

Fire Shield Foundation Building Fire-Resilient Communities



FIRE SHIELD

PREVENCIÓN • PROTECCIÓN • RESILIENCIA

A FULLY NONPROFIT ORGANIZATION

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**501(c)(3)
PUBLIC CHARITY**

EFFECTIVE DATE
MAY 29, 2026

A FULLY NONPROFIT ORGANIZATION
SERVING COMMUNITIES. BUILDING SAFER FUTURES.



PREVENTION

Educate. Empower. Prepare.



PROTECTION

Support. Strengthen. Safeguard.



RESILIENCE

Respond. Recover. Rebuild.

Who We Are

Fire Shield Foundation is a U.S.-based **501(c)(3) public charity** dedicated to strengthening community resilience against fire through prevention, infrastructure improvements, and emergency response support.

Working alongside fire departments, governments, universities, nonprofit organizations, and community leaders, we develop practical, research-driven solutions that reduce fire risk, improve emergency preparedness, and help protect lives, property, and livelihoods in vulnerable communities around the world.

Our Mission

To strengthen community fire resilience by working with local partners to improve prevention, enhance infrastructure, and support response capabilities in high-risk communities through education, research, collaboration, and sustainable implementation.

Our Vision

A world where every community—regardless of geography or economic conditions—has the knowledge, infrastructure, and emergency response capabilities needed to prevent devastating fires, protect lives, and recover more quickly from disasters.

Our Three Pillars

Prevention

- Reduce fire risk through education, outreach, hazard identification, and community engagement.

Infrastructure

- Improve the physical environment by enhancing access, water supply, fire-resistant construction, and community planning.

Response

- Strengthen emergency preparedness through training, pre-planning, equipment, technology, and coordinated response systems.

Our Approach

- **Research • Collaboration • Innovation • Community Partnership • Sustainable Solutions**

Fire Doesn't Discriminate.

Vulnerable Communities Pay the Highest Price.

Every year, thousands of fires devastate communities around the world. In many high-risk areas, rapid urban growth, limited infrastructure, overcrowded housing, and constrained emergency access allow small fires to become large-scale disasters.

While firefighters respond heroically, many communities remain vulnerable because prevention, infrastructure, and preparedness have not kept pace with their growth.

Fire Shield Foundation was created to help close that gap.

The Reality

- Growing informal settlements increase fire risk.
- Limited road access delays emergency response.
- Inadequate water supply complicates firefighting operations.
- Unsafe electrical systems and open-flame cooking remain leading causes of residential fires.
- Many communities lack fire prevention education and emergency preparedness programs.

Matters

- Communities should not have to wait for a tragedy before action is taken. Fire Shield believes resilience begins **before the first emergency call** through planning, education, infrastructure, and partnership.

Why It

Understanding Informal Communities

What Are Informal Communities?

Informal communities (also known as informal settlements) are neighborhoods that have developed outside of formal urban planning processes. Homes are often built incrementally with limited access to public infrastructure, creating unique challenges for fire prevention and emergency response.

• Common Characteristics

- 🔥 High housing density
- ⚡ Informal electrical systems
- 🔥 Open-flame cooking
- 🚧 Narrow or inaccessible roads
- 💧 Limited water supply
- 🧱 Mixed construction materials
- 📈 Rapid population growth
- 🚒 Limited emergency access

Why This Matters

These conditions can allow a small residential fire to spread rapidly, making prevention, infrastructure improvements, and coordinated emergency response essential to protecting lives and property.

A Global Vision Begins with a Local Pilot

Fire Shield Foundation selected **Medellín, Colombia**, as the location for its pilot program because the city offers a unique opportunity to develop, test, and refine innovative fire resilience strategies within high-risk communities.

Medellín is internationally recognized for its transformation through innovation, urban planning, and community engagement. At the same time, many hillside neighborhoods continue to face challenges associated with rapid urban growth, limited infrastructure, difficult emergency access, and elevated fire risk.

By working collaboratively with local communities, firefighters, universities, government agencies, and nonprofit organizations, Fire Shield is building a practical model that can be adapted and implemented in vulnerable communities throughout Latin America and around the world.



Why Medellín?

✓ Strong Fire Service

An experienced and respected fire department committed to protecting the community.

✓ Research Partnerships

Collaboration with universities and researchers to ensure decisions are driven by data and evidence.

✓ High-Risk Communities

Communities where targeted prevention, infrastructure improvements, and emergency planning can have a measurable impact.

✓ Innovation

A city recognized internationally for solving complex urban challenges through collaboration and innovation.

✓ Scalable Model

Solutions developed in Medellín are intended to become a blueprint for implementation in other communities worldwide.

"Medellín is not our destination—it is our starting point."

Fire Shield in Numbers

- **2,540** structural fires analyzed (2011–2020, Colombia)
- **432** fires occurred in informal settlements
 - **22,563** people affected
 - **3,489** homes destroyed
 - **35** lives lost
 - **275** injuries
- **42%** of known fires linked to electrical causes
- **26%** linked to cooking-related causes

Evidence- Based Foundation

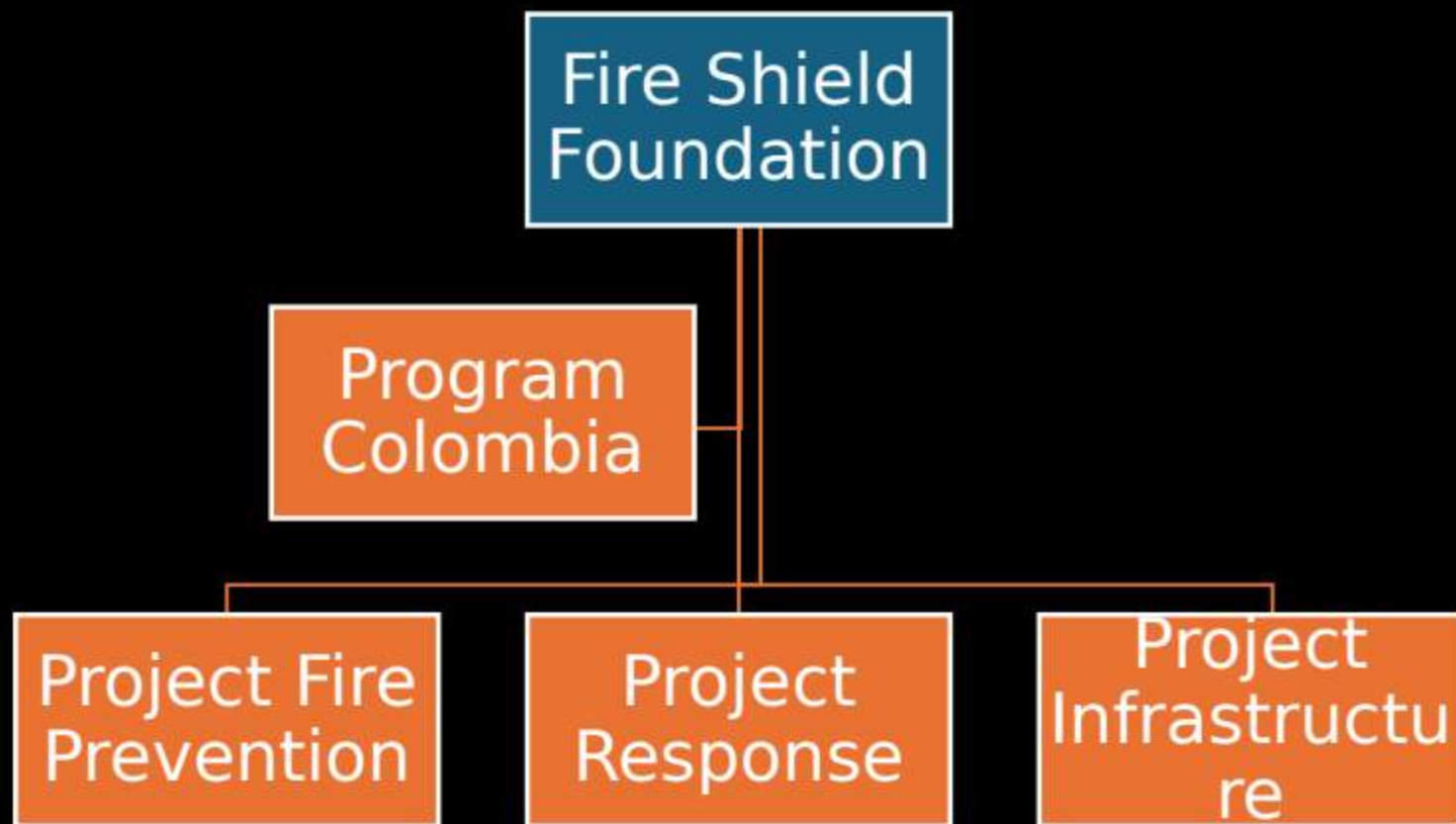
Every Fire Shield initiative is guided by published research, operational fire service experience, field assessments, and collaboration with universities and community partners. Before developing solutions, we work to understand the root causes of fire risk and identify evidence-based strategies that improve community resilience.



Research & Technical References

Research / Source	Contribution to Fire Shield
Kendil Fire Research Project	Foundational research examining fire behavior, ignition, and fire spread in informal settlements. This work helped validate the need for integrated prevention, infrastructure, and response strategies and influenced the development of the Fire Shield framework.
Diego Flórez Trujillo (2024) - Fire Risk in Informal Settlements	Comprehensive analysis of structural fires in Colombian informal settlements, identifying leading causes, community vulnerabilities, and evidence-based mitigation strategies.
Westminster University Graduate Research	Ongoing graduate research supporting implementation, evaluation, GIS analysis, and development of scalable community fire resilience models.
National Fire Protection Association (NFPA)	Internationally recognized standards and best practices for fire prevention, life safety, community risk reduction, and emergency response.
U.S. Fire Administration (USFA)	Community Risk Reduction (CRR) methodologies, firefighter safety guidance, and public education resources.
International Association of Fire Chiefs (IAFC)	Leadership principles, emergency management practices, and operational guidance for modern fire services.
Community Field Assessments	Local mapping, stakeholder engagement, and community risk assessments conducted within pilot communities to validate research findings and guide implementation.
Operational Fire Service Experience	Practical knowledge gained through years of frontline firefighting, emergency medical services, hazardous materials response, training, and incident management, informing program design and implementation.

The Fire Shield Framework



Pillar One: Prevention

Topics could include:

- Public education
- Schools
- Smoke detector initiatives
- Home safety inspections
- Electrical safety
- Cooking safety
- Community outreach
- Fire prevention campaigns
- Fire Extinguisher initiatives
- Community Risk Reduction (CRR)

Pillar Two: Infrastructure

Include

- Community mapping
- GIS
- Access roads
- Water supply
- Fire breaks
- Fire-resistant construction
- Building spacing
- Emergency access
- Community planning
- Hydraform brick technology
- Hazard mitigation

Pillar Three: Response

Include

- Incident pre-planning
- Community response plans
- Firefighter training
- Equipment recommendations
- Medical response
- Emergency communications
- Technology integration
- Drone support
- FAST Teams
- Mutual aid coordination

Implementati on



Fire Shield 30 • 30

- 30 Initiative

Three Measurable Objectives. One Safer Future.

Fire Shield Foundation is committed to delivering measurable improvements in community fire resilience. Through evidence-based prevention, infrastructure enhancements, and strengthened emergency response capabilities, our long-term objective is to achieve three transformative outcomes in high-risk communities.





30% Faster Emergency Response

Reduce overall emergency response times by 30%

- Through:
 - Community risk mapping
 - Improved emergency access
 - Pre-incident planning
 - Water supply improvements
 - GIS and data-driven planning
 - Stronger coordination between responders and communities
-



🔥 30% Reduction in Fire Spread

**Reduce the rate and severity of
fire spread by 30%**

Through:

- Fire prevention education
 - Electrical safety initiatives
 - Safer cooking practices
 - Fire-resistant construction techniques
 - Building spacing improvements
 - Fire breaks and hazard mitigation
-



♥ 30%
Reduction
in Fire-
Related
Loss of Life

Reduce fire-related fatalities in informal settlements by 30%

Through:

- Smoke detection initiatives
- Community preparedness
- Fire safety education
- Early warning systems
- Faster emergency response
- Enhanced firefighter capabilities

Join the Mission

Together, We Can Build Fire-Resilient Communities

Fire Shield Foundation believes that every community deserves the opportunity to live safer, prepare better, and recover stronger from the threat of fire.

Through collaboration, research, innovation, and local partnerships, we are building a model that can transform how communities prevent fires, strengthen infrastructure, and improve emergency response—not only in Medellín, but in vulnerable communities around the world.

- **How You Can Partner With Fire Shield**

- **Partner With Us**

- Collaborate on pilot projects and community initiatives.

- **Support Research**

- Advance fire resilience through academic and technical partnerships.

- **Strengthen Fire Services**

- Share expertise, training, and operational best practices.

- **Expand the Mission**

- Help bring the Fire Shield model to new communities and countries.

- **Invest in Safer Communities**

Support sustainable programs that deliver measurable, lasting impact.

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