



The Port Resiliency Program (PREP)

AmericasRelief Team

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

Promoting a Secured Supply Chain for the Americas

TECHNICAL NARRATIVE

Overview

Ports (airports and seaports) combine multiple facilities and functions, such as: terminals, delivery areas for packages or luggage, communication and information systems, security, process control coordination centers, document and goods storage areas, customs and border control, emergency response, and public and protected areas. Ports are often sprawling enterprises; each is unique in its operation and regulation dependent on the geographic location and local governing structure. Ports are seldom a single entity; they are usually a collection of varied private and public stakeholders, so the role of port authorities varies from port to port and from country to country. Airports are usually somewhat simpler, but still involve interactions among many parties.

Interdependencies among the various stakeholders, customers, clients and the local community are vast and complex in both air and sea ports – each requiring a mechanism for protection of vital interests and assets. To ensure this protection in the case of an emergency or disaster, ports must focus on building resiliency both internally and externally.

Damaged ports have a tremendously deleterious effect on the local community – indeed on the whole country, as the very crisis event that damages the port cripples the efforts to get in badly-needed goods and aid in the wake of the event. Jobs are lost as trade is halted, and duties, taxes and tariffs associated with the port are diminished. A damaged port may also delay medical or other evacuations. Our structured, functional port restoration program standardizes and streamlines response, promoting a timely reopening of damaged ports and fast restoration of trade. The PREP Program sets forth best practices to ensure optimal interoperability among port personnel and agencies in the complex challenges created by port impairment after a crisis event.



The Need

Much of the Caribbean's wealth depends on international trade, as the region is comprised of relatively small islands. Ships and planes import and export a range of bulk cargoes to the region, so protecting ports helps Caribbean countries and their businesses compete globally. Because of its geographical conditions, the Caribbean region is prone to natural events of severe intensity. Several Caribbean basin countries lie directly in the path of tropical hurricanes, which occur annually from June through November. Many of the countries also possess the added risk of high seismic activity. The magnitude and frequency of these natural events is expected to increase over the next ten years.

In the past 20 years, the Caribbean has sustained billions of dollars' worth of damage and the loss of thousands of jobs due to hurricanes alone. One statistic states the Caribbean and Latin American region saw an average of 7,500 fatalities per year over a thirty year period (1970 to 2000) due to the effects of natural disasters, with an estimated annual average cost of between \$700 million and \$3.3 billion dollars from 1970 to 2000. The economic cost is compounded by extreme vulnerability in the region, stemming in large part from inadequate disaster risk management policies and practices.

While some Caribbean countries currently employ disaster resilience strategies, few of the countries are fully optimized. Local and regional planning training, drilling, and exercising SOPs are still evolving. It is inevitable that countries in the Caribbean will continue to be hit by severe hurricanes or other natural disasters that will result in the temporary closure of their ports. Clearly, then, an accelerated port restoration plan during a catastrophic event that damages a port would be of tremendous benefit in fostering disaster resilience in the region. There is a need for a fully integrated disaster resilience strategy in the region involving ports, state coordinators, government agencies, NGOs, logistics firms, and other stakeholders. Helping disaster-stricken Caribbean countries reopen ports as quickly as possible will enable them to receive trade commodities and aid in a more timely and effective manner in times of crisis.

Local Approach

Port resiliency programs must start at the local level, so that resiliency becomes an emergent cultural value when the local stakeholders effectively collaborate to prepare for, respond to, recover from, and mitigate damage caused by catastrophic events. Beyond this, a local approach ensures that resiliency can be understood by the individuals who will be implementing and practicing the preparedness plans unique to each port. By working through local universities or learning institutions, to conduct port resiliency analyses, training, and support, we seek to build local capacity that can provide the sustainability and continuity for local port programs. The creation of an integrated framework that bridges local and industry knowledge, capacity and support with the necessary resources for resiliency-building is both effective and beneficial for the promotion of preparedness. Collaboration through the use of such a framework provides for sustainable, stable, equitable, and cost-effective measures to reduce vulnerability.¹

PREP Framework

While there are many differences among the ports around the world, many preparedness, response, recovery, and mitigation principles apply to all of them.

Many similarities in the challenges that ports experience during disasters are commonly related to loss of: (1) infrastructure, (2) communication, (3) personnel, and (4) interagency coordination. The resilience of every port, big or small, is governed by universal principles and traditional concepts of *Continuity of Operations (COOP)*, which determine the organization's capability to withstand unexpected shocks, to repair itself when necessary, and to thrive when conditions are right. Similarly, the resilience of every port is governed by the concepts and practices of *Business Continuity Planning (BCP)*. COOP and BCP must be coordinated to maximize resiliency.

Perfect resilience may be impossible, but improved resilience is attainable. The proposed PREP framework aids in the creation of coherent and robust plans that foster resilience. The PREP framework establishes a systematic process by which managers can gain insight into the capabilities of their organizations by identifying the



strengths and weaknesses of current processes as they relate to risks. Once the initial risk assessment is completed, the necessary steps that support strengths and correct weaknesses can be taken to enhance the continuity plans of each port.

Through the incorporation of a framework that encourages ports to become more adaptive and proactive, and therefore more able to adjust resources, configurations and outputs to meet changing internal and external needs and requirements, the same principles of preparedness can be applied to a multitude of regions while simultaneously promoting a consistent level of resiliency.²

The framework focuses on improvements (correcting weaknesses or building on strengths in order to reduce risks) that are most beneficial to the ports given their current situation and capabilities; each organization is different. The PReP framework ultimately identifies the needs of each port and identifies the critical items for recovery. Each port will customize the PReP framework to fit its own situation and risk profile.

Having one framework for the planning of port resiliency does not mean that identical planning decisions should be made at all ports, but that the decisions at all locations should be based on the same sound principles and technical information.

Regional Benchmarks

The proposed framework produces a consistent interpretation of the readiness of ports across the region, all being characterized by recognized industry standards. Having a consistent characterization of resiliency maturity for ports allows for the establishment of benchmarks. Benchmarks allow for the comparison of performance across ports with similar characteristics, and the creation of a learning network of ports that can identify and share experiences and knowledge over time. This means that PReP will be a proactive process, with lessons learned being communicated to all airports in the program. The continuous improvement cycle will be used.

Use of Technology

A fundamental aspect of our approach is capturing of the resulting plans, standard operating procedures, checklists, and other related artifacts into a centralized repository. The centralized repository is designed to help improve knowledge and innovation, and to enhance collaboration among stakeholders. Our technology will baseline port capability and maturity levels, and help update a process improvement program. Upon completion of all critical elements of information, the port is ready for an exercise to validate plans.

Exercise

Practice is an important aspect of the preparedness process. Exercises, drills, and simulations are critical to this type of emergency planning because they increase acting knowledge during emergencies; identify gaps and weaknesses in the plan; organize and test the response capacity of all organizations involved in the response; and increase the confidence of the port and local community about the resiliency of the port. Exercises promote trust and confidence among the responding organizations while providing the opportunity for these organizations to make important cross-departmental contacts. Mission critical recovery functions with deficiencies and in need of remedy will be identified, reviewed, and corrected. Upon successful completion of exercise process, the port will be authorized to receive the material support from the PReP.

Advisory Board

The PReP would be greatly served through the creation of an Advisory Board which serves to review, make recommendations, and track the progress of the program. The Advisory Board consists of representatives from the emergency management community, airports, airlines and air cargo companies, the invested members of the private sector, the active humanitarian organizations, the academic community, interested donor organizations, and most importantly full representation of the local stakeholders. The Advisory Board provides feedback to the process, ensures successful implementation of the project at each host country, and provides programmatic and strategic guidance to the PReP.



Stakeholders

The main stakeholders of PReP are threefold – the ports, their tenants, mutual aid partners, and local communities; the academic institutions and universities; and the acting partners and organizations involved in providing the materials and curriculum. Each actor benefits in various ways through this program and framework. Stakeholders at the port will be identified by that port working with the PReP Advisory Board.

Benefits to the Port and Local Community

After completing the PReP and submitting materials for review, the programs undertaken with respect to the ports will have several beneficial outcomes. The first outcome is access to a *Critical Supplies Container (CSC)*. The CSC is stocked with a customized set of critical items needed for the continuity of operations, their staff, and the families of the staff. The CSC resides at the port itself, and its critical content is identified through the PReP with a goal to maximize resiliency. In the event of an emergency, the CSC ensures a heightened level of port readiness, allowing for rapid response and recovery efforts, thereby increasing the port's availability during disasters.

Another outcome is a dramatic increase in formalized knowledge of continuity and preparedness at the local level. Through this program, the ports are provided with a maturity model for preparedness, which brings a discipline to the planning process that ensures effective and efficient operations during an emergency situation.

Furthermore, the ports and the stakeholders with whom they interact benefit by recognizing their critical role during a disaster. All stakeholders that interact with ports and share interdependencies in mission critical functions benefit from the PReP - that is, port vendors, port users, and the community at large.

While some Caribbean countries employ disaster resilience strategies, there is a clear need for a fully integrated disaster resilience strategy in the region involving ports, state coordinators, government agencies, logistics firms, and other stakeholders.



Program Summary

The Need	The PREP Solution
Destroyed port infrastructure after the crisis event hampers movement of trade goods.	✓ Pre-positioned SOCs store targeted supplies to facilitate rapid reconstruction of ports, leading to restored trade, protected jobs, and favorable impact on economies of local communities.
Supplies that arrive are not necessarily targeted to the strategic area of port reconstruction.	✓ SOCs pre-position goods that are pre-selected by local partnership, ensuring they are targeted to the critical goal of port restoration.
Trade goods and aid arrives from locations with no proximity to the theater of the disaster. Supplies are delayed, when time is of the essence.	✓ Commodities and goods arrive from in-country (or from the central, Miami SOC location) eliminating time delays and the need to order from multiple sources under hectic conditions.
Non-formalized, inadequately communicated SOPs for emergency response creates a disjointed, harried response, particularly in the early recovery phase.	✓ A planned, well-communicated set of SOPs serves as a valuable "roadmap" for essential port personnel. Procedures are formalized and the approach is unified and coordinated. Disaster response practices coordinate with SOCs' pre-positioned goods, and with the efforts of all partner alliance organizations.
Poorly or non-trained port personnel.	✓ Trained port personnel are on standby for short-notice dispatch for when disaster strikes. They have full understanding of SOPs, including how to make use of goods in SOCs.
Lack of coordination among key player organizations (vendors, suppliers, local government, NGOs, Consuls General, etc.)	✓ An alliance has been created of organized, mapped member alliance organizations whose efforts are coordinated and harmonized, avoiding redundancies.
Major security concerns at and around the port.	✓ Port personnel are trained in port security, credentialing, and control.

Outreach Aid to the Americas, Inc. under its Americas Relief Team's program brand has introduced an initiative called PReP which stands for Port Resiliency Program.

PReP is an accelerated port restoration plan during a catastrophic event that damages a port would be of tremendous benefit in fostering disaster resilience in the region.

AmericasRelief Team's Port Resiliency Program (PREP) is designed to improve the disaster readiness of air and sea ports in the Latin America and Caribbean region. It will facilitate the swift revitalization of the logistics supply chain, thereby stabilizing economies and saving lives. The project seeks to apply best practices and lessons learned from recent disasters to assist regional ports in advancing their continuity of operations. PREP will promote capacity building, implement resiliency assessment and planning activities, and provide post-disaster technical and commodities support. It is based on the creation, development, and dissemination of disaster mitigation best practice standard operating procedures and training.

Our structured, functional port resiliency program standardizes and streamlines response, promoting a timely reopening of damaged ports and fast restoral of trade. The PREP Program sets forth best practices, and disaster drills to ensure optimal interoperability among port personnel and agencies in the complex challenges created by port impairment after a crisis event.

The Port Resiliency (PReP) Program helps airports and seaports prepare for natural crises and incorporate a local implementation plan. The issues covered in this program include:



- Initial on-site screening & assessment to review existing knowledge
- Incorporates disaster mitigation best practices & recommendations to address identified GAPS
- Training and disaster readiness drill with stakeholders & essential personnel
- Development of a port-specific Implementation Plan
- Prepositioning of emergency kits for essential workers & their families, and deployment emergency package of key supplies for continuity of operations.
- Provides a process for sustainability and certification.

Our Sponsor

FedEx has built a global network serving more than 220 countries and territories. 300,000 team members strong, we move over 8 million packages every single day. Our business is designed to make people's lives better by placing the global marketplace within reach. We provide critical Access that helps people succeed, businesses grow, and communities thrive.

We are proud of the ways we connect the world, and believe our responsibility to provide Access extends beyond our customers. For decades, FedEx has used our nearly 700 planes, 75,000 trucks and the world's most powerful and versatile transportation and logistics network to deliver critical supplies, services and expertise to support victims of disaster.

At FedEx, disaster relief is in our DNA. Each year, we set aside space for as much as four million pounds of disaster-related charitable shipping. Our operations teams, pilots and drivers consider it an honor to be a part of relief teams that save lives around the world. But we know that delivering supplies is only one piece of how we can help communities affected by disaster. That's why we also leverage our logistics expertise, scale and influence to invest in preparedness initiatives for families and small businesses. In addition, we work on long-term recovery efforts in communities like New Orleans and Haiti that, years later, still have a lot of rebuilding to do.

We are honored to support the Port Resiliency Program to help countries throughout the Caribbean and Central America build the preparedness and response capacity of their ports and airports. The Port Resiliency Program leverages the logistics expertise of FedEx team members and aims to help mitigate the damaging effects of disaster-related port closures on the delivery of relief supplies and on local jobs, businesses and economies.

