

*Risk Mitigation for Improved
Port Security Operations*

Trends and Challenges

Presentation Outline

Natural Disasters-Port Security

The Link

Jamaican Case Study - JAMALCO

Risk Mitigation Strategies - Trends

Challenges

Conclusion

Natural Disasters-Port Security

The Link

- When all stakeholders are involved in risk mitigation strategies they feel invested in the Port and become another layer of security.
- A vulnerable port is not a secure port. Any efforts to build port resilience strengthens port security.
- Floods /natural disasters in and around the vicinity of ports disrupt the supply chain and the movement of goods . Shortages of basic necessities can lead to protests which threaten port security.

Disasters-Port Security

The Link

The Hurricane Season in the Caribbean runs from June to November, however **disasters** can happen at any time.

Though not exhaustive, disasters in the Caribbean fall in the following categories:

- **Natural Hazards:** Hurricanes, Earthquakes, Severe Weather, Floods
- **Technological Hazards:** Bomb Threats, Fire/Explosion, Hazardous Materials Incident, Radiological Hazards, Terrorism Incident, Transportation Security Incidents, Utility Outage
- **Other Hazards:** Health Pandemics, Civil Disturbance, Employee Disturbance, Fatality, Transportation Accident, Vessel Incident

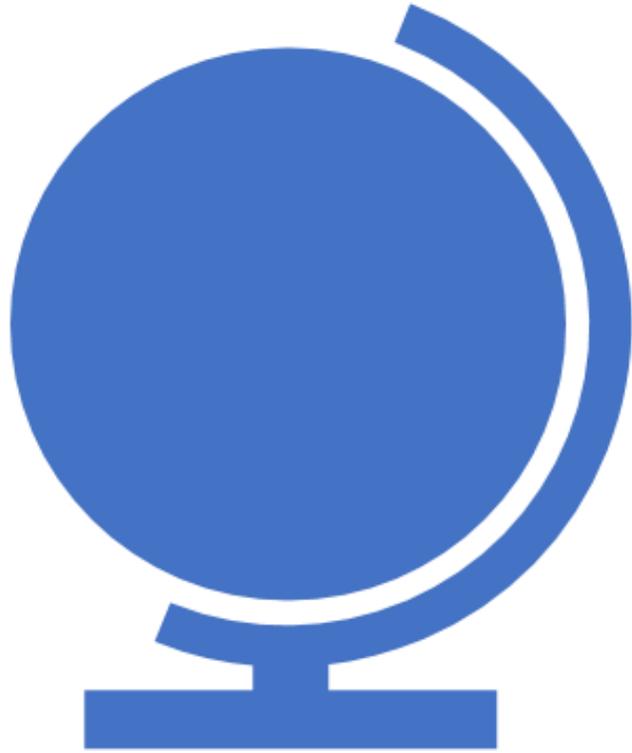
Disasters can result in injury to port personnel, damage to port property and needless interference to the efficient conduct of port operations.

Natural Disasters-Effect on Port Operations

- Sea level rise; the increased intensity of hurricanes; earthquakes
- Risk assessments must take into account natural disasters as the impact on port operations both directly and indirectly can be just as economically devastating as a manmade attack on the port infrastructure.
- The role of ports in the economy representing 90% of trade, make planning for these disasters by building risk mitigation strategies into security and disaster planning, and ensuring business continuity, an economic necessity.

PORT LOCATIONS IN JAMAICA





Climate Stability

Jamaica 2004/2007



Hurricane Ivan – September 2004 – Category 4

- JAMALCO Rocky Point :
- Repairs after Ivan was just over US\$30 million and took 6 weeks.
- Switch imports and exports to Port Esquivel, neighbouring port.
- There were associated retooling and rental costs.
- Other business costs.





Hurricane Dean August 2007

- August 19, 2007 – South Coast of Jamaica
- The amount spent to recover after Dean was about US\$40 million and the repair work took 2 ½ months.

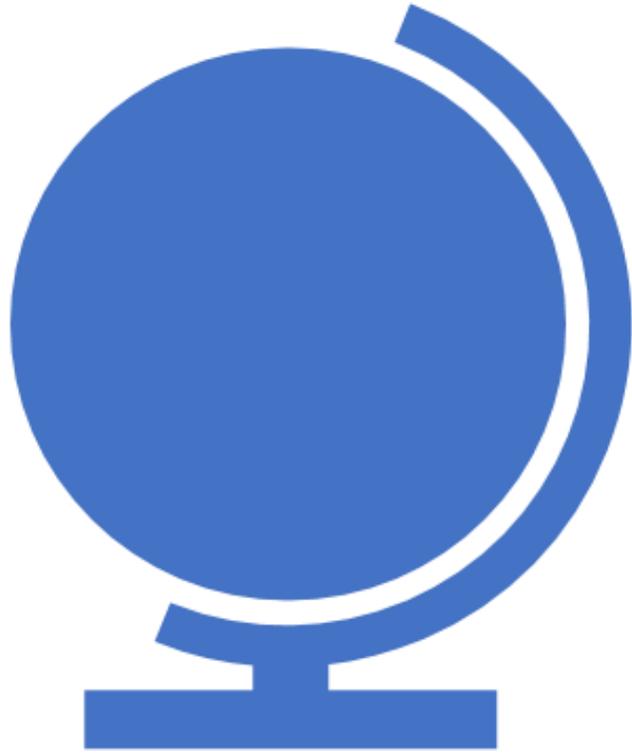


NOTICE

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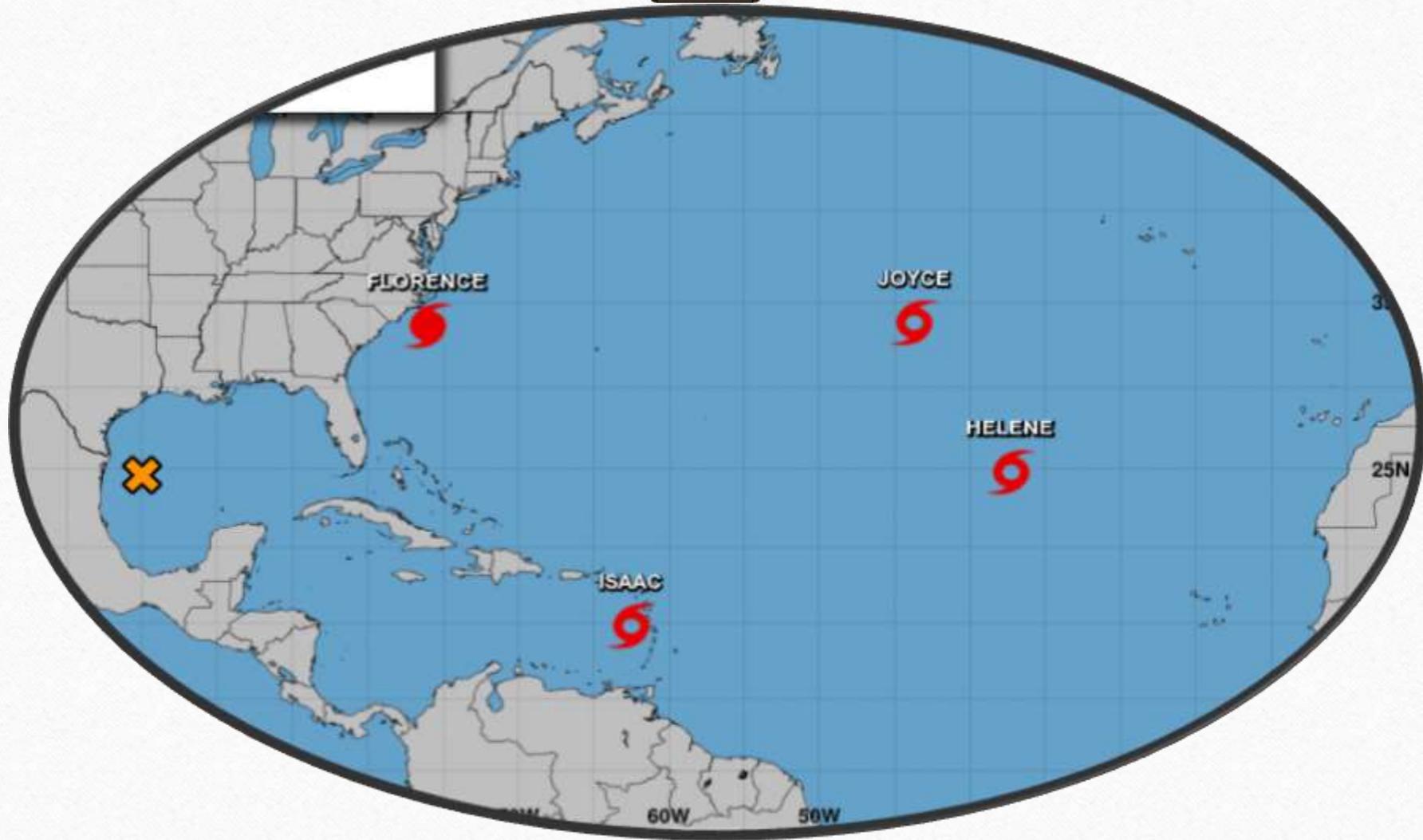






Climate Change

Japan 2018





Typhoon Jebi Japan - 2018

Typhoon Jebi leaves trail of destruction in Japan

- The strongest typhoon to hit Japan's mainland in 25 years smashed a tanker into a bridge, forcing one of the country's largest airports to close and hundreds of flights to be cancelled.



KENTARO IKUSHIMA/MORINICHI NEWS/PAF

Typhoon Jebi Japan - 2018

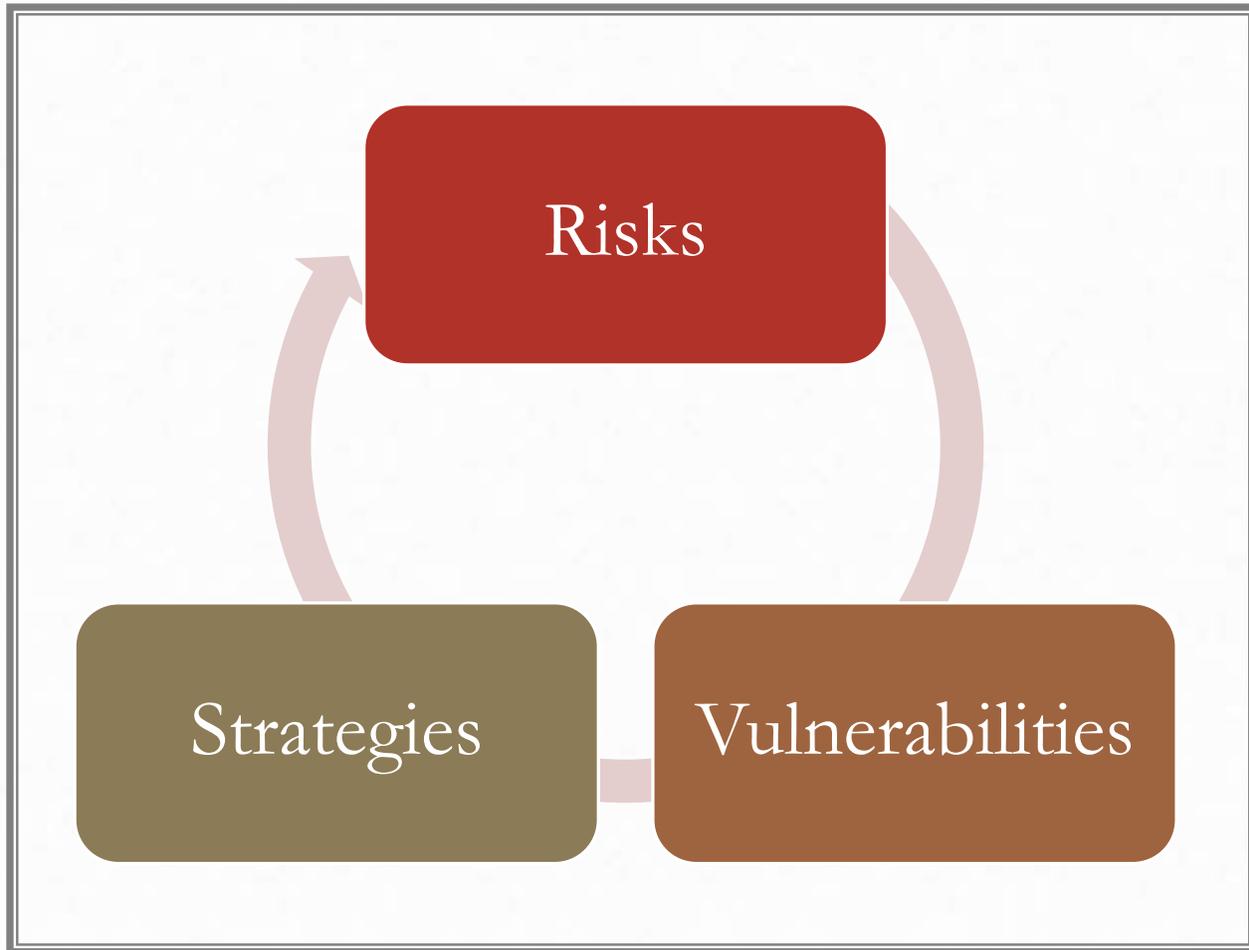
- Storm surges also swamped runways at Kansai Airport, with water washed in from Osaka Bay. Flight cancellations also affected Itami Airport in Osaka and Chubu Centrair International Airport in Nagoya.

Adapting to Climate Change

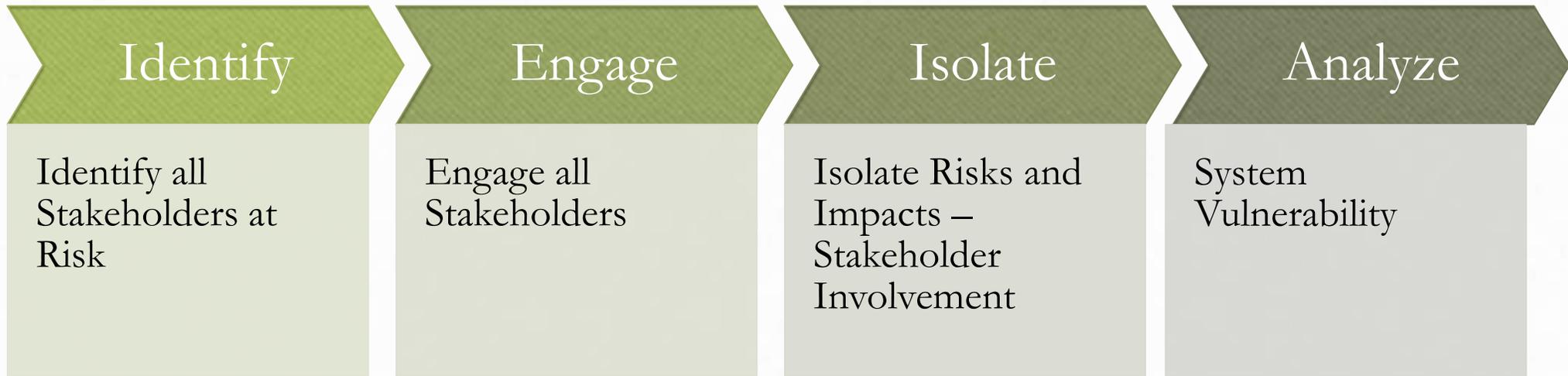
- Adaptation, as defined by the Intergovernmental Panel on Climate Change (IPCC), means “any adjustment in natural or human systems in response to actual or expected climatic stimuli or their effects, which moderates harm or exploits beneficial opportunities” (IPCC 2007).

Adapting to Climate Change

- As Ports no longer operate as singular entities we now look at it as one link in the supply-chain which means that the reach of natural disasters is greater than before and the effects greater on the population quantitatively and qualitatively.
- Hence in the process of adaptation involves identifying **all** stakeholders in order to evaluate the total costs and effects and the full requirements for change .



**Adaption
Process:
Step 1
Identify...**

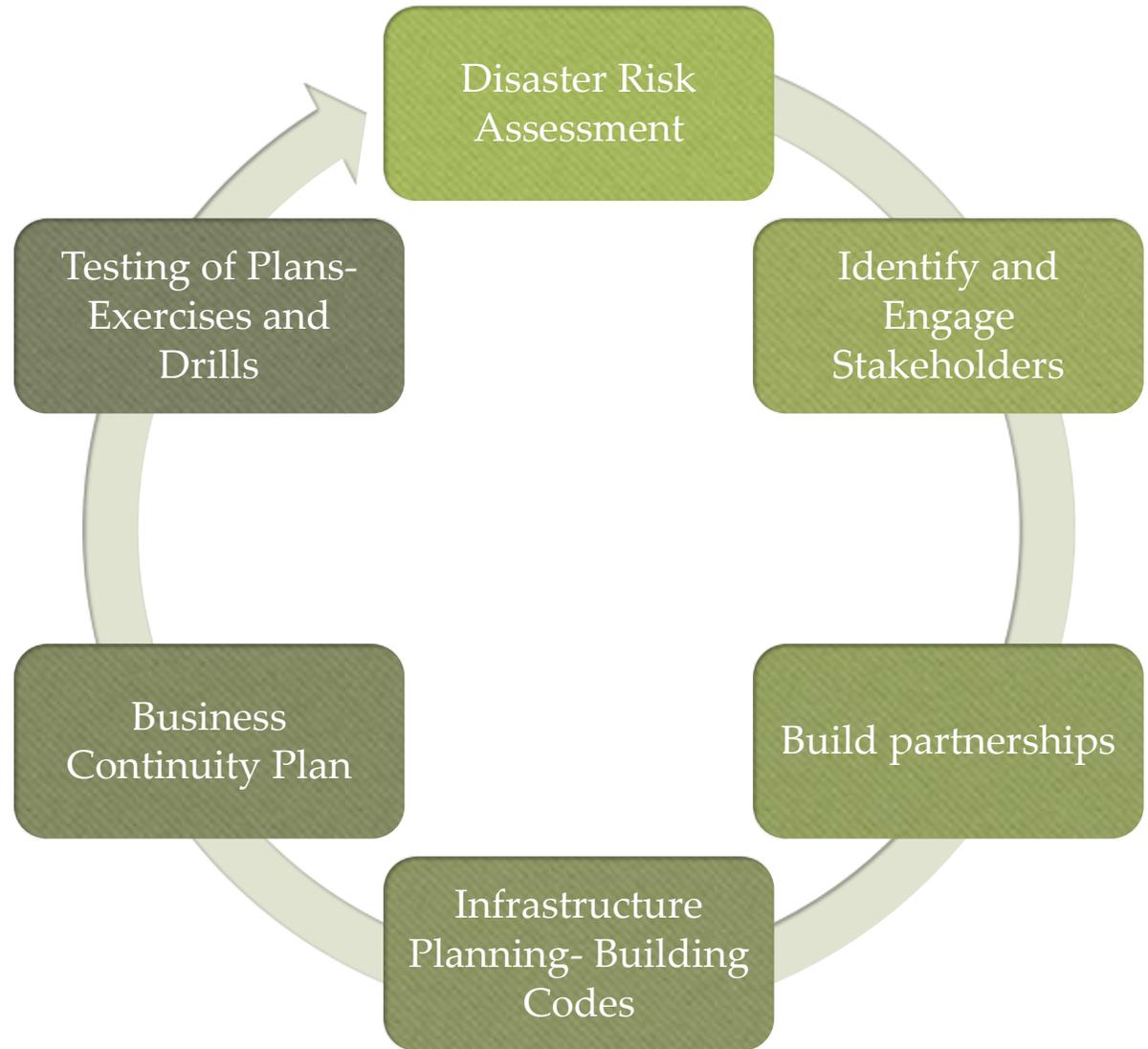


Adaption Process: Step 2

Building Port Resilience

- The effectiveness of a resilient infrastructure or enterprise depends upon its ability to anticipate, absorb, adapt to, and/or rapidly recover from a potentially disruptive event (O'Rourke 2007).
- Importance of stakeholder engagement in adaption planning
 - A resilient port can “withstand an extreme natural event without suffering devastating losses, damage, diminished productivity or quality of life, without a large amount of assistance from outside the community” (Mileti 1999)

Trends



Challenges in Disaster Planning

