

CASE STUDY

JAMAICA 2014-2019 / DISASTER RISK REDUCTION

CONTEXT / SETTLEMENT

SHELTER TYPE

SUPPORT METHODS

CRISIS

Disaster Risk Reduction in Portmore, Jamaica

PROJECT LOCATIONS

Naggo Head, Gregory Park and Newlands informal settlements in Portmore, St Catherine

POPULATION IN TARGET AREAS

260,000 individuals (As of 2004. 25,000 in Naggo Head, 23,000 in Gregory Park, and 212,000 in Newlands)

PEOPLE SUPPORTED BY THE PROJECT

6,386 individuals with Shelter and WASH support.
1,000 HHs with land tenure regularization support.

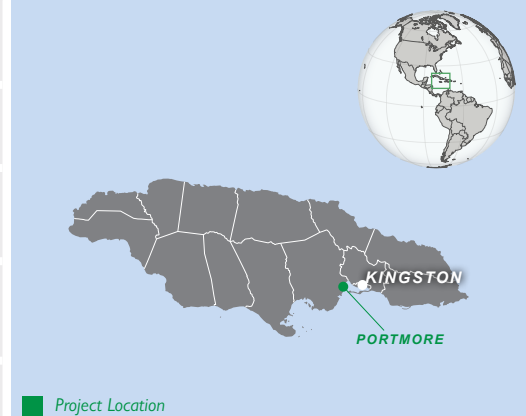
PROJECT OUTPUTS

100 people trained in carpentry/masonry and DRR.
250 houses retrofitted.
300 cash grants for housing repair.
Awareness campaign on hazard risk mitigation and emergency preparedness.
Training on Healthy Housing, Safer Housing.
Other outputs: 21 demonstration toilets built | 1 community resource centre built | 12 microprojects | 3 informal neighbourhoods regularized their land use | 3 community redevelopment plans | 500 households applied for land tenure regularization | 1 fast-track process for regularizing land tenure developed.

DIRECT COST

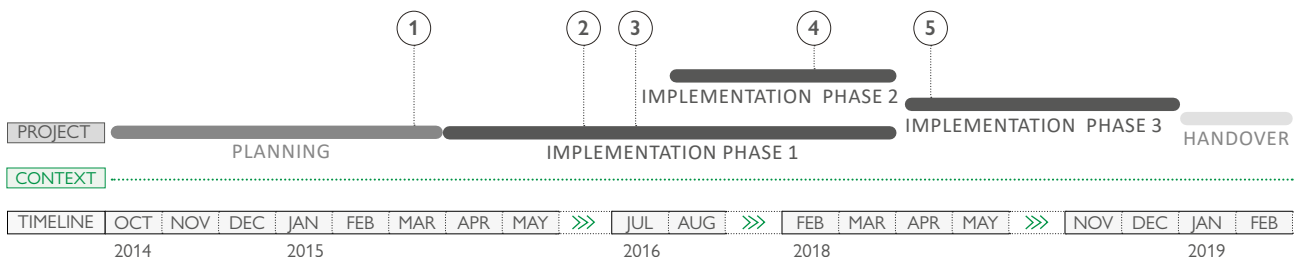
Varied, based on the following range:

USD 100 for light repairs
USD 2,000 for wall and roof repairs.



PROJECT SUMMARY

This innovative four-year DRR program focused on vulnerable informal settlements, integrating awareness, physical improvements and legal support with community-driven initiatives to enhance resilience against hurricanes and flash floods. The program used a neighborhood-based approach, involving community mapping to identify vulnerabilities in housing, water, sanitation and urban planning, alongside capacity-building programs. Secure land tenure was emphasized as crucial for long-term resilience. Designed as a pilot, the project aimed to create a replicable model for slum communities throughout Jamaica and the Caribbean.



Phase 1: Community Mapping, Shelter and Basic Services.

Phase 2: Land tenure at neighbourhood level.

Phase 3: Land tenure at national level.

- ① **Mar 2015:** Registration of the NGO in the country allowing operations to start, after five months.
- ② **Jun 2016:** Mid-term evaluation flagged poor quality and delays in Shelter and WASH pilot projects.
- ③ **Jul 2016:** The project was extended to also cover land tenure issues within the neighborhood.
- ④ **Feb 2018:** The land tenure component expands its scope to change policies at national level.
- ⑤ **Apr 2018:** Final evaluation of phases 1 and 2 confirmed issues were resolved and implementation was successful.



The project promoted safe practices for hurricane resilience through various means, including the construction of model houses also used for training.



The program was implemented across dense neighborhoods in Portmore.



The targeted informal settlements were underserved and exposed to hazards.

CONTEXT

Many of Jamaica's urban and peri-urban residents live in fast-growing informal settlements shaped by poverty, limited affordable housing and rapid urbanization. These dense neighborhoods often lack basic infrastructure and secure tenure, while homes are built with substandard materials. Exposure to hurricanes, flash floods and seismic events is compounded by poor construction quality. Land management and formalization are sensitive, with around 40 per cent of occupied land lacking formal registration. This increases insecurity, discourages household investment, limits infrastructure development and raises risks of eviction and disaster impacts.

NATIONAL HOUSING SCENARIO

Despite commitments to adequate, affordable and secure housing by 2030, weak enforcement of land-use designations leaves overcrowded, under-served and hazard-exposed neighborhoods highly vulnerable. Land-use management and formalization remain politically sensitive, especially where parcels are unmapped or unregistered. Policy and legislative reforms are under review, but enforcement of a modernized national building code remains limited.



The first phase of the program involved participatory mapping of the neighborhoods, including measurement of road widths for future planning.

PROGRAM PHASES

The program tested Shelter and Settlements and WASH interventions to reduce disaster risk in informal peri-urban settlements and inform more inclusive policies for vulnerable communities in the Caribbean.

- **Phase 1.** Participatory and digital mapping identified services, gaps, vulnerabilities and coping capacities. The program aimed to improve housing resilience through construction training, model retrofits and houses, a context-adapted hurricane-resilient housing manual, awareness on unsafe structures and promotion of low-cost self-retrofitting. It also supported community-prioritized micro-projects, water, sanitation and hygiene (WASH) improvements and emergency preparedness through training, awareness and response plans.
- **Phase 2.** Building on the participatory assessments, the program integrated land tenure security with settlement physical planning (community redevelopment plans), recognizing insecure tenure as a driver of risk. Plans were developed with a national university and included proposals such as widening streets, reserving land for buildings and public spaces, and planning basic service networks.
- **Phase 3.** Encouraged by the proven potential of tenure security to drive resilience, the donor extended the grant to refine a streamlined "fast track" land regularization process and collaborate on national policy.



Participatory planning was also used to identify hazards, including flooding and hurricane related risks, map vulnerable areas and propose solutions.

PROJECT IMPLEMENTATION

The project began with settlement assessments, household surveys and geo-referenced mapping. The Participatory Approach for Safe Shelter Awareness (PASSA) supported community risk assessment and action planning, identifying insecure tenure as a key barrier. Early model retrofits were weakened by limited technical guidance for informal construction practices. The team responded with a contextualized manual and training program, enabling more scalable rehabilitation works. Vocational training in masonry and carpentry upskilled community members, who were then recruited for construction through a learning-by-doing approach.

To deliver shelter repairs efficiently, the project pivoted from centrally purchased materials and project-run labor (an approach that created heavy administrative workload for limited output) to a voucher-based system in partnership with a local hardware store. Coupons were distributed directly to households; the vendor reported that many families co-invested by adding their own funds to achieve more substantial improvements.

In WASH, the team initially partnered with a national NGO, then transitioned to direct implementation to address capacity gaps. Elevated model latrines were installed to avoid flood inundation; a hygiene awareness campaign targeted healthy practices and reduction of open defecation.

The program also supported community-selected resilience micro-projects, including warning signs, emergency shelter improvements and drainage maintenance, and rehabilitated two community resource centers. Prioritization progressed slowly, making final implementation challenging, but helped build local ownership. As donor funding increased, the scope expanded. Plans to outsource tenure activities to a university were dropped due to cost; internal capacity was developed instead, while the university remained engaged on redevelopment planning.



The program also included a WASH component, including the construction of elevated flood-resilient latrines, which were implemented through contractors.

TARGETING

The selection of neighborhoods was based on exposure to natural hazards, population density and socioeconomic and physical vulnerability, with the local council involved. Household selection combined socioeconomic vulnerability and habitability criteria; prioritization was community-led and facilitated by the implementing organization.

COMMUNITY ENGAGEMENT

The project used a community-centred approach focused on capacity, empowerment and advocacy. Participation covered needs assessment, mapping and implementation, with community members taking leadership and advocacy roles. The neighborhood approach brought together local government, communities and nearby private actors through regular meetings. Volunteer groups in the three neighborhoods helped maintain dialogue and ownership, while youth documentation in the final phase showcased community perspectives and impact.

COORDINATION

- **Inter-agency collaboration.** The neighborhood approach fostered cooperation among Portmore municipal departments and national urban development agencies.
- **Public-private partnerships.** The program encouraged government and private sector partnerships to leverage resources and expertise.
- **Community-based organizations** played a critical coordination and implementation role, acting as intermediaries between the project and residents to facilitate communication and trust.
- **Advocacy strategy.** A standing advisory committee of government agencies, NGOs, universities and community representatives supported workshops and policy dialogue, with guidelines, settlement rehabilitation plans and the fast-track land methodology aimed at long-term systemic change.



In its subsequent phases, the program worked with multiple stakeholders, including CBOs and Universities, towards neighborhood redevelopment plans.



Model houses adopted hurricane-resilient features such as metal straps.



Diagonal bracing was one of the key low-cost features emphasized.

DISASTER RISK REDUCTION

The program aimed to strengthen resilience to high winds and flash floods through infrastructure improvements, safer shelters, neighborhood formalization and alignment with municipal redevelopment plans. Low-cost timber retrofitting measures included continuous load paths, wall and roof triangulation, timber protection against sun and insects, and improved roof nailing patterns.

LAND TENURE SECURITY

Participatory risk assessment identified tenure security as central to disaster resilience. The project combined land titling with community redevelopment planning, addressing risks linked to insecure ownership. Existing procedures were slow and costly, so collaboration with national agencies helped develop a faster and more affordable process.

An extension of the program refined a fast-track land process that shortened regularization to about 12–14 months at a cost of around USD 648 per family. The methodology included resident-led data collection, aerial mapping, application preparation, legal support through community hubs, agency coordination and title distribution.

More than 500 Portmore households applied for title deeds, strengthening security and encouraging resilient home investment. The approach reduced costs and offered a replicable model for Jamaica and other Caribbean contexts.



The correct use of roofing nails was implemented to prevent wind uplift.

MAIN CHALLENGES

- Obtaining government registration to operate took longer than expected, delaying the start of activities.
- Entering communities was initially difficult due to a history of unfulfilled promises from other agencies; partnering with a local NGO eased entry and, as visible progress accumulated, participation grew.
- A holistic program required specialized expertise across many disciplines. The plan to outsource activities proved less effective than anticipated; the team shifted to direct implementation, recruiting international experts where local capacity and timelines did not align.
- Local expertise in low-cost retrofitting was limited; a contextualized manual and “learning by doing” program for community builders addressed this gap.
- The socio-cultural context required careful transfer of international experience; a Caribbean national with extensive international background and strong public relations was appointed as project manager, and staffing favored partners and personnel receptive to innovation.
- Some activities experienced delays; a no-cost extension was obtained, and organizational funds were used to bridge administrative costs to ensure continuity.



Galvanised wire was used to secure roofing elements and as cross bracing.

OUTCOMES AND WIDER IMPACTS

HOUSING

- **Technical knowledge appropriation.** The 2018 final evaluation found that training laid the foundation for improved housing stock, and a 2024 post-project evaluation confirmed sustained impact. Community members showed greater awareness of technical standards and continued applying resilient techniques. Trained builders also supported neighbors, spreading practical knowledge.
- **Model retrofitted houses.** Five years after completion, Hurricane Beryl provided a stress test: no damage was reported to the retrofitted units. A structural engineer in the five-year post-evaluation confirmed the effectiveness of the low-cost improvements. The Jamaica shelter cluster coordination team observed these results and strongly recommended replication of the retrofitting techniques.
- **Livelihood opportunities.** The training component catalyzed external labor-market mobility. Most trained builders secured long-term private-sector employment, accelerated by high demand for masons during the Kingston Harbour infrastructure expansion.
- **Hurricane-resistant timber houses guide.** Based on Caribbean timber traditions, the guide was widely disseminated, adapted and translated, including in the Dominican Republic and Puerto Rico. It later served as an operational reference for communities and responders after disasters in Jamaica.

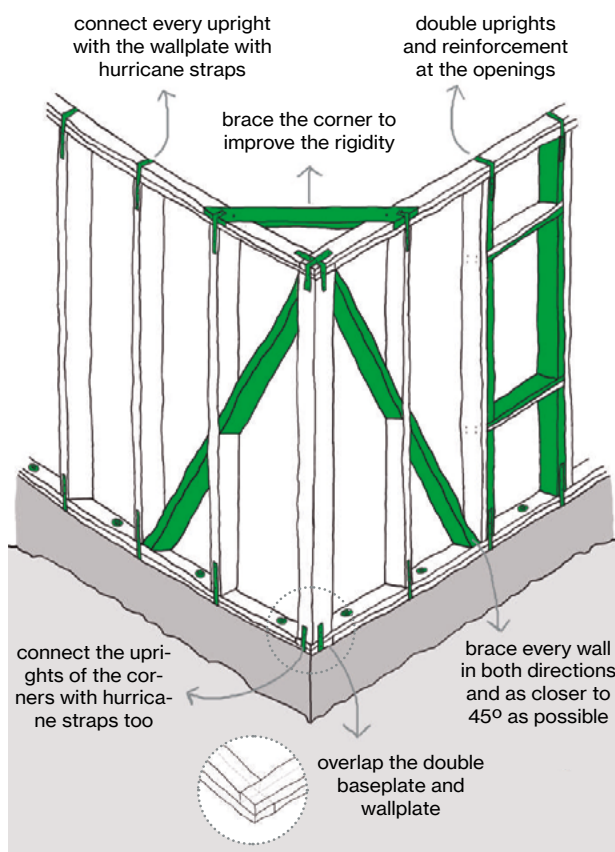
LAND REGULARIZATION AND SECURE TENURE

- **The neighborhood-level formalization approach improved prospects for infrastructure investment;** in one community, heavy machinery arrived within months to widen streets.
- **A fast-track, low-cost regularization procedure was developed.** Although a cadastre error prevented titles from being completed during the project, the methodology was validated and later used by a social enterprise to title 300 plots nearby. The project's piloting and advocacy coincided with the government's launch of a Systematic Land Registration program.

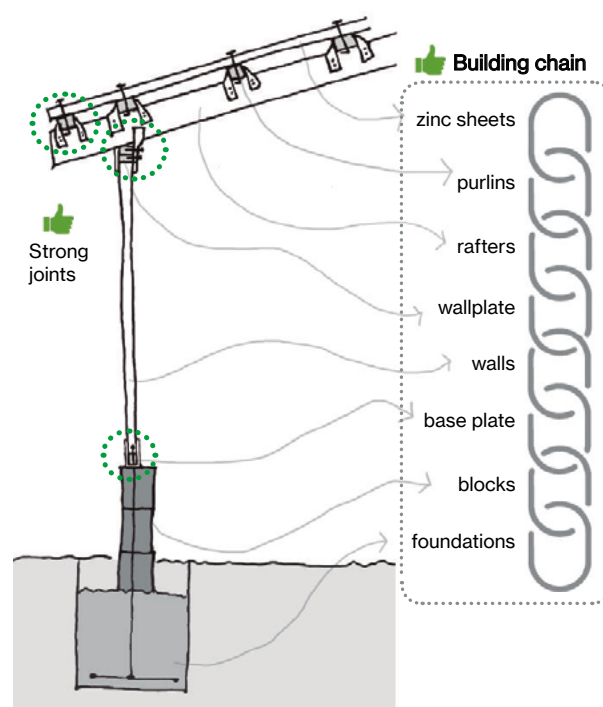
CAPACITY BUILDING

- **Local staff built significant expertise,** and many remained involved with project communities or continued in the development and humanitarian sector. Tenure specialists established a social enterprise that continues community services and government consulting.
- **Learning-by-doing** strengthened volunteer groups, leadership, pride and ownership.

How to brace the corners



Every element of our house must be linked to the others as a **CHAIN**, so if the wind comes, all the pieces of the house will resist together.



The hurricane-resistant timber house guide developed as part of this program included a comprehensive set of illustrations and guidance notes for low-cost building and retrofitting interventions. It was widely disseminated in the region.

STRENGTHS, WEAKNESSES AND LESSONS LEARNED

STRENGTHS

- ✓ **The holistic neighborhood approach anchored interventions in community realities.** A place-based, multi-sector strategy addressed housing, WASH, settlement planning and HLP together. Grounding decisions in local socioeconomic and physical conditions supported durable gains: tenure processes were advanced, resilient construction practices introduced and infrastructure planning aligned with risk profiles.
- ✓ **Participatory community approach.** Engagement was fully bottom-up, through street and community meetings, joint prioritization and “visioning”, and relied on local knowledge for beneficiary selection. The program also maximized local engagement in delivery, employing community members wherever possible; this strengthened ownership and the continuity of safe-building practices.
- ✓ **Engaging multiple stakeholders.** The project brought together academia, local government, politicians, national agencies, NGOs and private businesses. This strengthened institutional buy-in and resource mobilization. University leadership in Naggo Head redevelopment planning continued to inform national advocacy five years later.

WEAKNESSES

- ✗ **Limited country presence.** The entity’s limited prior presence and a previously closed affiliate led to delays registering to operate, building networks and understanding the context. Recruiting a new team was challenging, and once the project ended, lack of additional funding constrained follow-up with communities and government partners.
- ✗ **Regional support adjustment.** As the initiative scaled, the regional HQ moved from light-touch support to a more hands-on role to help meet technical standards and timelines. This required adjustment by the local team, but ultimately strengthened delivery.



FURTHER READING ON SHELTER PROJECTS

On projects in the Caribbean: [SP 2010 / A.3 GRENADA: SP 13-14 / A.4 CUBA and A.5 DOMINICAN REPUBLIC / 2012.](#)

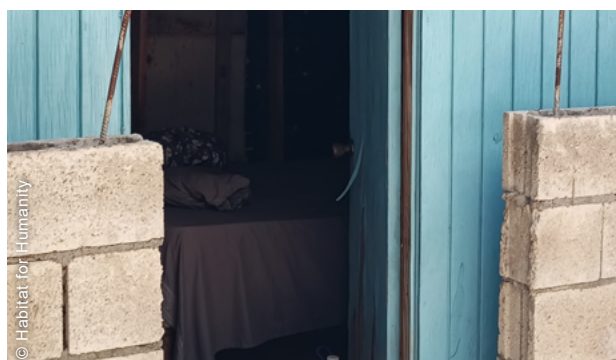
On DRR and PASSA: [SP 11-12 / A.03 COLOMBIA / 2010; SP 11-12 / A.13 HAITI / 2010; SP 8TH ED. / A.13 INDONESIA / 2018-2020; SP 9TH ED. / A.16 CAMBODIA / 2018-2021.](#)

LESSONS LEARNED

- **Increased private sector involvement in land regularization.** Establishing a social enterprise at close-out proved an effective exit strategy. In St. Elizabeth, more than 300 families obtained titles through the service, showing that private-sector participation can sustain tenure gains beyond project closure. Such mechanisms should be considered earlier in future programming.
- **Dissemination of plans must be inclusive and continuous.** Five-year findings highlighted the need for wider community dissemination of agreed plans, including door-to-door pamphlets, posters and onboarding of new arrivals. Modest, sustained financing for awareness-raising should be planned from the outset.
- **Community as the key enduring partner.** The project convened diverse stakeholders, but community leadership showed the strongest long-term commitment to neighborhood development. Investing in leadership and post-project contact mechanisms can preserve momentum and accountability.
- **Contextual protection considerations influence housing choices.** The five-year review found that some households added concrete block external walls to timber houses for ballistic protection. DRR housing guidance and settlement planning should consider context-specific protection risks alongside wind and flood performance.



A program review conducted 5 years (and a hurricane) later found that the retrofitted houses were still in good conditions.



Years after the project end, some houses had added concrete blocks to the timber walls as a bulletproofing measure.