

## PREPARE Trinidad and Tobago Semi-Annual Performance Report

Reporting Period: April 1, 2021 – September 30, 2021

**Implementation Partner: Miyamoto International** 

Activity Number: 720FDA19GR00161

**Activity Name: PREPARE TTT** 

Implementation Country: Trinidad and Tobago

Activity Start Date: October 1, 2019

Activity End Date: September 30, 2021; NCE May 31, 2022

List of Documents Uploaded to BHA ART: Semi Annual Report, Indicator Tracking Table

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### PREPARE Trinidad and Tobago

The goal of the USAID/BHA is to provide a clearer picture of the probable impact of an urban earthquake disaster and facilitate advocacy and planning initiatives around strengthening seismic disaster risk reduction and preparedness measures in Trinidad and Tobago for a reduction in lives lost, fewer people injured, fewer internally displaced persons and less social and economic disruption.

### The U.S. Agency for International Development (USAID)

The U.S. Agency for International Development is an independent U.S. federal agency responsible for planning and administering economic and humanitarian assistance around the world.

### The Bureau for Humanitarian Assistance (BHA)

The Bureau for Humanitarian Assistance provides humanitarian assistance that saves lives, including food, water, refuge, emergency medical attention, sanitation and hygiene and critical nutrition services to the world's most vulnerable and hardest-to-reach people.

### Miyamoto International, Inc.

Miyamoto International is a global firm providing structural engineering and disaster risk management expertise, with experience in resilience that sustains industries and safeguards communities around the world.

### Acknowledgements

The PREPARE TT program is being implemented in partnership with the Office of Disaster Preparedness and Management Ministry of National Security and the University of the West Indies, Seismic Research Center.

#### **Disclaimer**

This publication is made possible by the support of the American People through the United States Agency for International Development (USAID) and its Bureau of Humanitarian Assistance. The opinions, findings and conclusions reflect the author and do not necessarily reflect the views of USAID or the United States Government.

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### **ACRONYMS**

**APETT** Association of Professional Engineers of Trinidad and Tobago

**ATTIC** Association of Insurance Companies of Trinidad and Tobago

**BOETT** Board of Engineers of Trinidad and Tobago

**BHA** Bureau for Humanitarian Assistance

**CDM** Comprehensive Disaster Management

**DDMP** Disaster Debris Management Plan

**DIQE** Division of Infrastructure, Quarries, and the Environment –Tobago

**DMU** Disaster Management Unit

**IDHNA** Initial Damage and Humanitarian Needs Assessment

**ISO** Initial Situation Overview

**IFRC** International Federation of Red Cross and Red Crescent Societies

**MIYAMOTO** Miyamoto International, Inc.

MNS Ministry of National Security

MOWT Ministry of Works and Transport

MRDLG Ministry of Rural Development and Local Government

**NEOC** National Emergency Operations Center

**ODPM** Office of Disaster Preparedness and Management

PIDA Pre-Impact Data Assessment

**POSCC** Port of Spain City Corporation

**RDA** Rapid Damage Assessment

**SRC** Seismic Research Center

**SWMCOL** Solid Waste Management Company of Trinidad and Tobago

**TEMA** Tobago Emergency Management Agency

THA Tobago House of Assembly

TTBS Trinidad and Tobago Bureau of Standards

**USAID** United States Agency for International Development

**UWI** University of the West Indies

#### 1 OVERALL PERFORMANCE

The USAID/BHA Urban Disaster Resiliency and Preparedness in Trinidad and Tobago - PREPARE TT program (Award 720FDA19GR00161) began October 1, 2019, with activities originally being implemented over a 24-month period (ending September 30, 2021) in Port of Spain Trinidad, Republic of Trinidad and Tobago. A no-cost extension was granted through May 31, 2022, to complete activities given the challenges of the COVID-19 pandemic restrictions in T&T. The total PREPARE TT program budget is \$1,000,000. This semi-annual performance report covers activities carried out from April 1, 2021, to September 30, 2021.

The program goal is to provide a clearer picture of the probable impact of an urban earthquake disaster and facilitate advocacy and planning initiatives around strengthening seismic disaster risk reduction and preparedness measures in Trinidad and Tobago for a reduction in lives lost, fewer people injured, fewer internally displaced persons and less social and economic disruption.

The program objectives are: (1) To strengthen risk management, preparedness and response planning of national and local institutions for improved collaboration following an earthquake; (2) To strengthen the capacity of national and local institutions in risk management and response for a reduction on lives lost, fewer people injured and less economic disruption in high-risk areas; and (3) To facilitate the incorporation of risk management and response best practices, strategies and tools into critical national and local planning processes and strengthen public-private collaboration in their application.

During the reporting period the program made progress toward these objectives in the following ways. The City-Wide Assessment of Earthquake Risk in Port of Spain (POS) Trinidad has been used to raise awareness of earthquake risk and advocate for risk reduction action among public and private sector stakeholders including high level government officials, councilors and senior staff of the Port of Spain City Corporation (POSCC), the Ministry of National Security and senior Ministry staff and the Claims Sub-Committee of the Association of Insurance Industries in T&T. The University of the West Indies (UWI) Seismic Research Center (SRC) added more specific recommendations regarding the risk assessment and has taken on the responsibility of sharing the results of the assessment with broader groups. The program and its deliverables are being shared across organizations to build widespread awareness, acceptance, and ownership.

Structured stakeholder consultation on earthquake disaster scenario planning and priorities continued, with the participation of twenty new institutions that engaged in risk management discussions. These institutions have been involved in the development of plans, policies and strategies through interactive meetings. Furthermore, 57 people have participated in discussions on national risk reduction strategies. These people represent engineering and building inspection personnel from the 14 municipal corporations, the Tobago infrastructure Division, senior security, immigration and forensic science personnel from the Ministry of National Security (MNS) and the insurance sector.

A comprehensive Disaster Debris Management Plan (DDMP) was developed with support of stakeholder consultations. Additionally, a Rapid Damage Assessment (RDA) instrument was crafted for Trinidad and Tobago for beta testing in the next reporting period. The Damage and Needs Assessment (DANA) Continuum, including the Pre-impact data analysis (PIDA), is underway, and all the municipalities are currently using a common digital Initial Disaster Humanitarian Needs Assessment form.

### 2 CHANGES AND AMENDMENTS

During the reporting period a no-cost extension was granted by USAID BHA through May 31, 2022, to complete activities given the challenges of the COVID-19 pandemic restrictions in T&T. No amendments to the activities occurred in the reporting period.

#### 3 MEASURING RESULTS

Table 1 Indicator Table

| Sector: Risk Management Policy and Practice<br>Sub-Sector: Policy Planning  |               |  |                                   |                   |  |  |  |
|---|---------------|--|-----------------------------------|-------------------|--|--|--|
| Indicator   | LOP<br>Target | Reporting Period                           | LOP<br>Achieved                   | % Target Achieved |  |  |  |
| Number of hazard risk reduction plans, strategies, policies, disaster preparedness, and contingency plans developed and in place. | 2             | 0  | 0                                 | 0%                |  |  |  |
|   |               |  |                                   |                   |  |  |  |
| Number of people participating in discussions regarding national risk reduction strategies as a result of the program             | 80            | 57<br>(34 males/<br>23 females)            | 230<br>(149 males/<br>81 females) | 287%              |  |  |  |
|   |               |  |                                   |                   |  |  |  |
| National and local risk assessment, hazards data and vulnerability information is available within targeted areas (Y/N)           | Y             | Y  | Y                                 | Y                 |  |  |  |
|   |               |  |                                   |                   |  |  |  |
| Number of institutions involved in the development of plans, policies, and strategies (custom)                                    | 8             | 20<br>(16 government,<br>4 private sector) | 66                                | 825%              |  |  |  |

LOP persons participating Oct 2020- March 2021 173 115 males and 58 females; LOP Institutions Oct 2020- March 2021 46

### 1.2 Indicator 1: Number of hazard risk reduction plans, strategies, policies, disaster preparedness, and contingency plans developed and in place

The life of program (LOP) target for this indicator is two. During the reporting period, in consultation with stakeholders, one response tool and one plan were drafted:

A Disaster Debris Management Plan (DDMP) consultant was hired to revise and update the national DDMP. Specifically, the consultant elaborated on the contractual and technical waste management issues within the 2016/2020 draft plan and developed a debris calculator adapted to the local context.

An RDA consultant was also hired during the reporting period. The consultant completed a desk review and held initial focus group consultations with multiple stakeholders including the ODPM Preparedness and Response Unit, 21 local government engineers and building inspectors from 14 municipalities, Ministry of Works engineers – Designs Branch and Highways Division and the Tobago Division of Infrastructure, Quarries, and the Environment (DIQE).

The RDA consultant produced a draft RDA tool for buildings and bridges. This draft included final amendments based on feedback from the Technical Advisory Committee. A field test of the RDA instrument is planned for the next reporting period.

The program team is planning a walk-through of the Draft Earthquake plan at the National Emergency Operations Center (NEOC) with the Emergency Service Function (ESF) leads for the next reporting period. This was originally planned for this reporting period, but delayed due to multiple competing issues at the ODPM - the COVID-19 third wave lockdown, the National Disaster Preparedness Month (May) Activities,



Figure 1. Screen shot of CDM Policy Consultation July 2021

budget preparations and close of accounts and subsequent severe weather events. The walk-through is scheduled for October 21, 2021, the anniversary of the 1766 M7.8 event.

The PREPARE TT program has advocated for and supported the ODPM with initiatives to develop a comprehensive disaster management (CDM) Policy for T&T. Thirty participants attended a stakeholder consultation for partners event centered on this policy development (Figure 1). Two more consultations were hosted by the ODPM for the public sector and private sector respectively. The draft CDM policy for T&T has been submitted to and reviewed by the ODPM in preparation for wider stakeholder feedback beginning in the next reporting period.

The ODPM, Miyamoto and the International Federation of Red Cross and Red Crescent Societies (IFRC) met to discuss a potential cost share to contract a legislative drafting consultant. This would propose to update the draft CDM Bill of April 2014, including the results of the gap analysis completed by the ODPM, IFRC and TTRC in 2021. The IFRC is in the process of contracting the selected candidate.

The PREPARE TT program and the ODPM have continued the development of an integrated damage and needs assessment system – the DANA continuum. Standardized forms were developed, and DANA training was conducted. With program support, the ODPM has standardized the Initial Damage and Humanitarian Needs Assessment (IDHNA) form. Previously each municipality used different documents. This made information management on multi-municipal events very difficult. Moreover, the forms were digitized using Arc 123 and loaded onto tablets. Four municipalities beta tested the forms during localized events during the reporting period. The US Embassy in T&T donated 16 tablets for the municipalities and ODPM in November 2020. During the reporting period, at ODPM's request, the PREPARE TT program procured and delivered to ODPM two additional Samsung Tab S5e tablets for the island of Tobago – emergency management office (TEMA).

Online training on the DANA Continuum was facilitated by the Caribbean Disaster Emergency Management Agency (CDEMA) and the ODPM. An average of 85 persons over the three days participated from the 14 municipalities and Tobago, including disaster management officers and community emergency

response team members. Fifty participants (19 male, 31 female) met the certification requirements. Subsequently, ODPM held practical training for the municipal Disaster Management Unit (DMU) participants on the use of the digital application forms. This proved a timely intervention, as the DANA application was widely available for the severe flood events, which occurred from mid-August to mid-September (Humanitarian story, Annex C).

The foundation of the DANA is the Pre-impact Data Analysis (PIDA), which includes demographics, scenarios and planning data, maps, and other information. In close collaboration with the ODPM, and reaching out to national stakeholders, the PIDA consultant updated the digital demographic data, cleaned ODPM's and the UWI SRC hazard data, adding new records of historical flood hazard information as well as resources available to communities. The information was plotted on GIS layers with attribute. The PIDA analysis is currently being prepared.

## 1.3 Indicator 2: Number of people participating in discussions regarding national risk reduction strategies as a result of the program

The LOP target for this indicator is 80. Over the life of the program, PREPARE TT has engaged 230 persons in discussions (149 males/81 females) around program activities for seismic disaster risk reduction. Each month the program continues to engage as many national stakeholders as possible (often from previously targeted institutions) as these persons/institutions are relevant/important to the discussions. This is not only to ensure the widest possible feedback from the national community, but it is also a risk management approach to ensure adoption of protocols/tools and continuity of program goals (see Risk Management).

During this reporting period the program involved 57 new stakeholders (26 males/31 females) in strategic discussions<sup>1</sup>. The participants included executives and senior staff of the Ministry of National Security and the Association of Insurance Companies of T&T (ATTIC) Claims Divisions (Figure2), with whom the results of the POS earthquake risk assessment were shared in hopes of enlisting their support for risk management policy and action. The program team had a meeting with staff of Habitat for Humanity T&T to share what each program is focused on. During that meeting Habitat for Humanity T&T informed the program team that they are implementing the USAID funded Urban Resilience project in the same target area, and also discussed risk in four constituencies in POS. Further discussions were held with AMCHAM T&T regarding options for private sector engagement. The multiple stakeholders focus groups were discussed above in reference to the RDA. These new persons/institutions are in addition to the regular almost weekly participants in the technical advisory groups for DDMP, RDA, PIDA, and the quarterly meetings on policy and legislation.

## 1.4 Indicator 3: National and local risk assessment, hazards data and vulnerability information is available within targeted areas (Y/N)

The LOP target for this indicator is Yes (Y). The earthquake risk assessment final digital files were shared with UWI SRC in May. UWI SRC intends to apply a similar but deterministic risk model to other parts of T&T. The risk assessment results GIS shape files were also shared with ODPM's GIS Unit to expand their risk information database to support preparedness planning.

A communications strategy to support the dissemination of the earthquake risk assessment for POS was developed as a collaborative effort among communications specialists from Miyamoto, UWI SRC, ODPM and POSCC's Disaster Management Unit (DMU). The package of tools included FAQ, two-minute explanatory videos, summaries of the risk assessment results and summary of the Road Map for Seismic

<sup>&</sup>lt;sup>1</sup> Another 43 new persons benefitted from DANA Continuum training in August 2021. These new persons were from the municipal offices and community emergency disaster teams (CERTS) in the burgesses.

Risk Management in T&T. The intent of the communications strategy was to anticipate questions and prepare for any attempts at sensationalism by journalists.

The PREPARE TT program shared the results of the earthquake risk assessment for POS with:

- The Mayoral Office, Councilors and Senior Staff of the POSCC (Figure 2)
- The Claims Committee of the Association of Trinidad and Tobago Insurance Companies (ATTIC)
- The Ministry of National Security and senior members of the Ministry

The UWI SRC completed the recommendations on the risk assessment results. These were shared at the meeting with the Ministry of National Security and included in the National Road Map for Seismic Disaster Risk Reduction. The program continues to advocate with the Ministry of National Security and other entities concerned with the adoption of actions within this Road Map. A follow-up meeting is planned with the Ministry of National Security to highlight specific policies and actions that could be adopted.

## 1.5 Indicator 4: Number of institutions involved in the development of plans, policies, and strategies

The LOP target for this indicator is eight. During the reporting period, 20 new institutions (16 public and 4 private sector) became involved in the development of plans, policies and strategies. These institutions were mainly from the 14 municipalities, were engaged as legally bound stakeholders to the RDA instrument, as well as the security/crime detection/deterrent divisions and units of the Ministry of National Security, which do not directly participate in disaster risk management on a regular basis.

### 4 PARTICIPATION OF AND ACCOUNTABILITY TO AFFECTED POPULATIONS

As mentioned previously, during the reporting period, the program shared results of the POS earthquake risk assessment with multiple exposed populations including the POSCC, first response institutions and the insurance sector. The intention was to raise awareness of earthquake risk in T&T and to solicit their greater involvement in the risk management measures. These multiple stakeholder engagements account for the leap in the number of people and institutions participating.

Other organizations and individuals whose jobs would be heavily impacted in the event of an earthquake disaster continue to be intimately engaged through the technical advisory teams that guide the consultants. For example, engineers from the Board of Engineering (BOETT), the Association of Professional Engineers (Civil Sub-sector), the Bureau of Standards, Ministry of Works and Transport (MOWT) and the Ministry of Rural Development and Local Government (MRDLG) guide, monitor and evaluate work of the RDA consultant. Technical specialists from the Solid Waste Management Company Limited (SWMCOL) and disaster managers from the MRDLG, as well as POSCC are actively involved in helping to develop the DDMP.

Throughout the protocol development processes, the consultants have been guided by multiple exposed persons and organizations including ODPM, local government engineers and building inspectors from the municipalities, MOWT engineers and Tobago Division of Infrastructure Quarries and the Environment. These efforts are important not only to ensure that program outcomes will positively impact the population of indirect beneficiaries in POS (estimated at 300,000) but those directly involved also get the opportunity to develop the risk management solutions. An improved understanding of risk and a coordinated response in the event of an earthquake disaster will be beneficial to the entire target area.

### 5 RISK MANAGEMENT

The PREPARE TT program continues to engage as many national stakeholders and institutions as possible as a risk management approach. There are two reasons for this. First redundancy; should staff leave critical program support positions, others within the organization are familiar with the initiative and can continue with minimal disruption. Secondly, widespread engagement not only raises awareness and visibility, but supports advocacy for adoption of protocols and policy. The public service in T&T is loaded with short-term and two-year contracted staff. A high turnover of personnel is common and the government has frozen all new hires for the public service. It is therefore essential to bring as many persons into the program as possible to ensure continuity and sustainability. Wider engagement also seeds awareness and commitment by generating talk around earthquake risk. Caution must be exercised due to the COVID-19 pandemic exhaustion and over-tasked personnel.

Challenges were faced in the area of support for deliverables, as well as timelines. April to September 2021 was dominated by a third wave of COVID-19, with more severe restrictions introduced in early May. These included limiting groups to six people, dispersal of the civil service in partial work-from-home arrangements and a 21:00-05:00 curfew. Program staff was fully vaccinated in the second quarter of 2021. The participation of stakeholders and engagement of partners nevertheless had to revert to online platforms. Ministry personnel were especially difficult to contact. Although not ideal in a Caribbean culture, information and telecommunications support became the norm (see Lessons Learned).

The risk of stakeholders becoming disengaged from the program was compounded by remote meetings. With multiple vaccines currently available for every member of the population, the opportunity will be taken to increase the (culturally appropriate) in-person meetings to solidify relationships before the end of the year. All COVID-19 protocols will be observed (mask, sanitation, ventilation separations and limited group sizes). The Delta variant is now endemic, and with some vaccine hesitancy, the risk of a fourth Delta wave and another lockdown is a possibility in January, particularly as the country enters the social Diwali and Christmas seasons.

The program's main partner, ODPM, had an expected increase in competing priorities during this period. Cabinet designated May (in 2020) as National Disaster Preparedness Month (NDPM) ironically, limiting the staff availability in pursuit of awareness actions. From June onwards and especially in August and September, the ODPM has been heavily responding to severe weather situations affecting communities. In August and September, public servant support was particularly difficult as organizations finalize their budget requests, advocate, and close accounts. Consequently, targeted actions and flexibility in this period had to be carefully managed with consideration for ODPM staff's increased workload.

### 6 COORDINATION

The foundation of the PREPARE TT program is coordination. AMCHAM T&T continues to seek actions for private sector engagement in disaster risk management. Resilient infrastructure, collaboration with municipalities, or a pilot project with an industrial fence line school were discussed during the reporting period. AMCHAM T&T expressed a desire for tangible action that is not weighed down by planning meetings. Shared value of DRM actions remains elusive particularly in a difficult economic time created by COVID-19 restrictions.

The program continues to work closely with the ODPM and the UWI SRC. PREPARE TT benefits from technical support from representatives of the Board of Engineers of T&T, the Association of Professional Engineers of T&T Civil Engineering Section, the Ministry of Rural Development and Local Government, Port of Spain City Corporation, Solid Waste Management Company, T&T Bureau of Standards, the

Ministry of Works and Transport and the International Federation of Red Cross and Red Crescent Societies. A collaboration meeting was held between the ODPM, Miyamoto and the IFRC for contracting a legislative drafting and advocacy support consultant. The legislative gap analysis report was shared. The PREPARE TT program and the IFRC will cosponsor the consultant.

The first of four stakeholder consultations on the CDM policy with the CDEMA consultant was completed during the reporting period for those who had been involved in the legislative gap analysis. Three subsequent consultations were held for the private sector, other public sector agencies, and politicians. The ODPM is currently reviewing the draft Comprehensive Disaster Management (CDM) Policy received from the consultant. Stakeholder consultations are expected to begin in mid-October. As mentioned previously, the IFRC has recruited the legislative drafting consultant.

The ODPM and the PREPARE TT team participated in the *Resilient City* initiative of Habitat for Humanity T&T for four communities in Port of Spain. The intent was to identify synergies, which seem to be in sharing the PIDA data. The PREPARE TT program, ODPM, and Habitat for Humanity agreed to further collaborate and share data for POS.

### 7 LESSONS LEARNED

The 2018 M6.9 earthquake had the opposite effect on earthquake risk perception in T&T. The public, comparing the impact of past and recent earthquakes of similar magnitude in the region (Haiti, Puerto Rico), have mistakenly assumed that T&T's built environment is stronger than these two countries because minimal damage was experienced. A lack of understanding of the relative remoteness of the 2018 T&T earthquake epicenter (c. deep and >170Km away from POS) when compared to Haiti and Puerto Rico (shallow and within 10km) i.e., intensity, has led to this misconception. At each earthquake risk assessment presentation, the UWI SRC takes the opportunity to clarify this error, but much work remains in this area.

Furthermore, stakeholders find it difficult to envision and plan for a national (widespread) disaster. This is due to a fortunate lack of experience of such events in over three generations. This unfortunately has resulted in a low-risk perception, and an "it can't happen here" attitude. The program team works continuously, through engaging the technical advisory group participants, to demonstrate to stakeholders that the current Level 1 and 2 response systems will not suffice under national level disruption and loss.

Cultural difficulties have also been encountered in this program. In the relationship-based society of T&T, online meeting platforms are not conducive to spontaneous contributions to discussions. As such, participants are often reluctant to speak, and much coaxing is required. Moreover, time limitations for engagement stymic the solicitation of concrete future support in DRM. As often as the new realities of COVID19 will allow, small in-person meetings are organized.

Lastly, policy and legislation are fundamental pillars, but alone will not deliver resilience. Through the supportive plans, exercises and collaboration being delivered by the PREPARE TT program, individual/organizations participate and are given the tools/network opportunities to improve national capacity to resist, cope, response and recover from disasters.

#### 8 PLANNED INTERVENTIONS

The next reporting period will focus on re-engaging the stakeholders, raising awareness, institutionalizing tools and plans and soliciting support for advocacy around the road map, CDM Policy, and the legislation. Specific actions include:

- Beta test the RDA tool in the field and develop a digital application and training manual to share with national counterparts.
- Resolve outstanding information management decisions around which organizations will provide the storage platforms for mobile applications on DANA and RDA. Hold information and communication technology (ICT) meeting among ODPM, MOWT, Min. Rural Development and Local Government and Tobago House of Assembly THA.
- Raise awareness and seek final approval for the national earthquake plan among Emergency Service function leads in public service.
- Re-engage POSCC Disaster Management Unit and staff to develop and test contingencies for earthquake response and disaster debris management. POS will become the pilot for these actions with templates being generated for other municipalities. Ultimately, POS will host the municipalities and Tobago to test and familiarize themselves with the plan.
- Continue to seek ways to collaborate with the private sector, continuing with the Bankers Association of T&T (BATT). Support banking policy that encourages construction best practice compliance in the mortgage portfolios (in the absence a national building code).
- Re-engage stakeholders to support and advocate for the CDM Policy. Develop and implement an advocacy strategy for policy and for the revised CDM Bill through stakeholder engagement.
- Meet with the Minister of National Security before December about the Road Map for seismic disaster risk management.
- Expand on PIDA, developing two more hazard information data sets (landslides and hurricanes) and analysis. Integrate these into municipal/Tobago and public sector emergency planning.

### 9 EXIT STRATEGY AND SUSTAINABILITY (IF APPLICABLE)

The exit strategy relies on institutional strengthening. The policies, plans and strategies are useful for documenting preparedness and response intent. These plans and processes are being institutionalized as regular actions to cede ownership of these arrangements to the national authorities and their stakeholders. This embedding of processes is achieved through wide stakeholder involvement among and within organizations. Multiple representatives of the same organization are involved in helping to develop/test plans and policies thereby encouraging ownership of the process/tool/plan. At the same time, communities of practice are being developed across multiple agencies to strengthen networks and collaboration and adoption of tools and plans. Binding this effort is the development of the comprehensive disaster management policy, and advocacy with the Minister of National Security for the government's adoption of the CDM policy as well as a road map of actions for seismic risk management.

ANNEX A HUMANITARIAN STORY: PRPARE RISK STUDY INCLUDED IN HIGH-LEVEL MINISTRY OF NATIONAL SECURITY MEETING

# PREPARE URBAN DISASTER RESILIENCY AND PREPAREDNESS IN TRINIDAD + TOBAGO

### PREPARE RISK STUDY INCLUDED IN HIGH-LEVEL MINISTRY OF NATIONAL SECURITY MEETING

The earthquake risk assessment, developed under the current USAID/BHA PREPARE Trinidad and Tobago project, was included on the agenda of the Ministry of National Security's Heads of Division Leaders Meeting-effectively increasing its reach and impact to critical national decision-makers. The monthly meeting included attendance from 30 Ministry staff and Divisional Heads and was held in-person on August 17th, 2021.

This critical review of the earthquake risk assessment for Port of Spain came at the request of Major General Rodney Smart, the CEO of the Office of Disaster Preparedness and Management (ODPM), and an important stakeholder and active participant in the risk study process and reporting. The assessment was regarded with increased importance as the meeting was held three days following the destructive Magnitude 7.2 earthquake in Haiti, reigniting consciousness ad urgency surrounding Trinidad and Tobago's own seismic risk and structural vulnerability.



Dr. Ilias Papadopoulos of the University of the West Indies' Seismic Research Center was also in attendance and gave an introductory presentation as a key architect of the assessment report and related policy recommendations.

Critical findings presented from the report include the vulnerability of reclaimed coastal areas to liquefaction hazards and the large quantity of disaster-related debris that is predicted to impede firstresponder efforts.

Following the presentation, Heads of Divisions were given the opportunity to ask questions and explored key action items, such the need to assess older homes and critical facilities for potential retrofits and the need to both improve and enforce building codes. ODPM also noted an interest in developing best practice construction training programs throughout the country for greater disaster mitigation.





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This story is made possible by the support of the American People through the United States Agency for International Development (USAID) and its Bureau of Humanitarian Assistance. The opinions, findings and conclusions reflect the author and do not necessarily reflect the views of USAID or the United States Government.

PREPARE RISK STUDY INCLUDED IN HIGH-LEVEL MINISTRY OF NATIONAL SECURITY MEETING | 2

ANNEX B HUMANITARIAN STORY: PRPARE RISK STUDY INCLUDED IN HIGH-LEVEL MINISTRY OF NATIONAL SECURITY MEETING

# PREPARE URBAN DISASTER RESILIENCY AND PREPAREDNESS IN TRINIDAD + TOBAGO

### STAKEHOLDERS HELP GUIDE THE NATIONAL RAPID DAMAGE ASSESSMENT INSTRUMENT

In August and September, Rapid Damage Assessment (RDA) focus groups were held with municipal engineers and building inspectors, engineers from the Ministry of Works and Transport (MOWT), and Tobago's Division of Quarrying, Infrastructure, and the Environment.

In total, 24 government engineers and building inspectors from Trinidad and Tobago's fourteen municipalities, the MOWT Highways Division and the Designs Branch, Construction Division participated in the meetings. The discussions explored the mobilization protocol, current assessment forms and standards in use, as well as the storage and use of RDA information. The engineers and building inspectors also discussed tagging protocols and structural assessment experiences. The municipalities and the MOWT also shared their current RDA tools and construction/inspection standards.



A technical advisory, which includes representatives from the Association of Professional Engineers of Trinidad and Tobago (APETT), the Board of Engineers (BOETT), T&T Bureau of Standards, the Office of Disaster Preparedness and Management, Miyamoto International and the Ministry of Rural Development and Local Government, is helping to guide the development of these tools by an expert consultant.

The consultant is due to provide a draft of the standardized RDA instrument for peer review in September.



Figure 1 Tobago Earthquake Damage. Photo from uwiseismic.com

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ANNEX C HUMANITARIAN STORY: STANDARDIZED DAMAGE AND NEEDS ASSESSMENT FORMS AND AP ASSIST MUNICIPALITIES IN FLOOD RESPONSE

# PREPARE URBAN DISASTER RESILIENCY AND PREPAREDNESS IN TRINIDAD + TOBAGO

### STANDARDIZED DAMAGE AND NEEDS ASSESSMENT FORMS AND APP ASSIST MUNICIPALITIES IN FLOOD RESPONSE

The Office of Disaster Preparedness and Management (ODPM) for Trinidad and Tobago (T&T) recently shared newly developed and standardized damage and needs assessment (DANA) forms and application with the fourteen municipal corporations in Trinidad and the disaster office in Tobago. This training occurred just in time to assist with the emergency assessments for multiple severe weather events and flooding in the second half of August and the beginning of September.

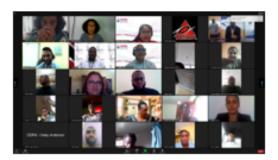
Prior to this training, each municipality used their own hard-copy form in the field, which created challenging information management processes, a lack of data sharing across municipalities and inefficiencies in disaster response efforts.

"This [digital method] made the DANA process so much easier" said a Disaster Management Unit (DMU) field officer responding the floods.



The DANA training was part of the Urban Disaster Resiliency and Preparedness in T&T (PREPARE TT) project, funded by the U.S. Agency for International Development's Bureau for Humanitarian Assistance (USAID/BHA), led nationally by the ODPM, and implemented by Miyamoto International. The PREPARE TT program hosted a virtual training on the regional DANA Continuum on August 5th, 6th, and 9th, which was facilitated by expert staff from the regional Caribbean Disaster Emergency Management Agency (CDEMA). Fifty-one members of the local DMUs and the Tobago Emergency Management Agency (TEMA), as well as Community Emergency Response Team members, successfully completed the course.

On August 17th, the ODPM and Ministry of Rural Development and Local Government facilitated the familiarization training for the participants on the various forms and digital application, including the Initial Situation Overview (ISO) and Initial Human Needs Assessment (IHNA). The application allows the municipalities to remotely capture geographic locations, information and photos on tablets and mobile phones. The information then syncs to ODPM's server within Wi-Fi enabled areas for timely information management.



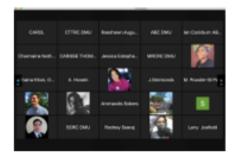


Figure 1 Screen shots of DANA Training

The ODPM and four municipalities beta tested the system in June and July. Each DMU and the Ministry of Local Government can access the app directly off their tablet or remotely through ODPMs server, which will help coordinate response efforts and support the disbursement of humanitarian assistance to those who need it most.

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USAID/BHA PREPARE TT SEMI-ANNUAL PERFORMANCE REPORT - 2021