



*Information Document*

# **Building Resilience to Natural Disasters and Saving Lives in Puerto Rico**

*Airports and Communities Resiliency Program for Greater Preparedness (C-PReP)*

## **San Juan, Puerto Rico**

March 11-15, 2018

On the morning of Wednesday, September 20, 2017, Hurricane Maria struck Puerto Rico, devastating the island and plunging all its 3.4 million residents into a desperate humanitarian crisis. Hurricane Maria with strong, damaging winds, destroyed homes and critical infrastructure. A year later thousands of homes are still left powerless by the 155-mph hurricane.

Hurricane Maria is the worst storm to hit Puerto Rico in over 80 years and arrived only two weeks after Hurricane Irma passed just north of the island and left 1 million people without power. The effect on Puerto Rican families — and the island's infrastructure — will take many years to heal. The official death toll from the monster storm was 2,975 persons.

Hurricane Maria's disaster in Puerto Rico vividly demonstrates the need to redouble efforts to reduce the impact of such events. The disaster impacted port operations, disrupting the supply chain of goods and services and made it difficult to respond to humanitarian needs and economic recovery. Hurricane Maria continues to remind us that ports are crucial lifelines to vulnerable populations during disasters.

Natural disasters in the Caribbean are becoming more ferocious and frequent even relative to small states. The recent devastations of Category 5 hurricanes Maria and Irma (both in September 2017) demonstrate how powerful storms can lead to widespread destruction, loss of life, and weaker economic growth prospects.

In response, Americas Relief Team (OAA), an initiative of Outreach Aid to the Americas (OAA), Inc. has announced the implementation of its Community and Port Hurricane Resilience (C-PReP) program in Puerto Rico the week of March 11-15, 2019. The disaster mitigation initiative will take place at Universidad InterAmericana de Puerto Rico.

The C-PReP program is designed to improve the disaster readiness of airports, seaports and other facilities, and communities; and to ensure standardized mechanisms, drills and best practices are in place to mitigate the worst possible effects of a disaster and to streamline efficient and effective responses to disasters. Invited entities and organizations include: government ministries and agencies including health, transport, FEMA, and law enforcement sectors; non-government organizations including the local Red Cross, and local faith-based groups; airports in Puerto Rico,

airlines, logistics companies, customs, fire departments, civil emergency units, first responders and others.

The C-PRReP program place particular emphasis on airport and seaport resilience planning since damaged ports have a tremendously deleterious impact on local communities, often crippling efforts to adequately respond to crises arising out of disasters. The program seeks to apply best practices and lessons learned from recent disasters to assist the seaports and airports in advancing their continuity of operations. C-PRReP will also promote capacity building, implement resiliency assessment and planning activities, and provide post-disaster technical and commodities support.

The program is executed by OAA/ART/in partnership with Aeropuertos Del Sureste (ASUR) of Mexico, representing CIFAL Mérida (International Center for the Training of Authorities and Leaders) and ACI-LAC (Airports Council International for Latin America and the Caribbean). C-PreP Puerto Rico is certified by UNITAR/United Nations Institute for Training and Research.

OAA/ART will partner in Puerto Rico with Universidad InterAmericana de Puerto Rico, AEROSTAR Airport Holdings LLC, Miami International Airport, and American Airlines. The program has significant contributions from FedEx and The US Caribbean Strong Relief Fund at the Miami Foundation.

Among the presenters at the workshops will be Nelson Mejias, Airport Manager Miami/Opa Locka Executive Airports; Juan Manuel Manriquez, Manager APEX in Safety, ACI World; Capt. Ricardo Garcia, Program Manager, Office of Foreign Disaster Assistance (OFDA) at USAID; Mrs. Suzanne Williamson, Director, Tower Operations at American Airlines; Ms. Maricarmen Estrada, Program Director at OAA/ART; and Dr. Teo Babun, President and Chief Executive Officer, OAA/ART; and others.

Similar workshops have been held previously in Jamaica, Costa Rica, Mexico, the Dominican Republic, Miami, Florida, St. Vincent and the Grenadines, St. Lucia, Dominica, and Antigua and Barbuda.

**For more information or to arrange interviews please contact Sumaya Davila at Outreach Aid to the Americas (OAA) Email: [SD@oaausa.org](mailto:SD@oaausa.org) or [www.oaausa.org](http://www.oaausa.org).**

**C-PRReP is an initiative of OAA for a disaster mitigation network of communities and airports throughout Central America and the Caribbean. C-PRReP saves lives during times of disaster by preparing airports and communities to become more resilient before disasters strike, thus accelerating the response time and delivery of humanitarian aid.**

**Americas Relief is an initiative of Outreach Aid to the Americas, Inc.  
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## Speaker's Resumes



**Mrs. Maricarmen Estrada**  
*Program Director OAA/PReP*

Mrs. Estrada has extensive experience working with the United States Government, United Nations, and Private donors in international development and humanitarian response. As a Development Assistance Specialist of the United States Agency for International Development (USAID) she managed complex development assistance programs in Latin America, more specifically in El Salvador, the Central America Region, and the Dominican Republic. She has executive ability to design, implement and monitor large scale health, democracy and governance, citizen security, migration, disaster preparedness and response programs including the development of policy dialogue, partnerships, capacity building, and community-based activities. She has strong knowledge and experience in developing relationships, building consensus, working with diverse stakeholders, including international donors, national/ local governments, and civil society organizations.



**Captain Ricardo E. Garcia (Ret.)**

Ricardo Garcia is a retired captain from the Miami-Dade Fire Rescue Department, where he worked 29 years. As Program Manager for the Office of Foreign Disaster Assistance (OFDA) of the United States Agency for International Development (USAID), Emergency Responder Program, he coordinated, developed and implemented emergency responder training courses and exercises in Latin America, Caribbean and South Asia. Mr. Garcia was also a member of the Federal Emergency Management Agency (FEMA) Incident Support Team (IST) tasked with coordinating Urban Search Rescue efforts after disaster and has responded to different types of incidents of national significance. He formed part of the development team for the USAID/OFDA emergency responder courses and has been certified by FEMA and USAID/OFDA as instructor of numerous courses. He currently consults for various higher education, non-governmental, and private institutions in disaster risk reduction, and emergency planning and response.



**Nelson Mejias**

*Airport Manager - Miami-Opa Locka Executive Airport*

Nelson Mejias is a 32-year veteran of the Miami-Dade Aviation Department. He is a Code Enforcement Officer and the Airport Manager for Miami-Opa Locka Executive and Dade-Collier Training & Transition Airports in Miami, Florida. He has authored Miami International Airport's Airport Certification Manual, Airport Emergency Plan, the Airside Operations Training Manual, and developed the FAR Part 139 Training Program for the airport.

Nelson is a subject matter expert in the National Incident Management System, Airport Emergency Plan and exercises, Airport Construction, Airport Lighting & Signage, and Airfield Markings. He developed the Derelict Aircraft Management system for MIA and several computer applications currently utilized by the Aviation Department. Nelson is an instrument rated pilot and currently holds an AS in Airport Management. He lives in Ft Lauderdale, Florida.



**Mrs. Maricarmen Estrada**  
*President & CEO OAA/PReP*

Dr. Babun is the President & CEO of Outreach Aid to the Americas, Inc. (OAA). Americas Relief Team (ART) is an initiative of OAA. The mission of ART is to provide humanitarian logistics assistance and educational programs for disaster victims in the Americas and develop sustainable programs that establish long-term benefits for those in need. After a highly successful career in the manufacturing and the maritime industries, Dr. Babun decided to dedicate the rest of his life to charitable and non-profit endeavors in support of the most vulnerable populations. Dr. Babun earned a bachelor of Electrical Engineering, as well as a Master in Business Administration from Michigan Tech University and earned Doctor of Philosophy, Ph.D, from Vision International University and Doctor of Letters from Miami International Seminary.



**Mrs. Suzanne Williamson**  
*Director MIA Tower Operations American Airlines.*

Since 2014, Mrs. Williamson has acted as the American Airlines Director of Tower Operations at Miami International Airport. Previously, Mrs. Williamson was the Manager for Systems Efficiency and the Security Operations Center (SOC) Sector Manager. American Airlines is a major United States airline headquartered in Fort Worth, Texas. American Airlines together with its regional partners operates an extensive international and domestic network with an average of nearly 6,700 flights per day to nearly 350 destinations in more than 50 countries. American Airlines developed over the years out of the union or merger of some 85 companies. It is the world's largest airline when measured by fleet size, revenue, scheduled passengers carried, scheduled passenger-kilometers flown, and number of destinations served. American Airlines is a founding member of OneWorld Alliance, the third largest airline alliance in the world. The combined network fleet numbers more than 900 aircraft.



**Mrs. Ninoska Somoza**  
*Program Coordinator OAA/PReP*

Professional with more than seven years of experience in the implementation and execution of development, humanitarian and economic projects in Latin America. Ninoska worked in the public sector in El Salvador where she was responsible for the analysis and technical evaluation of economic and development initiatives for small and medium enterprises. She was part of the management and administration of more than twenty-five donation agreements granted by the Millennium Challenge Corporation (MCC) to build capacity and strengthen various productive chains in the northern zone of El Salvador. She has experience in the development and execution of local development programs for children and families in the eastern area of El Salvador and additionally has more than three years of experience in the financial area for transnational companies in Costa Rica. She has also proven ability to consistently deliver results in implementing international projects of relief, advocacy and development.

## ADDITIONAL INFORMATION

### Problem Statement – Puerto Rico and Hurricane Maria

Hurricane Maria is the worst storm to hit Puerto Rico in over 80 years and arrived only two weeks after Hurricane Irma passed just north of the island and left 1 million people without power. The effect on Puerto Rican families — and the island's infrastructure — will take many years to heal. The official death toll from the monster storm was 2,975 persons.

Hurricane Maria's disaster in Puerto Rico vividly demonstrates the need to redouble efforts to reduce the impact of such events. The disaster impacted port operations, disrupting the supply chain of goods and services and made it difficult to respond to humanitarian needs and economic recovery. Hurricane Maria continue to remind us that ports are crucial lifelines to vulnerable populations during disasters.

Natural disasters in the Caribbean are becoming more ferocious and frequent even relative to small states. The recent devastations of Category 5 hurricanes Maria and Irma (both in September 2017) demonstrate how powerful storms can lead to widespread destruction, loss of life, and weaker economic growth prospects.

Puerto Rico's policymakers will need to prioritize building resilience to disasters and climate risks, building on three complementary pillars:

- Structural protection to reduce disaster risks, such as through resilient infrastructure, adequate land-use, zoning rules and building codes, and resilient social safety nets;
- Financial protection to reduce the impact of recovery and reconstruction costs on public finances, for instance through risk-financing instruments, such as insurance; and
- Contingency planning and rapid access to financing for speedy disaster recovery.

Investing in preparedness for natural disasters and climate change is a key step in establishing resilience and reducing the large economic and human cost of natural disasters to the Caribbean economies. Significant progress is being made in many countries in developing risk management strategies, and the multilaterals and bilateral partners are playing an active role. Still, international financing remains concentrated on post-disaster relief and reconstruction, with resources for building ex-ante resilience limited and somewhat difficult to access due to cumbersome processes and eligibility criteria.

Building resilient infrastructure takes time and risks cannot always be averted. Securing financial protection, for example, through insurance and provisioning for dealing with the aftermath of natural disasters will be needed to accompany building structural protection. As physical and social structures become more resilient, insurance needs and costs and the need for disaster relief should fall.

### **What are living conditions like now?**

More than one year has passed since Hurricane Maria made landfall, and clear evidence of the storm remains. The lack of electricity, running water and reliable communications remain central challenges to the Caribbean island as it struggles to return to a semblance of normal life.

Roughly a third of Puerto Rico's residents — some 1.2 million people — are still living in the dark. After sunset, neighbors gather around generators or sit by candlelight. The blackout has become the largest blackout in U.S. history.

Some residents still don't have access to clean water. Even where water service has been restored, many communities still have a "boil water" advisory in place. Other areas are still purchasing bottled water to get the clean water they need.

## **Who's been most affected by the destruction?**

The storm disproportionately affected Puerto Rico's poorest residents, who have fewer resources on hand to help them recover and rebuild. Many of these people live in more rural communities and the hard-to-reach areas of the mountains, and can expect to be the last to regain access to water or see their electricity restored.

Major portions of the infrastructure are being rebuilt as federal agencies support the Government of Puerto Rico's plan to restore the island's lifeline systems and enable Puerto Rico to withstand the storms to come.

Never before has FEMA coordinated federal resources to rebuild an entire commonwealth with a population of 3.3 million people, 78 municipalities, electrical, water and telecommunications systems, seaports, airports, schools, healthcare system, roads and bridges. More than 166,000 homes need repair or reconstruction.

## **Unique Challenges:**

The response to Hurricane María was unprecedented. It was the largest and longest federal response to a domestic disaster in the history of the United States. To put María's impacts into context, this has been:

The longest sustained domestic air mission of food and water response in U.S. history;

- The largest disaster commodity distribution mission in U.S. history;
- The largest sea-bridge operation of federal disaster aid in U.S. history;
- The largest disaster generator installation mission in the United States, with generators still installed at critical facilities today;
- One of the largest disaster medical response missions in U.S. history; and
- One of the largest disaster housing missions in U.S. history.

## **Progress in neighborhoods, restoration of services:**

More than 462,000 households have received a total of \$1.4 billion in FEMA Individual Assistance for essential home repairs, rental assistance and other disaster-related costs. Under FEMA's Temporary Sheltering Assistance program more than 7,000 families were housed in just over 1,000 hotels in 41 states, the District of Columbia and Puerto Rico. 68,654 homes were repaired.

The U.S. Small Business Administration approved \$1.8 billion in low-interest disaster loans to 52,228 homeowners, renters and businesses. The National Flood Insurance Program paid \$33 million to policyholders.

## Community and Port Hurricane Resilience (C-PReP) program

### **Why Does Puerto Rico Need C-PreP?**

By conducting the C-PReP workshop in Puerto Rico, OAA/ART will be saving lives, building institutional capacity by improving response effectiveness following a hurricane disaster. C-PReP will serve airports/communities in optimizing their local and national disaster preparations/resiliency plans, trainings, drilling and exercising disaster response standard operating procedures. Carrying out the C-PReP workshop in Puerto Rico is critical in this point in time, as Puerto Rico is still managing its recovery from the damages after Hurricane Maria, can draw upon lessons learned from its response and resiliency efforts, and can review and update their emergency preparedness and resiliency plans for this 2018 hurricane season.

The C-PReP program is vital to advance the airport resiliency plans and operations protocols, and to foster the active participation of key stakeholders. Social outcomes: 1) Lives saved in the communities affected by disasters, 2) Increased capacity of airports/communities to react to disasters, 3) Increased safety of key airport personnel and their families, 4) Increased safety of travelers/airport users, 5) Better engaged airports with key stakeholders, 6) Better understanding and implementation of response mechanisms enabling efficient actions during times of emergencies/disasters, 7) Communities more resilient to disasters.

C-PReP helps the governments, communities and stakeholders enhance existing infrastructure, societal, and organizational strengths and minimize weaknesses through risk assessment, improved planning, joint training, cooperation, and information sharing to protect life, property, and enhance economic vitality. In addition, part of the expected sustainable program results after the training is performed to continue the engagement and networks built among the key stakeholders growing from the relationship forged during C-PreP. C-PReP encourages and suggest the signature of memorandums of understanding and statements of collaboration and resiliency roles among all parties involved in emergency response and relief, such as vendors, local agencies and community-based organizations.

Air services play an essential role in assistance to regions facing natural disasters, perhaps the most immediate and effective resources can be catalyzed through air, but this will happen only if the airports are prepared and are resilient immediately after the disaster occurs; together with the airports, stakeholders are also critical for immediate disaster response in the affected communities. OAA/ART's concern is to mitigate the impact of disasters by helping airports, stakeholders (police, firefighters, first responder teams, airlines, etc.) and communities respond effectively and restore ordinary operations as quickly as possible, and help communities be more resilient. OAA/ART's approach consists on providing capacity building opportunities to airport personnel, key stakeholders and community-based organizations that would have a resiliency role while facing disasters.

The first component of the C-PReP program is to conduct an assessment of target airports and communities to identify and analyze gaps in their plans/procedures/protocols and understand their needs; this serves to customize the training material, to orientate the workshop in the direction needed by target airport, communities and key stakeholders. Within the approach, OAA/ART also takes close attention on how to incorporate within the workshop greater participation from the different stakeholders, not

only at the program execution level, but beyond the program from the sustainability perspective. Another key component/approach of the program is to simulate a disaster scenario through a Table Top Exercise aiming to train the C-PreP participants to think on internal and external constraints when disasters occur and on how to adapt to unforeseen changes based on the emergency level, this implies that airports would determine the adoption of certain emergency management approaches or a combination of them to ensure the maximum level of resiliency, together with active involvement of key community stakeholders. The program's key milestones are: 1) Identification of key LAC countries, 2) Assessment of target airports and communities to determine gaps on emergency preparedness and resiliency, 3) C-PreP workshop execution, 4) Post-training activities, and 5) Monitoring and Evaluation of the C-PreP Workshop's impact.

The C-PreP program is built around knowledge, innovation and evidence, to help ensure the trainings have an impact, facilitate the transfer of knowledge, and are sustainable. The C-PreP training workshops are carried out to foster sustainability by building ownership and capacity of its participants, promoting participants engagement and collaboration, empowering them to become more resilient and active trainers by sharing their own experiences and lessons learned, utilizing real life and practical examples and case studies scenarios. With the assessment the C-PreP team conducts prior the workshop, the C-PreP professionals help the airports, local and government agencies to prepare or optimize their local disaster preparedness plans, incorporating specialized Standard Operating Procedures (SOPs) tailored to site-specific needs for rapid response to natural disasters and emergencies. Airports, communities and other stakeholders are assisted in identifying specific needs, vulnerabilities and generating effective solutions. Roles and responsibilities are clarified to minimize confusion and error during chaotic situations. Personnel are trained and drilled to respond to probable real-world scenarios. When disaster strikes, targeted plans go into action, thus promoting a timely reopening of damaged airports to support the delivery of humanitarian aid and rapid restoration of normal operations and trade.

### **Additional Information on Partners in Puerto Rico:**

The Puerto Rico Ports Authority operates all public-use of the airports and all fall under the mandate of the Federal Aviation Administration (FAA). The C-PreP program will be targeted to the largest six airports in Puerto Rico which, after San Juan, rank in the following order of annual passenger traffic: Rafael Hernández International Airport, Mercedita International Airport, Antonio Rivera Rodríguez Airport, José Aponte de la Torre Airport, and Fernando Luis Ribas Dominicci Airport in Isla Grande.

The main partner for the development of C-PreP in Puerto Rico is Aeropuertos del Sureste (ASUR) of Mexico, representing CIFAL Mérida (International Center for the Training of Authorities and Leaders) and ACI-LAC (Airports Council International for Latin America and the Caribbean). C-PreP Puerto Rico is certified by UNITAR/United Nations Institute for Training and Research. OAA/ART will partner in Puerto Rico with Universidad InterAmericana de Puerto Rico, AEROSTAR Airport Holdings LLC, Miami International Airport, and American Airlines; with support from FedEx and The US Caribbean Strong Relief Fund at the Miami Foundation.