electrical infrastructure of a basic house is not built to accommodate the electrical system load that new asset demand. In turn, households find themselves at higher risk or electrical-related fires as their electrical systems remain stagnant while their electrical consumption patterns increase. This failure traps households in a system that is not at par with the safety standards required to sustain their new lifestyle, rendering economic progress as a significant source of fire vulnerability.



Photo captured during a field visit.
An air-conditioning unit installed in a partially completed dwelling, illustrating how appliance acquisition can occur alongside ongoing housing improvements.

Material supply chain and consumption dynamics

The residential electrical market in Lapu-Lapu operates as a cost-driven supply chain where economic realities of the households and purchasing advice of service providers dictate material standards. This creates an environment where safety considerations can take a back seat to immediate affordability.

Affordability and limited information shape material choices

According to supply actors interviewed, affordability and lack of technical knowledge regarding electrical systems are key factors shaping household decisions on electrical materials.

When households were asked where they purchase electrical materials (multiple responses allowed), 54 respondents identified Business-to-Consumer (B2C) hardware stores, while only 24 reported purchasing from larger Business-to-Business (B2B) hardware suppliers. This suggests that homeowners primarily rely on smaller neighborhood hardware stores due to their proximity, accessibility, and convenience for small repairs and incremental upgrades. In contrast, larger B2B suppliers are more commonly used for bulk purchases and larger electrical-related housing projects.

Beyond their role as suppliers, these neighborhood hardware stores also serve as important sources of information for homeowners. Given the limited electrical knowledge of many households, purchasing decisions are often influenced by recommendations provided by hardware store staff and trusted electricians, making these outlets a critical point for shaping consumer awareness and material choices.

Electrical material supply actors note that low-income households may tend to purchase low-cost and potentially substandard materials if they recommend those first, a choice driven by affordability. There is a common agreement by market actors that substandard materials are available in the market as supply businesses see these materials as fast-moving while also not regulated enough to limit them from being offered to consumers.

Informal electricians as market influencers

In many cases, informal electricians serve as key influencers in material purchasing decisions, by advising households on the appropriate materials for their electrical systems. Their influence on purchasing logic is substantial.

It was noted, during the focus group discussion, that informal electricians perceive safety through a lens of minimum compliance. They recommend the most affordable materials while still meeting their perceived bare minimum standards needed to complete the job. They would routinely prioritize products that help households minimize costs, effectively influencing them towards cheaper, lower-grade materials. This is not only a practice of informal electricians - in a key informant interview, a licensed electrician admitted recommending materials solely based on cost and not checking whether the material bears the Philippine Standards (PS mark) or Import Commodity Clearance (ICC) sticker ensuring it has gone through a certification.



Image 1: *PS Marks and ICC Stickers from Bureau of Philippine Standards (BPS)*

Households trust informal electricians as both experts and neighbors, leading them to follow the advice without questioning the long-term fire risks. As informal electricians are motivated to keep the repair inexpensive to ensure the job is affordable to the household and repeated clientele, they sustain a market demand for low-quality materials that B2C hardware stores selling questionable-quality materials is all too willing to fulfill.

The loop in the system

This supply chain feedback loop, with households prioritizing low-cost materials, hardware stores focusing on sales volume, and informal electricians using low-cost, easily accessible products, results in a critical fire hazard. The cumulative effect is that many low-income homes have electrical systems that are unable to handle modern electrical appliances and equipment leading to fire hazards such as overloading, stripped insulation, pinched wires, and others. This continues to enable future fire risks under the guise of affordable upgrades.

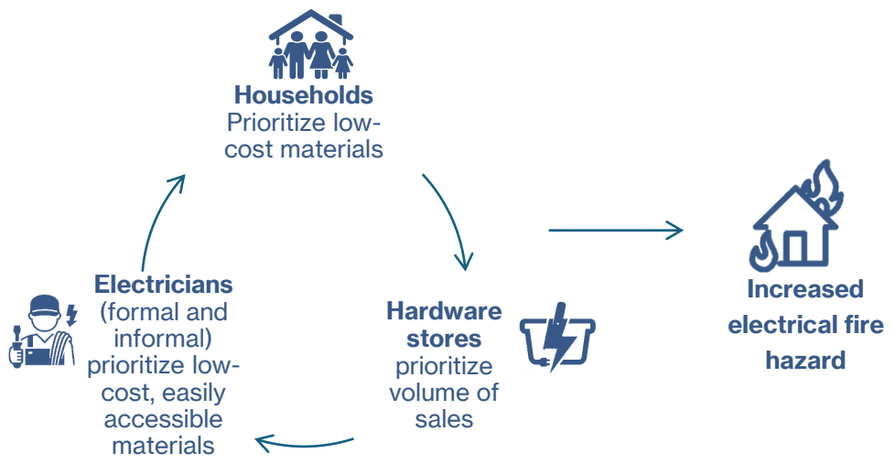


Figure 4: *Market incentives reinforcing electrical fire hazards*



Households trust electricians and hardware stores to guide purchasing decisions, but cost-driven recommendations often increase exposure to substandard materials leading to electrical fire hazards.

Photo provided by the Lapu-Lapu City DRRMO, 2026.

Labor dynamics and the role of informal electricians

The electrical labor supply in Lapu-Lapu City is fundamentally shaped by a reliance on informal labor networks. While licensed and Mactan Electric Company (MECO) accredited electrical professionals are engaged during initial construction of houses to be allowed to connect to the grid for power supply, the subsequent maintenance, repair, and upgrade of electrical systems for low-income households that are incrementally building their homes is dominated by informal labor.

Formal labor vs. community reliance on informal labor

There is a mismatch between the supply of formal electricians and household demand for electrical services. MECO, the city's power distributor, has only 30 accredited electricians, whose primary role is to inspect and certify new electrical connections, limiting their capacity to serve households' ongoing and incremental electrical needs. As a result, this roster is insufficient to support the city's 129,000 households, equivalent to one MECO-accredited electrician for every 4,300 households. Many residents therefore seek services outside MECO's approved roster, with an estimated 406 informal electricians helping to fill the gap.

The disparity is not a reflection of a total lack of formal technical expertise but rather a misalignment between household hiring behavior and formal credentialing. Estimates from all 30 barangays indicate that there are 180 formally trained or licensed electricians in the city. However, interviews with the organization of electrical engineers and a local electrical training center indicate that many of these licensed electricians are either formally employed or cater to higher socio-economic market segments, limiting their engagement in the small-scale electrical work typically demanded by low-income households. Consequently, when households identify “formally trained and verified” professionals, they exclusively register MECO-accredited personnel. This creates a perception that MECO-accredited electricians are expensive, while their accreditation serves as a surrogate for guaranteed quality service. Despite this, many households do not actively prioritize official accreditation, licenses, or training certificates when seeking repairs and incremental electrical system upgrades.

Informal electricians help meet household demand, but the lack of regulation and quality assurance can increase electrical fire risks.

Household to Electrician Ratio



[1]2026 field assessment estimates identified ~586 electricians in Lapu-Lapu City, including 406 informal barangay electricians and 180 trained and licensed electricians. Of the licensed electricians, 30 were MECO-accredited.

Drivers to hire electricians

The selection criteria of households highlight the tension between formal professional credentials and community-based trust. When asked about qualifications for hiring electricians, households prioritize social capital (recommended by family and friends) at 42%, formal qualifications (electricians with certifications / licenses) at 38%, proximity (lives within the neighborhood) at 14%, and cost (inexpensive service) at 2%.

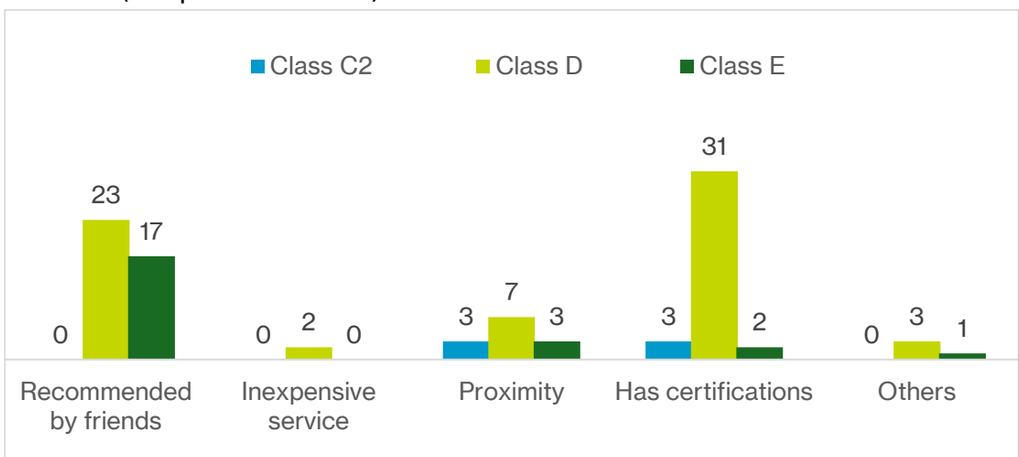


Figure 5: *Factors influencing electrician hiring decisions by income class*

The priority rankings change based on socioeconomic status. Class C2 and D households place higher importance on certifications while Class E households rank recommendations by friends and family and proximity above certifications.

However, 31% of respondents (31 households) who hired a formal electrician for past repairs stated that they would never hire electrician again, despite 3 of them having experienced a fire incident. While 7% of respondents (7 households) who did not hire a formal electrician said they would seek certified services in the future, despite five of them having already experienced a fire incident. This suggests that prior experiences with formal electricians do not necessarily lead to positive perceptions of value or credibility.

For 24% of households who do not prioritize hiring formal electricians, the primary barrier is a preference for DIY methods or informal electricians (37%). Social media platforms and the perceived simplicity of electrical work give households the confidence to undertake repairs themselves. Another commonly cited reason is that the house is an RFO unit (38%), reflecting a belief that the home's electrical system remains safe because it was originally built to code. However, as noted previously, electrical risks can emerge over time as unsupervised modifications and additions accumulate after occupancy.

Reason for not hiring formal electricians	Coastal Community	Informal Settlement	Resettle-ment	Subdivision	TOTAL
Expensive fees	4%	-	4%	8%	16%
No available certified electricians	-	-	-	-	-
Prefer DIY or informal help	-	8%	4%	25%	**37%**
Lack of trust in service providers	-	4%	-	4%	8%
No budget/not a priority	-	4%	4%	-	8%
House is RFO[1]	-	-	-	38%	**38%**

Table 1: *Reasons for not hiring formal electricians per community type*

Note: Multiple responses were allowed. Percentages are based on households that do not hire certified electricians; therefore, totals may not sum to 100%.

[1]**Ready for Occupancy (RFO)** – Subdivision homes are typically delivered as ready for occupancy, with electrical systems already in place as part of the housing package.

Barriers to formal electrician training and certification

For informal electricians, the MECO accreditation process is viewed as highly inconvenient, time-consuming, and impractical, as it requires master-level technical training and tests they must pass when a certification is not needed in their small-scale, neighborhood-focused service model.

Informal electricians view their work as both a passion and a responsibility to their neighbors. Despite lacking formal credentials, they claim not to compromise on safety, recognizing that electrical fires can affect entire communities, not just individual households. For most, electrical work is a side job rather than a primary source of income, and their services are driven as much by social capital as by financial gain.

While informal electricians maintain a prescriptive service fee of Php 500 (US$ 8) per convenience outlet, switch, or lighting fixture, they would allow clients to pay based on their financial capacity. Households report states that the average electrician service fee is Php 1,046 (US$17). In many instances, neighbors are not charged a formal fee at all, with compensation often taking the form of food and beverages. This flexible, low-cost model acts as a significant barrier to formalization, as formal electricians cannot compete with these personalized, social capital-subsidized rates.

Strategic role of informal electricians during crisis

The indispensability of informal electricians in Lapu-Lapu City becomes most pronounced during periods of crisis. Following Typhoon Rai in 2021, the demand for electrical repairs and reconnections overwhelmed the city's formal electrical workforce. In response, MECO actively encouraged anyone capable of providing electrical services to assist in restoring power connections. Informal electricians became key responders to the widespread disruption, providing immediate and accessible technical support through existing community networks when formal service providers lacked the capacity to respond quickly enough.

This ad-hoc mobilization was essential, as it took three to six months for the official workforce to address the damage to the power lines, a timeline that would have left thousands of households without electricity without the proactive intervention of the informal workforce.

The challenge is not replacing informal electricians, but improving the safety, skills, and accountability of a workforce that households already depend on.



Information access and awareness gaps across the market system

A barrier identified in the research is the fragmented landscape of information access and safety awareness across different market actors. While households, hardware stores, electricians, and other market actors operate within the electrical safety ecosystem, their varying levels of awareness and reliance on unverified information channels contribute to persistent fire hazards:

Household information gaps and vendor reliance

Surveyed households show lack of formal literacy regarding electrical specifications, load limits, and standard safety markings for electrical products. Retail purchases also rely heavily on direct recommendations from electricians and hardware store personnel. Because households cannot independently distinguish between certified and substandard components, they are acutely vulnerable to purchasing cheaper, uncertified and probably substandard materials recommended by retailers.

DIY practices and potential digital misinformation

A prominent trend revealed is that both homeowners who practice DIY electrical repairs and informal electricians increasingly rely on social media channels, (e.g. YouTube), to gain instructions and apply them directly to residential electrical work. Without professional oversight or formal technical grounding, these crowdsourced visual tutorials may skip safety compliances to electrical codes, turning amateur modifications into hidden fire hazards.

Electrical safety decisions are shaped by information gaps, leaving households, electricians, and retailers vulnerable to unsafe practices and misinformation.

Informal electricians and training information gap

Informal electricians primarily learn through on-the-job experience and unverified social media content rather than formal technical training. They also face information gaps on certification pathways, training opportunities, and scholarships, compounded by the limited availability of training centers in Lapu-Lapu City and weak institutional links connecting informal workers to formal labor markets.

Hardware stores and product literacy

While local hardware stores are the primary source of electrical supplies, electricians, electrical materials manufacturers, and even hardware store operators reported that some retailers continue to stock uncertified products due to consumer demand for lower-cost options and limited awareness of electrical safety risks. As a result, substandard and counterfeit electrical materials remain available in the market despite the fire hazards they can introduce into residential electrical systems.

Drivers of household investment in fire safety

Survey respondents pointed to specific critical pathways when assessing what information and external support mechanisms would most effectively help households invest in their own safety (multiple responses were permitted):



63% influenced by government/ NGO support



45% needed clear **cost-benefits** information



21% need **financing options** to address upfront costs

Financial access and latent demand for fire safety

Existing access to finance services

Fifty-five percent (55%) of households reported having access to financing services for housing-related improvements. Among those with financial access, microfinance institutions (51%) were the most used source, followed by cooperatives and credit unions (36%), and government financial institutions (13%). Access to financing was most prevalent among Class D households, which accounted for the largest share of users across most financing sources.

Financial Services Accessed	Class E	Class D	Class C2	TOTAL
Banks	-	5%	-	5%
Microfinance Institutions	16%	35%	-	**51%**
Cooperatives and Credit Unions	5%	29%	2%	**36%**
Government Financial Institutions	5%	2%	5%	**13%**
Digital Banks	-	2%	2%	4%
Others (own savings)	2%	5%	-	7%

Table 2: *Financial Services Accessed per Socioeconomic Class*

Note: Multiple responses were allowed. Percentages are based on households reporting access to financing services and therefore do not sum to 100%.

These findings suggest that financial exclusion is not the primary barrier to investing in electrical fire safety. Instead, many low-income households are already participating in formal or semi-formal financial systems through MFIs, cooperatives, and other community-based lenders. Existing financing relationships provide a potential pathway for introducing electrical safety-focused financial products, particularly among households that have demonstrated both borrowing experience and willingness to invest in housing improvements.

The latent demand for safety financing

Financial inclusion and access are critical determinants of household's ability to invest in electrical system upgrades. A common assumption within the housing market is that low-income households are averse to spending on preventive maintenance for their homes. However, data reveals a latent demand: **64% of the respondents stated their willingness to access financial products specifically for electrical fire safety.**

This debunks the misconception that safety is viewed by the low-income sector as an unaffordable luxury. Instead, they recognized the catastrophic financial and personal risks of fire incidents, but the constraint remains to be the absence of flexible, structured financial mechanisms that match their cash-flow realities. When safety remains an "out-of-pocket, lump-sum" expense, it is perpetually deferred. The high-willingness to utilize financial products, which 55% of the households are already accessing, indicates that the market failure is not a lack of demand for fire-safety, but a lack of supply-side financial tools designed for low-income consumers.

The combination of existing financial access (55%) and willingness to borrow for fire safety improvements (64%) indicates an opportunity for financial service providers,

cooperatives, and MFIs to develop targeted products for electrical safety improvements. The market gap therefore lies less in consumer demand and more in the availability of accessible, affordable, and purpose-built financing solutions that enable households to spread the cost of safety investments over time.

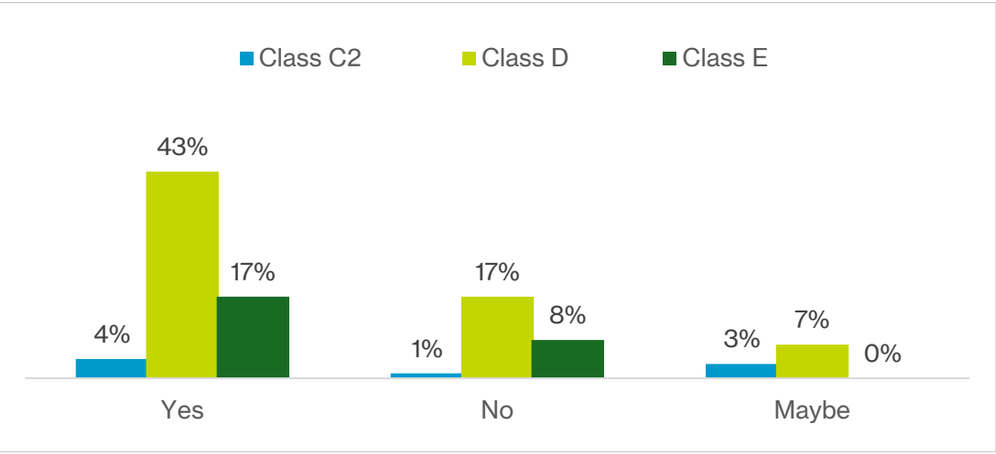


Figure 6: *Willingness to access financial products for fire safety by income class*

The barrier is not willingness to invest in fire - safety, but access to financing that aligns with household cash flow and financial behavior.

Preferred financial mechanisms

Data disaggregation reveals preferences for how households want to finance safety investments. With the options given, the respondents identified the following mechanisms (multiple responses were permitted):

1. **Microloans (45%):** Indicates that the households are comfortable in using small, structured credit lines to fund significant home electrical upgrades.
2. **Installment payment scheme through moneylenders (22%):** A favored transactional approach where cost of materials and labor is broken down into manageable, periodic payments rather than an upfront burden.
3. **Savings (17%):** A disciplined cash-based accumulation strategy, relying on personal or community savings pool to fund home improvements.
4. **Insurance (9%):** Least favored standalone mechanism for preventative investment, reflecting lack of familiarity with non-life micro-insurance products, which are typically viewed as compensation after a disaster rather than a tool for risk mitigation.

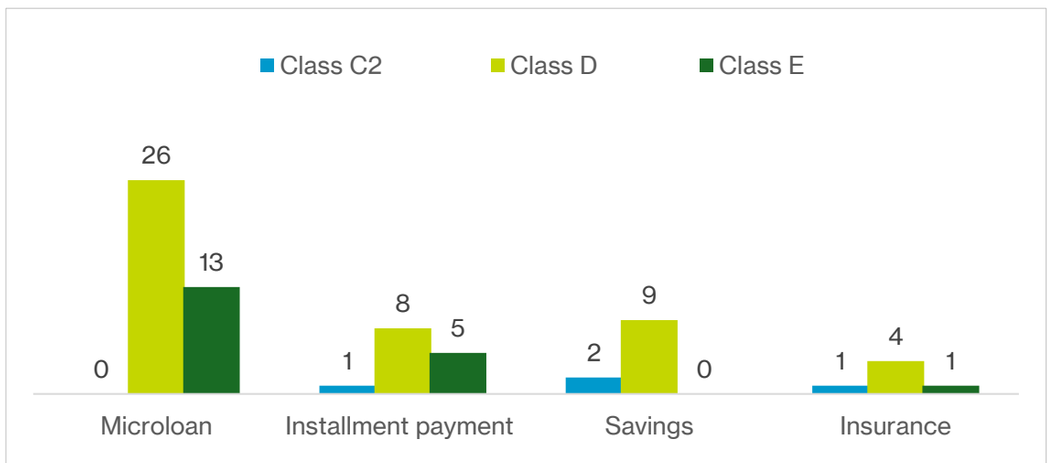


Figure 7: *Preferred financial product per income class (multiple answers)*

Socioeconomic disaggregation of financial willingness

As incomes rise, households tend to shift toward more formal financial products, though preferences vary by economic class.

Class C2: Households in this tier rely primarily on savings and insurance to prepare for fire-safety risks, reflecting a preference for non loan-based financial products. They view preparedness as risk mitigation and therefore depend on their own resources while also open to more sophisticated financial products, such as insurance.

Class D: Representing the bulk of the latent demand, these households take a varied approach to financial preparation, showing willingness to utilize formal and informal finance options including microloans, savings, installment schemes, insurance, and even community savings.

Class E: While facing felt budget limitations and exhibiting similar behaviors to Class D households, Class E households often lead toward consumption-based lending to financially prepare for risks.

The gendered dimension: Women as financial and safety decision makers

While men are usually stereotyped as the ones executing physical home repairs, household financial access and risk management are handled by women. **Data show that women are the decision-makers in 91% of households.**

This dynamic presents a market opportunity for microfinance institutions, cooperatives, and other financial service providers to develop products for women, such as micro-loans for home safety improvements, group lending schemes, and installment payment plans that can help overcome barriers to accessing finance.



The enabling environment and regulatory gaps

How regulatory blind spots allow electrical risks to accumulate

Residential electrical fire hazards persist in Lapu-Lapu City due to gaps in the oversight of existing homes and incremental construction. While permits and safety inspections are required before homes can be connected to electricity, regulatory oversight often ends after approval, leaving many subsequent electrical modifications unmonitored. Key informant interviews identified three regulatory blind spots that increase household exposure to electrical fire hazards:

1. **The permit and inspection loophole:** The Office of the Building Official's (OBO) mandate for building permit plans, which include electrical plans, approvals primarily to new constructions or major house improvements. Once permits are secured, OBO lacks the personnel capacity to continuously monitor existing residential structures. Annual or routine inspections conducted by the OBO are currently limited to commercial, industrial, and government buildings requiring periodic permits to operate. For households already connected to the electrical grid, routine oversight effectively ends after permit approval and occupancy clearance, as there is no requirement for subsequent inspections.
2. **Exemptions and accidental oversight:** Incremental housing developments, which characterize the construction patterns of Class C2, D, and E households, often bypass regulatory touchpoints entirely. Construction exemptions exist for low-cost repairs and additions under Php 15,000 (US$ 243) and those who make use of indigenous materials. In a key informant interview with OBO, monitoring and inspection of residential structures, especially incremental construction, happens entirely by happenstance, typically occurring only when inspection teams pass residential areas en route to commercial inspections or when a formal complaint is escalated through barangay or homeowners' association channels.
3. **The silent accumulation of electrical hazards in incremental homes:** As families expand their houses' floor area or increase appliance loads overtime, electrical modifications are integrated into older circuits without professional oversight. Because neither the OBO nor electric distribution companies track post-construction alterations inside the home, these incremental upgrades accumulate invisible hazards such as overextended circuits, unmonitored amperage increases, and improper splices, effectively elevating fire vulnerability.

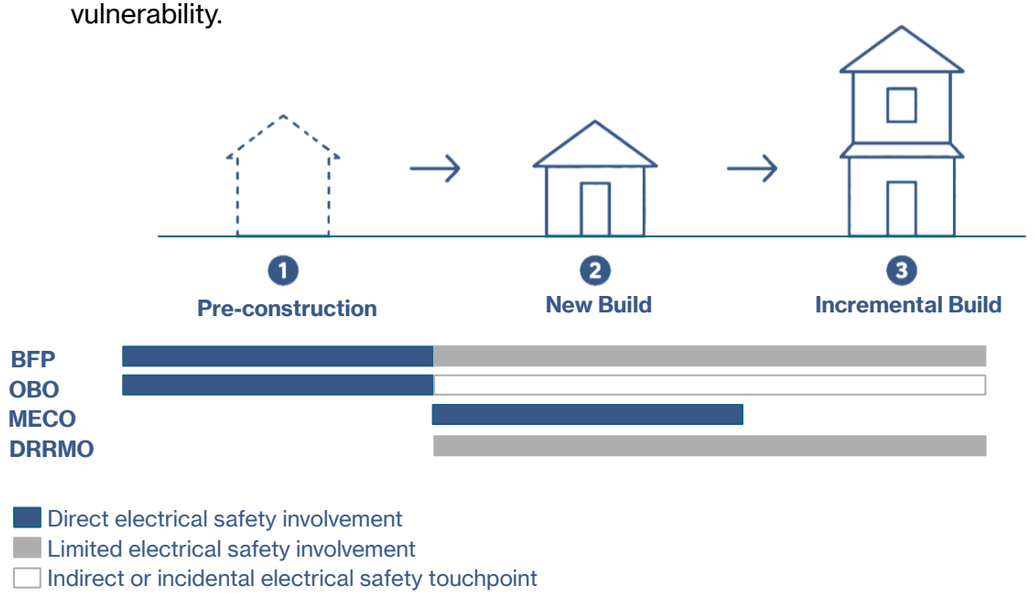


Figure 8: *Mapping of agency touchpoints for electrical fire safety across the housing journey.*



Photo provided by the Lapu-Lapu City DRRMO, 2026.

Households that expand their homes incrementally are highly vulnerable to fire hazards, as regulatory systems rarely monitor post-construction electrical modifications.

Institutional loophole and missing agency links

The vulnerability of low-income households is further compounded by a fragmented institutional ecosystem where key market and regulatory actors operate in silos:

The utility company boundary: Mactan Electric Company (MECO) maintains electrical standards for infrastructure up to the service drop and meter base, ensuring that only their accredited electricians can execute service connections. However, MECO's operational mandate stops at the load side. Once electricity enters the house, MECO exercises no control, oversight, or monitoring over internal electrical systems, material choices, or subsequent load additions made by the homeowner.

The Bureau of Fire Protection inspection limits: While BFP conducts household surveys and community visits through initiatives such as *Oplan Ligtas Pamayanan,* (Safe Community Program) typically surveying housing typologies and identifying high-risk barangays annually, these inspections do not specifically target electrical systems. The BFP lack the dedicated technical capacity and specialized personnel required to audit complex residential electrical systems, leaving electrical faults unexamined during routine safety sweeps.

Disaster Risk Reduction and Management Office programs' prevention gap: While local disaster response initiatives such as community drills, seminars, and distribution of fire extinguishers and installation of water tanks, are widely recognized for improving emergency preparedness and post-incident response, they remain largely reactive. These programs successfully build community resilience against active fires, but they need structured interventions focused on the prevention of root causes of fires.

Proliferation of substandard materials: With limited inter-agency coordination BFP, DTI, and LGUs allows uncertified and counterfeit electrical products to remain widely available. Because safety labels are poorly understood and easily forged, cost-conscious consumers and even electricians often purchase substandard materials that deteriorate quickly.

Recommendations

Local governments' approaches to residential fire safety commonly rely on a top-down model that is mismatched with the realities of urban growth in Lapu-Lapu City. Traditional regulatory frameworks, governed by centralized permitting and periodic compliance audits, operate on the assumption that housing development is a formal, lump-sum process. In practice, this model is failing.

The market assessment identified systemic constraints that increase household exposure to electrical fire hazards in Lapu-Lapu City:

1. **Supply Chain Gap** – Substandard and counterfeit electrical materials remain widely accessible in the market, while affordability often takes precedence over quality and safety considerations among households, retailers, and electricians.
2. **Labor Gap** – A shortage of qualified electrical service providers leaves only a limited number of MECO-accredited electricians serving more than 129,000 households. This drives widespread reliance on informal electricians who fulfill critical market demand but often operate with limited quality assurance, oversight, and access to continuous skills development.
3. **Monitoring Gap in Existing Houses** – Oversight of residential electrical systems largely ends once a household is connected to the grid. As households undergo repairs, expansions, and incremental upgrades over time, potential hazards can accumulate without regular inspection or monitoring.
4. **Awareness Gap** – While households commonly practice visible fire safety measures, many remain unaware of underlying electrical risks. Limited understanding of electrical systems and safe installation practices can result in household improvements that unintentionally introduce hidden fire hazards.

Together, these constraints create an environment where unsafe materials, unregulated electrical work, undetected hazards, and knowledge gaps reinforce one another, increasing the risk of electrical-related fires, particularly among low-income households.

The recommendations that follow recognize that residential electrical fire safety is a market systems challenge that cannot be addressed by government action alone. Effective implementation will require coordinated efforts among local government agencies, utility providers, electricians, suppliers, financial institutions, civil society organizations, training institutions, and community stakeholders. Depending on their mandates and resources, these actors may serve as conveners, coordinators, enablers, or implementers of interventions. The Local Government of Lapu-Lapu City and its partners may pursue these recommendations either as a phased strategy or through integrated initiatives that strengthen the overall electrical fire safety ecosystem.

Establish local electrical safety monitoring and strengthen workforce capacity

To break the cycle, Lapu-Lapu City local government unit must adopt a robust market systems approach through mobilizing the existing labor market and embedding institutional accountability into local governance:

- **Barangay-level professional monitoring**: Integrate electrical safety into local governance by assigning or retaining a professional electrician in each barangay to conduct routine household inspections and provide technical oversight for existing homes, helping address current regulatory monitoring gaps.
- **City recognition, endorsement, and assurance:** To systematically expand the pool of qualified electrical workers, the city must officially recognize and endorse trained electricians, creating a market assurance that electricians working on residential electrical systems are vetted, competent, and accountable.

- **Inspected workmanship:** All residential electrical installations and alterations must be inspected by the barangay-paid electrician, aligning labor incentives with fire-safety standards.
- **Institutionalized training pathways:** To increase the number of qualified electricians, training programs must be provided annually through local-government initiatives or partnerships with recognized learning centers or alternative learning providers.

Lapu-Lapu City hosts approximately 180 formal electricians (including MECO's accredited roster) alongside an estimate of 406 electricians who operate without formal training or regulation[1]. Bringing these informal workers through structured training, city recognition, and barangay deployment turns a hidden vulnerability into an organized and regulated workforce that will help protect the city from electrical-related fires.

From Program to Policy: Institutionalizing Electrical Safety

Embedding these mechanisms into local legislation will help ensure continuity beyond individual projects, political administrations, or funding cycles, while creating clear roles, responsibilities, and accountability among government agencies, barangays, and electrical service providers.

Supply-side retail controls and multi-agency linkage

Market systems must address retail level compliance to purge counterfeit and uncertified electrical materials from the market. This requires institutionalizing direct coordination between agencies:

1. **The BFP-DTI linkage:** To effectively curb the presence of substandard and counterfeit electrical materials in local hardware stores, the city must establish a formalized operational linkage between Bureau of Fire Protection-Lapu-Lapu City and the Department of Trade and Industry Region 7. While DTI holds the mandate for product standards and market monitoring, its enforcement reach is limited; linking it with the BFP's local presence allows joint retail inspections, active point-of-sale verification of standard safety marks such as PS marks and ICC stickers, and strict penalties for merchants selling uncertified products.
2. **The trusted seal for hardware stores:** As conceptualized in the multi-stakeholder workshop, this inter-agency mechanism can be operationalized through a recognized certification scheme led by DTI, BFP, and industry bodies. Hardware stores that exclusively stock pre-screened, compliant electrical materials are designated as trusted safety gatekeepers.
3. **Incentivizing compliance via green-lane status:** To make compliance commercially attractive, the local government can grant participating, certified hardware stores "Green-Lane" status for annual safety inspections and business permit renewals, streamlining bureaucratic processes for businesses that actively protect the community from fire hazards.

Stimulate demand for electrical safety through awareness campaigns

While existing fire safety programs implemented by the Bureau of Fire Protection and the Disaster Risk Reduction and Management Office have strengthened emergency preparedness and response, there is an opportunity to further reduce residential fire incidents by increasing awareness of electrical fire hazards and promoting safer household practices. As data shows, many households rely on affordability, peer recommendations, and informal advice when making decisions about electrical materials and services. Strengthening consumer awareness can help households better understand the risks associated with substandard materials,

[1] The figures presented are based on a rapid market scan conducted by the Terwilliger Center across 30 barangays in Lapu-Lapu City in August 2026.

unsafe installation practices, and uncertified electrical work, while increasing demand for safer products and services throughout the market system.

- **Integrate electrical safety into existing BFP and DRRMO programs** through community assemblies, social media campaigns, and barangay training campaigns, with a stronger focus on electrical fire prevention, common household electrical hazards, and safe electrical practices.
- **Establish a city electrical safety information campaign** that develops and disseminates consumer education materials on electrical hazards, certified electrical products, safe installation practices, preventive maintenance, and the benefits of hiring trained electricians, with content designed to drive behavior change and safer household purchasing decisions.

By improving household awareness and decision-making, these initiatives can stimulate demand for quality electrical materials and qualified electrical services. As consumers increasingly prioritize safety alongside affordability, market actors will have stronger incentives to supply compliant products, promote safer practices, and compete on quality rather than cost alone.

Conclusion

Electrical fire risk in low-income households is not solely the result of individual behavior, but of systemic failures across the electrical safety market system that leave electrical quality and safety unrewarded, reinforcing risky practices.

Low-income households, especially those who build incrementally, are trapped in a cycle of poverty due to fire risks that increase as they move up the income ladder. Existing regulatory systems provide limited protection for households with established homes, relying primarily on awareness campaigns and community fire prevention trainings.

The components of an electrical fire-safe city are already present in Lapu-Lapu City. Electrical materials are widely available, formal and informal electricians serve communities, information access points exist, low-income households demonstrate a willingness to invest in electrical fire safety, financial services are accessible, and both the local government and civil society organizations have existing fire safety programs.

Despite these strengths, significant systemic constraints remain. Regulatory oversight is weak, particularly for existing and incrementally built homes where electrical systems often go unchecked. Households are frequently offered cost-efficient materials and services by default, informal electricians are more accessible than formally trained ones but are their work is mostly unchecked, financial services are not tailored to electrical fire safety investments, and existing programs and partnerships focus more on response than prevention, reinforcing electrical fire hazards.

These findings suggest that electrical fire risks persist not because households are unwilling to invest in safety, but because the market system does not consistently reward safe behaviors, quality products, qualified services, or preventive investments.

Despite these constraints, the assessment identified strong foundations for change, including existing financing access and willingness, active community networks, local government interest, established fire safety programs, and a pool of informal electricians that can be integrated into a safer and more accountable workforce.

Reducing residential electrical fires in Lapu-Lapu City requires stronger local oversight, a more capable electrical workforce, greater demand for safer products and services, and sustained policy support. Achieving this shift from fire response to fire prevention will help protect lives, homes, and household assets. Electrical safety is not solely a regulatory responsibility, but a shared challenge that requires coordinated action from households, market actors, and government.

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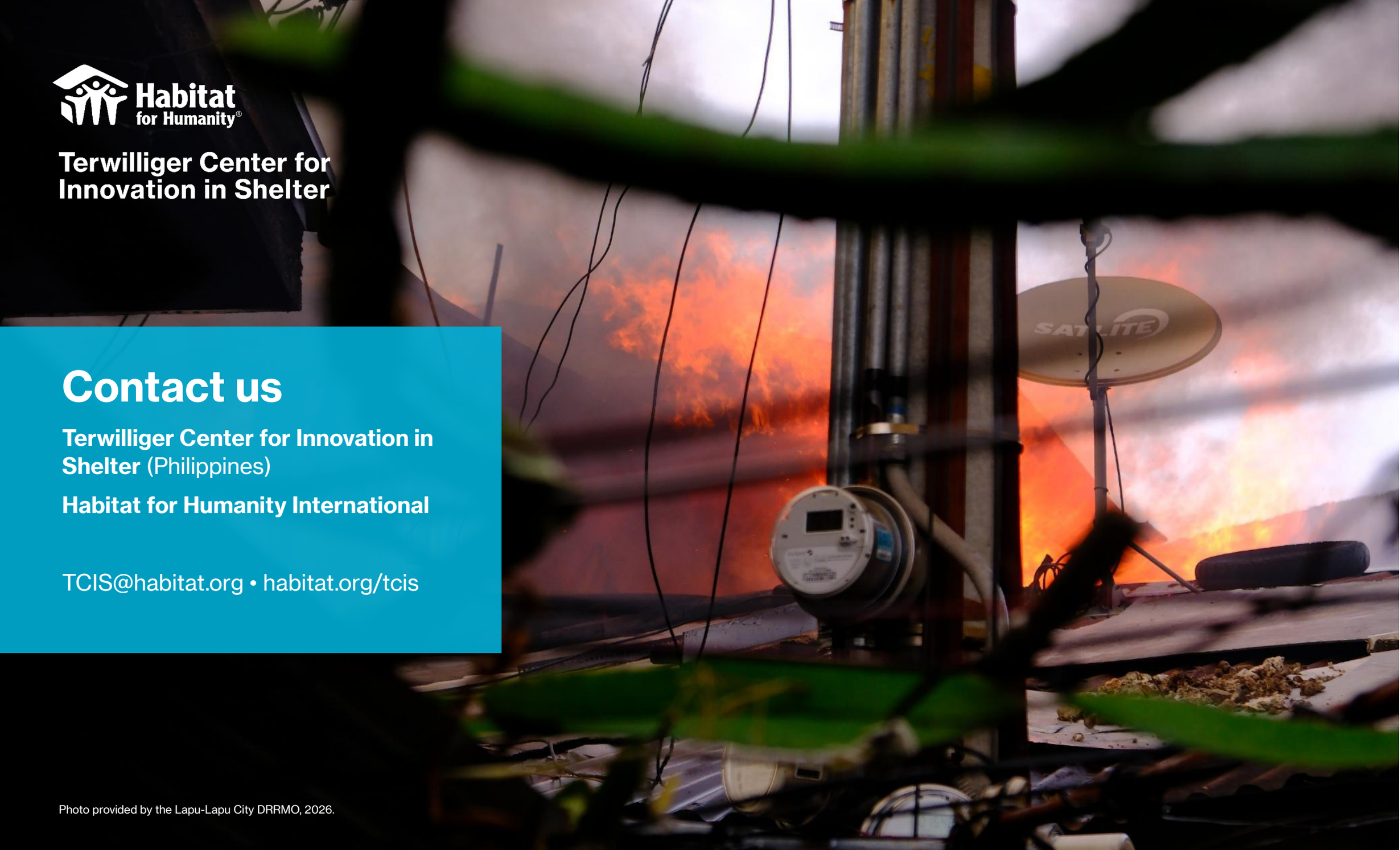


Photo provided by the Lapu-Lapu City DRRMO, 2026.