



*An initiative designed to improve the disaster resiliency of airports in the LAC Region*

# Final Report

## PORT RESILIENCY PROGRAM (PREP) WORKSHOP

**Argyle International Airport  
St. Vincent and the Grenadines (SVG)  
September 27-28, 2017**



**Implementing Partner**



**Sponsored by:**





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## Background

Growing out of lessons learned in Haiti after the 2010 earthquake, the Port Resiliency Program (PREP) began in 2012 as an effort to improve the resiliency of airports and seaports in disaster-prone areas of the Caribbean and Latin America. With strong sponsorship and support from FedEx and Miami International Airport (MIA), the program was pilot tested at Las Americas International Airport in Santo Domingo, the Dominican Republic, in 2013. Lessons learned there were applied to create PREP 2.0 that was successfully applied in 2015 at Juan Santamaria International Airport in San Jose, Costa Rica. The fully operational PREP program was delivered to Jamaica's three international airports in July 2016. In early 2017 a PREP Workshop was delivered to the Merida International Airport and its parent company Aeropuertos del Sureste (ASUR,) including five other international airports in Mexico: Cancún International Airport, Cozumel International Airport, Villahermosa International Airport, Puerto Vallarta International Airport, and Mazatlan International Airport. Subsequently, on mid 2017 the government of Saint Vincent and the Grenadines (SVG) requested the implementation of a PREP Workshop to improve the emergency and resiliency plans of the Argyle International Airport (Argyle Inc.)

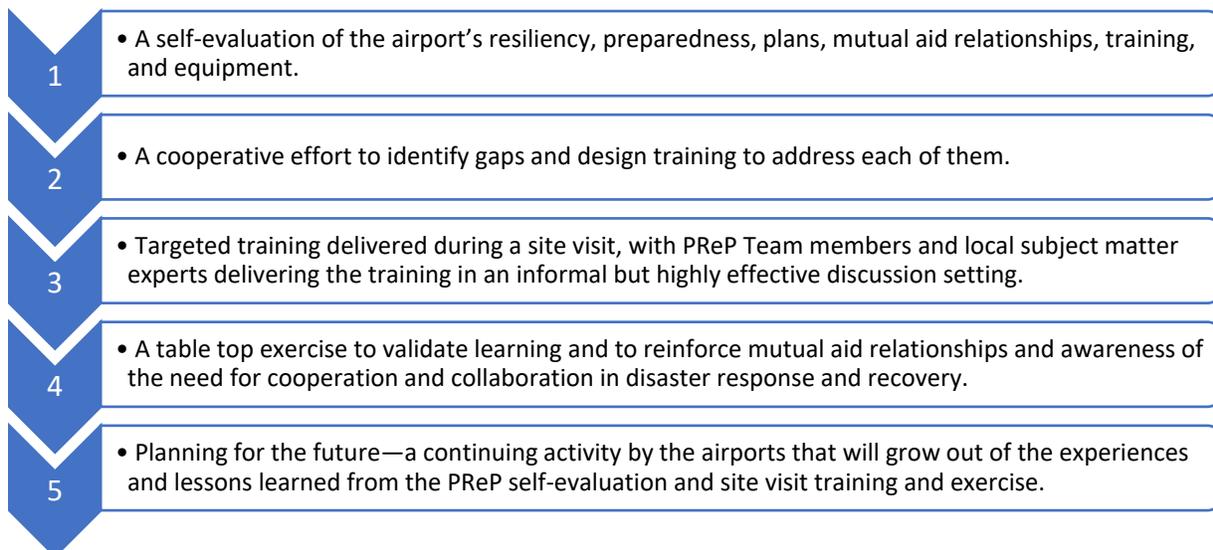
PREP main sponsors are FedEx and Miami International Airport (MIA).

## PREP Basics

PREP has three overarching goals:

- To speed an airport's ability to restore function to allow humanitarian aid as quickly as possible after a disaster strikes.
- To speed a region's, an island's, or a nation's economic recovery by restoring full airport function as quickly as possible.
- To reconcile these two goals so that the benefits of both are maximized and conflicting demands for the use of a recovering airport are minimized.

In order to achieve these goals, PREP engages in a highly collaborative and interactive process with the airports that normally includes five steps:

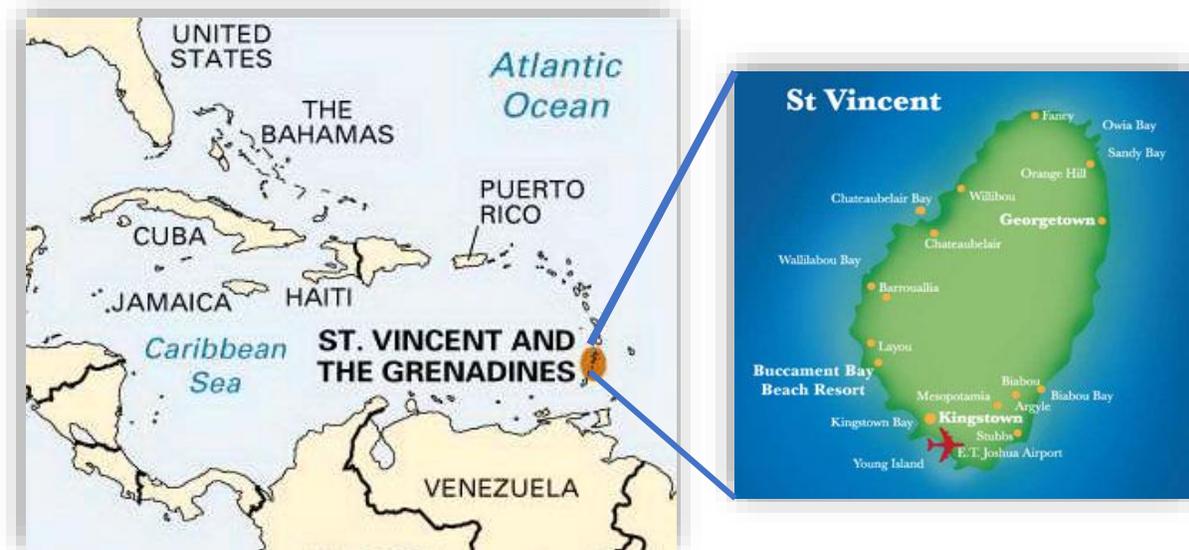


## Context

This section includes a brief description of the context of the workshop, location, and the airport needs and plans.

### a) Overview of St. Vincent and the Grenadines location

St. Vincent and the Grenadines (SVG) is located in the Eastern Caribbean, at the southern portion of the Windward Islands of the Lesser Antills, an island arc in the Caribbean Sea. Thirty-two islands form an archipelago, with St. Vincent being the largest island and the smaller Grenadines comprising of eight other inhabited islands: Bequia, Mustique, Canouan, Mayreau, Union Island, Young Island, Palm Island, Petit St. Vincent, and a number of uninhabited small islets.



*Location of Saint Vincent and the Grenadines, and the Argyle International Airport (AIA)*

The country covers approximately 384km<sup>2</sup>, with an estimated population of 109,557 based on figures obtained from the Statistical Office at the Ministry of Economic Planning, Sustainable Development Industry, Information and Labor. The capital, Kingstown, has a population of 25,000<sup>1</sup>. The main industries in SVG include agriculture, tourism, construction and a small offshore banking sector.

### b) Overview of the airports and emergency plans

Argyle Inc. is the state company owned solely by the government which operates all airports in SVG on behalf of the government, with the exception of Mustique, which is a private airport. The new Argyle International Airport (AIA) located in Kingstown was officially opened on February 13, 2017, replacing the E.T Joshua Airport. It is expected that air traffic and tourism to the country will increase with the opening of the new airport.

<sup>1</sup> The Official Website of the Government of St. Vincent and the Grenadines: <http://www.gov.vc/index.php/visitors/about-svg>

Mr. Hadley Bourne serves as the CEO of all airports in SVG, with the exception of Mustique Airport. NEMO is the country's primary emergency planning organization and is primarily a government entity. The Airport Authority is responsible for the oversight of the development of the airports' emergency plans. Each airport should have their own airport emergency plan.

As part of the preparation work to develop a PReP Workshop, in close coordination with the management of Argyle Inc., the PReP Team carried out the Self-Assessment (PReP Step I) and collaborative Gap Analysis (PReP Step II) of AIA. These two steps allowed the PReP Team to identify current practices, needs, gaps, potential risks and vulnerabilities, barriers to incorporate change for improvement, and analyze existing documentation of AIA.



*Argyle International Airport (AIA)*

In the review of the AIA Emergency Plan e, it appears that the first responders in an airport-related emergency include the on-airport fire station and police, off-airport police and fire, the Coast Guard, the Milton Cano Hospital, and the Ministry of Health. A Memorandum of Understanding (MOU) has been established with several organizations, including four medical universities in SVG. The legal framework is in the process of being changed and therefore it is likely that all MOUs will need to be updated. Additionally, MOUs need to be constructed and agreed upon by all other agencies and/or organizations that may be a resource for disaster preparedness.

AIA, in its Emergency Plan, lists hazards affecting SVG in order of priority, which include hurricanes, flooding, landslides, volcanic eruptions and pandemics and communicable diseases. The management of communicable diseases is unique, and the Ministry of Health may have health officers conducting active screening at AIA during a health-related crisis. Any passengers that might be infected are completely removed from the general population and planned to be held in the isolation unit, which is in the process of being finalized. AIA also has a Health Unit, including nurses, that are available in the event of an emergency.

General information about AIA and the country in general relevant to emergency planning includes:

- Air traffic has been increasing by about 25% since 2015. The airport receives approximately 6,000 – 7,000 passengers per month.
- The country has one general hospital and two clinics close to the airport.
- There are 2,200 hotel rooms available.
- The airlines currently flying into SVG include:
  - LIAT, with seven flights daily

- Caribbean Airlines, with one flight 5 days a week
- Easy Sky with five flights weekly
- Island Hoppers including Grenadine Airlines
- Additional flights being introduced later in the year from North America:
  - Air Canada starting on December 14
  - JetBlue – still in negotiations
  - Southwest Airlines – still in negotiations
  - American Airlines – still in negotiations
  - WestJet – still in negotiations
- Majority of imports come in by sea. There are dedicated cargo flights which operate between 50% and maximum capacities.

### **c) Need for disaster resiliency training**

Due to its location and topography, the island is prone to a number of natural disasters including hurricanes, tsunamis, earthquakes, landslides and volcanic eruptions. An active volcano, La Soufrière, located on main island of SVG, last erupted in 1979. This makes it critical for the country to have an emergency management system in place that allows it to adequately respond in the event of a disaster.



*PREP Workshop participants - St. Vincent*

The Government of SVG and the management of AIA identified a need for additional disaster resilience and emergency management training and expressed significant interest in training their staff and officials, first responders, representatives from hospitals, clinics, coast guard, law enforcement and non-governmental organizations who may be resources in the event of a disaster to be prepared to respond in the event of a disaster at or near AIA.

Although the focus of the PREP disaster resiliency mandate was on the Argyle International Airport in SVG, disaster relief is a community effort, whether for the airport or for the nation; therefore, several other government and non-government entities were contacted to participate in the workshop as well.

## **PREP Workshop Preparations**

### **a) Planning process for the workshop**

The PREP team was engaged to deliver a two-day workshop to the Government of SVG and AIA, with a specific focus on AIA, to improve the resiliency of their disaster planning, to ensure optimal interoperability and coordination among agencies and other resources in the event of a crisis.

The PReP team conducted research on the latest information and best practices in emergency management and planning, held a number of internal planning workshops, as well as conference calls with AIA representatives to better understand the context of the workshop as well as coordinate logistical arrangements.



*PReP Team working on workshop preparations with FedEx and MIA*

Prior to the site visit, the PReP team reviewed all available documents provided by the Government of SVG, resources from the U.S. Federal Aviation Administration (FAA), the U.S. Department of Transportation (DOT), and the International Civil Aviation Organization (ICAO), emergency management websites, and documents available from other sources such as conferences, and academic/ journal papers. The AIA's current emergency plan was reviewed and compared with the St. Vincent and the Grenadines National Disaster Plan prepared by the National Emergency Management Office. Both plans were then compared with the ICAO Annexes on emergency management planning to ensure best practices and compliance with ICAO was followed.

The PReP Team and AIA management discussed plans for the organization of the workshop and agreed on the dates, location, list of participants, and general logistics for the Workshop, all of this in close coordination and collaboration of the Government of SVG.

#### **b) Summary of the pre-assessment and main needs identified**

In preparation for the workshop, the PReP Team constructed a questionnaire which included elements that are pertinent to understanding the governmental and aviation structure and supporting disaster relief and resiliency agencies in SVG. The responses to the questionnaire were analyzed as completed by AIA. Conference calls with the airport director and staff were made to review potential attendees, additional information needed, and discuss the logistics of the conference.

The pre-assessment, through the responses to the questionnaire, revealed some helpful information about the current state of the country's national emergency planning as well as the status of the AIA's Emergency Plan.

The Government of SVG has a National Disaster Plan in place prepared by the National Emergency Management Office in 2005. AIA's updated Airport Emergency Plan dated February 12, 2017 is still undergoing review and has yet to be submitted to the Eastern Caribbean Civil Aviation Authority for final approval. However, the AIA plan is the current version that the airport uses. The last available official airport emergency plan was prepared in 2005 and was for the old E.T Joshua Airport, and is therefore now obsolete. Both the National Disaster Plan and the current AIA Disaster Plan outline a series of contacts and actions to be taken in the event of emergency situations.

Based on the information provided, research conducted and general awareness of the requirements for best practices in airport emergency planning, a preliminary agenda for the

workshop was prepared by the PReP team and included the team's experience offering former workshops at other airports, consultants' experience in disaster planning and awareness, and IOS Partners' experience in safety and security at airports around the world.

### c) On Site Visit of the Airport

The Director of Operations provided the PReP team with both a pre-security and a post-security tour of the airport beginning with the curbside, moving through the ticketing area, to the security and departure areas. On the post-security side, the PReP team also reviewed the proximity of the sea, any potential landslide areas, runaway and taxi way access as well as the location of the Air Traffic Control Tower. Other areas relevant to emergency planning were identified and include:



*Participants of the PReP Workshop*

- A local tourist attraction close to the sea on airport land, beyond security, which had a number of dwellings, which may become an area of concern in the case of rising seas and/or tsunamis.
- The elevation of the buildings and the parking lots, along with the staging or muster locations for the potential evacuation of passengers and/or airport public and employees.
- Airport holding areas such as Remain Overnight stands and/or any other available staging for aircraft and/or gate access, along with the fire and rescue station.
- Within terminal, areas for family gatherings in the event of an aircraft disaster, along with the person responsible for assisting in that area.

### d) Meetings/calls with in-country emergency related organizations



*Local authorities participating in the PReP Workshop*

Several planning workshops and conference calls were held by the PReP team to coordinate delivery of the workshop. During the scheduled conference calls on August 29 and September 19, 2017, the PReP team reviewed the self-assessment questionnaire completed by AIA and requested additional information such as the airport layout plan to better understand the context, as well as organize the logistics and structure of the workshop.

The PReP team gathered information on the background of AIA and the structure of reporting within the organization and to the Government of St.

Vincent and the Grenadines. AIA senior management reports to a Board of Directors, who are then responsible directly to the Prime Minister.

- The PReP team met with representatives from the major hospital, nearby clinics, the Coast Guard, the central office of the Police and Fire unit on September 25, 2017.



Participants group discussions at the PREP Workshop

- The PREP team met with officials of AIA and conducted a tour of the airport on September 26, 2017.
- Meetings were held with Kenneth John of the Traffic Area who explained the resources that would be available in the event of an emergency. He stated that the current system in place is that all officers return to the station. They have 5 motor cars and 11 motorcycles available; however, they may be being used for patrolling and not be immediately available in the event of an emergency. When asked about resources available such as water, Mr. John was not sure how much water they currently had access to.
- During a meeting with Sgt. Broom of the Police Department, he remarked that the public frequently gets involved and knows about an emergency before they are officially notified.
- During a meeting with the fire department Sergeant on the afternoon shift at the Central Fire Station, he noted that they have 2 fire trucks. Emergencies usually are identified through receipt of a 911 call. They have 2 ambulances (one at Central location and one at AIA).



Local Authorities Expert Panel at PREP

- During a meeting with Mr. Smith, the Executive Officer at NEMO, he noted each agency has its own emergency plan. NEMO is activated for its national disaster or emergency plan. In the case of a hurricane, there is a sequence of watch – monitor – warning and Emergency Operations Center (EOC). The Prime Minister is the Chair of the Committee along with the Minister of Education who may close schools, if necessary, in the event of an emergency.
- NEMO will activate their EOC as needed with emergency personnel serving in shift. They have a pantry with food for a week; a generator and fuel tank outside with a full tank of fuel (42 gallons and another with 600 gallons which starts the pump as required by the generator and shuts itself down to save fuel as needed). They check the generator twice a week and have a schedule for maintenance. They have a warehouse, saws, generators, water pumps, central water with chlorine, tents, cots, etc. available.

- NEMO provides training and conducts a drill twice a year. During the last drill, a tsunami was used as an example of the disaster. They monitor the volcano and hold volcano awareness workshops for media and public awareness.
- NEMO is receiving a \$2.2 million grant to assist in connecting the repeaters along with other necessary communication equipment and upgrades from the World Bank. The PReP team was provided a tour of the NEMO facility as well.



*FedEx Representative with AIA's CEO giving PReP Certificates*

- The PReP team had a hospital administration visit with Grace Walters. She was not aware of the upcoming workshop at AIA; however, it is likely that the hospital's Chief Medical Officer is the person who may have received an invitation. The hospital has a well thought out emergency response plan and would respond when called for AIA. They have 2 ambulances available. Their water tank holds 3900 gallons. The hospital has enough emergency food and medical supplies for three days. They have 10 units in their emergency rooms with 14 triage kits. The ambulance is manned with 3 people.
- The PReP team also visited the Coast Guard Center and met with Mr. Henry. They have 4 boats ranging from 23' to 125'. Helicopters are available through St. Lucia. All musters are at the Coast Guard Center. They use cell phones to communicate on VHS frequencies.
- Mr. Lewis provided a tour of the Coast Guard facility. An emergency planning exercise was recently completed with AIA and NEMO. The Coast Guard has a National Maritime Search & Rescue Plan, which will be activated as needed. They have between 15 to 20 staff on duty overnight.
- The team met with two nurses at the Stubbs Polyclinic visit, who are the first responders in the event of an emergency. The clinic serves the local population and has 2 beds and 3 ambulances (although one is not working presently), with an average of 40 patients per day. A doctor is available as required. There are 2 nursing assistants. They have 1 generator and use 4 cell phones for communication. They operate from 8:00 am to 4:00pm and do not currently have a designated representative if an emergency occurs.
- The PReP team prepared and presented a two-day on September 27 and 28, 2017 held at the National Emergency Management Organization (NEMO) headquarters in Kingstown, SVG.

## Workshop General Information

### a) Summary general information of the workshop

PREP Disaster Planning and Emergency Management Workshop	
<b>Country</b>	Saint Vincent and the Grenadines (SVG)
<b>Airport Name</b>	Argyle International Airport (AIA) – Argyle Inc.
<b>Venue</b>	Argyle International Airport (AIA)
<b>Dates</b>	September 27 & 28, 2017

### b) PREP Team

The PREP Workshop was led by the following PREP Team (short biographies included in Annex I – Short Biographies of PREP Workshop Presenters):

- OAA Team:
  - Dr. Teo A Babun, CEO
  - Mrs. Maricarmen Estrada, Program Director
  - Mr. Wesley Kirton, Director CARICOM Outreach
- IOS Partners Team:
  - Mr. Robert Hans, CEO
  - Dr. Patricia Ryan, Director of Aviation
  - Mrs. Komal Sood, Project Manager

### c) Workshop participants

There were 54 attendees present from AIA, local representatives from the Ministry of Health, the National Emergency Management Organization (NEMO), the Coast Guard, local police, airport fire and rescue, Air Traffic Control, agricultural office, environmental office, and the Red Cross as well as various government entities involved in disaster management and response. List of participants is included in Annex II. The PREP Team delivered a certificate of participation (see Annex III) to each one of the PREP Workshop participants.



*PREP Team in St. Vincent AIA*



*St. Vincent PReP Workshop participants*

Participants included representatives from:

- Argyle International Airport
- National Emergency Management Organization (NEMO)
- The Ministry of Health
- Milton Cato Memorial Hospital
- Red Cross
- Soufreie Monitoring Unit
- Police Special Services Unit (SSU)
- Coast Guard
- Stubbs Police Station
- Biabou Police Station
- Traffic Branch
- Argyle International Airport Fire Station
- FedEx SVG
- Stubbs Medical Clinic
- Air Traffic Control
- Ministry of Foreign Affairs
- Seismic Monitoring



*PReP Workshopo participant receiving her PReP Certificate of Participation.*

## **Workshop Development**

### **a) Agenda of the Workshop**



Inauguration of the PReP Workshop in St. Vincent and the Grenadines

DAY ONE: Wednesday, September 27, 2017		
8:00 am	Registration & Refreshments	
8:30 am	<b>Official Opening Ceremony</b>	Amb. Wesley Kirton, Director CARICOM Outreach, OAA/PReP
	Welcome by Argyle Inc.	Mr. Hadley Bourne, CEO/Argyle Inc.
	Remarks by OAA/PReP	Dr. Teo A. Babun, CEO/ OAA/PReP
	Greetings by FedEx	Mrs. Wendy Minors, FedEx St. Vincent Country Manager
	Official Opening Address	Rt. Hon. Dr. Ralph Gonsalves, Prime Minister
9:30 am	<i>Coffee Break</i>	
9:45 am	Improving Operations and Preparedness	Dr. Patricia Ryan, Director of Aviation IOS Partners
10:15 am	Emergency Communications and Social Media	Dr. Patricia Ryan
10:45 am	Aircraft Crash Impact and Response	Mr. Robert Hans, CEO/IOS Partners
11:30 am	<i>Lunch</i>	
12:30 pm	Taking Care of Employees and Families	Mrs. Maricarmen Estrada, Program Director OAA/PReP & Dr. Teo A. Babun
1:15 pm	From Hazard and Risk Assessment to Superior Resiliency, with emphasis on volcanic ash, flooding, earthquakes, hurricanes, landslides, pandemics and communicable diseases.	Dr. Patricia Ryan
1:45 pm	<i>Coffee Break</i>	

2:00 pm	Panel Discussion: Building Strong Relationships with Preparedness & Response Partners	Moderator: Dr. Teo Babun
2:45 pm	Financial and Contracting Arrangements for Emergency Services/Supplies	Dr. Patricia Ryan
3:15 pm	Panel Discussion with Government Officials	Moderator: Dr. Patricia Ryan Argyle Airport, NEMO, PM Office, and others.
	Closing Remarks	Amb. Wesley Kirton

DAY TWO: Thursday, September 28, 2017		
8:00 am	<i>Refreshments</i>	
8:00 am	Table Top Exercise (TTX)	Dr. Patricia Ryan & Mr. Robert Hans
10:00 am	<i>Coffee Break</i>	
10:15 am	Table Top Exercise (TTX) continues	Dr. Patricia Ryan & Mr. Robert Hans
11:15 am	Team Reports on TTX	PReP Participants
12:15 pm	<i>Lunch</i>	
1:15 pm	After Action Review/ Improvement Plan Discussion	Dr. Patricia Ryan
1:30 pm	Evaluation of PReP Workshop Presentations and TTX	Mrs. Maricarmen Estrada
1:45 pm	Closing Remarks	Amb. Wesley Kirton
2:00 pm	End of PReP Workshop	

### b) Workshop Presentations

To assist AIA and the SVG’s government in improving disaster resiliency and emergency management, the PReP team prepared and delivered presentations and led discussions on the following topics

1. *Improving Operations and Preparedness* – building on SVG’s National Disaster Plan and the AIA Emergency Plan, the subject matter focused on ways to improve the airport and government’s preparedness for emergencies and disasters.
2. *Emergency Communications and Social Media* –the means and methods for effective communications and exchange of information for successful incident and disaster event management was an interactive discussion. An important trend



*IOS Partners leading a session of the PReP Workshop*

in the use of social media to manage communication to the public in the event of a crisis was identified with not only AIA involvement but the Ministries and other organizations who needed to coordinate such response.

3. *Airport Crash Impact and Response* – the focus was on response to an aircraft crash onsite at the airport, including immediate response, coordination with other agencies, securing the crash site and the terminal, and communication and care for victims, family members and other passengers.
4. *Taking Care of Employees and Families* –The importance of taking care of employees and their families in the event of an emergency was emphasized as a priority for not only AIA but all other agencies as well.
5. *From Hazard and Risk Assessment to Superior Resiliency* – this topic dealt with planning and preparedness for the disasters that could impact SVG including hazard and risk analysis, planning, resource mobilization and budgeting, workforce recruitment, training, response, recovery and continuous improvement processes.
6. *Building Strong Relationships with Preparedness & Response Partners Panel* – the purpose of this panel was to discuss ways to ensure strong relationships and coordination among partners in the event of an emergency.
7. *Financial and Contracting Issues in Emergencies* – the topic was introduced to ensure airports and other agencies have sufficient resources / access to resources to adequately respond and maintain operations once the crisis hits
8. *Panel Discussion with Government Officials* – during this part of the agenda SVG’s government presented and shared lessons learned, and challenges related to emergency planning and management.



OAA leading an Expert Panel Discussion

Each presentation and discussion offered an opportunity for questions and/or comments by the workshop attendees. During the presentations, several key gaps were identified which will be discussed in the next sections.

### c) **Summary of the Table Top Exercise (TTX)**

A Table Top Exercise simulating an earthquake, followed by a tsunami was conducted on Day 2 of the workshop to evaluate learning outcomes and airport/ government /community readiness to deal with a disaster of significant proportions. The purpose of the exercise was to present a real-life scenario to identify any gaps in the process and procedures as well as decisions made in the group settings and to determine the effectiveness of responses and interactions between and among the different agencies and/or organizations



PREP Participants at Table Top Exercise (TTX)



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*An initiative for a disaster mitigation network of airports throughout  
Central America and the Caribbean*



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