

**Global Supply Chain Forum
(Bridgetown, Barbados, 21–24 May 2024)**

Parallel Session 9

**Climate change adaptation, resilience-
building and disaster risk reduction for
ports**

23 May 2024

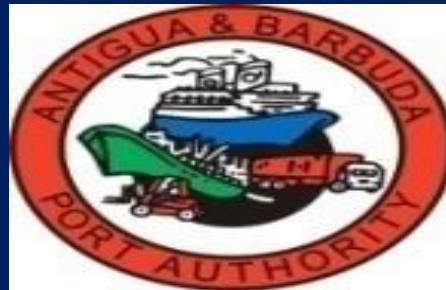
**Lessons Learnt Aftermath Hurricanes Maria and
Irma**

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Lessons Learnt Aftermath Hurricanes Maria and Irma

Impact of Hurricane Irma on Barbuda



The greatest challenge for the region in 2017 was the impact of hurricane Irma & Maria. The season featured 17 named storms, 10 of which became hurricanes. The season was the costliest on record, causing an estimated US\$ 316.5 billion in damages. In Barbuda 90% of the island's housing stock was destroyed.

Role of the Executive Port Management

- ✓ Demonstrated resiliency in Port Operations for cruise ships.
- ✓ Coordinated air, land & ocean logistics for relief items for Barbuda & Dominica with regional & international agencies (CDEMA, CARICOM, UNICEF, Shelter box: Samaritan Purse)
- ✓ Lead national coordination efforts.
- ✓ Strategic placement of assets and resources at the sea and airport to facilitate efficient supply & logistics.
- ✓ Coordinated evacuation of Barbuda with NODS.
- ✓ Establish the Port as the staging for national & regional logistics.
- ✓ Reduced risk exposure of assets(boats) to the local community.
- ✓ Design containerised accommodation facilities

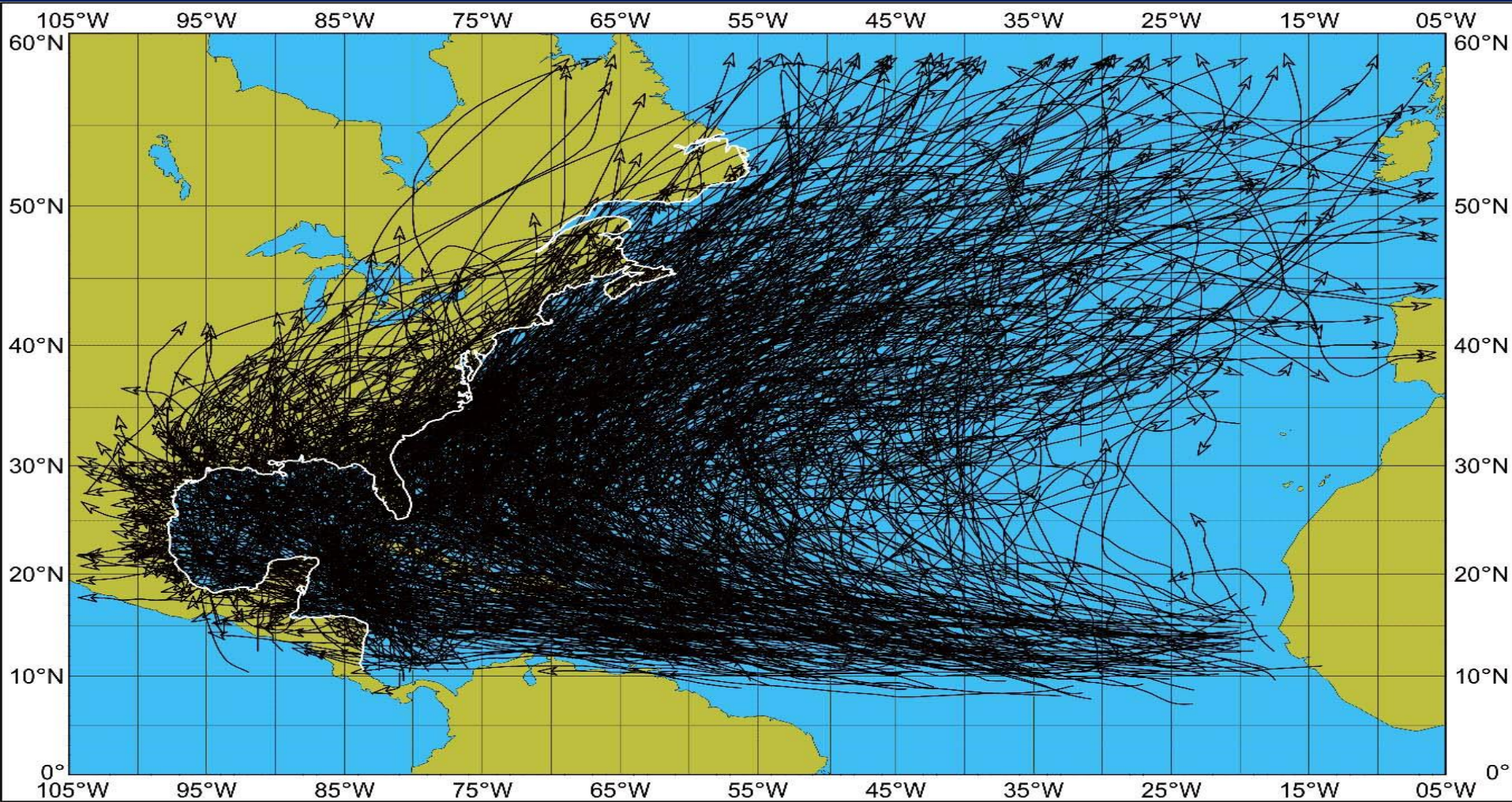
Social Responsibility Response to the Community



The Port constructed bathroom facilities for the relocation of Barbudans using 40 containers.

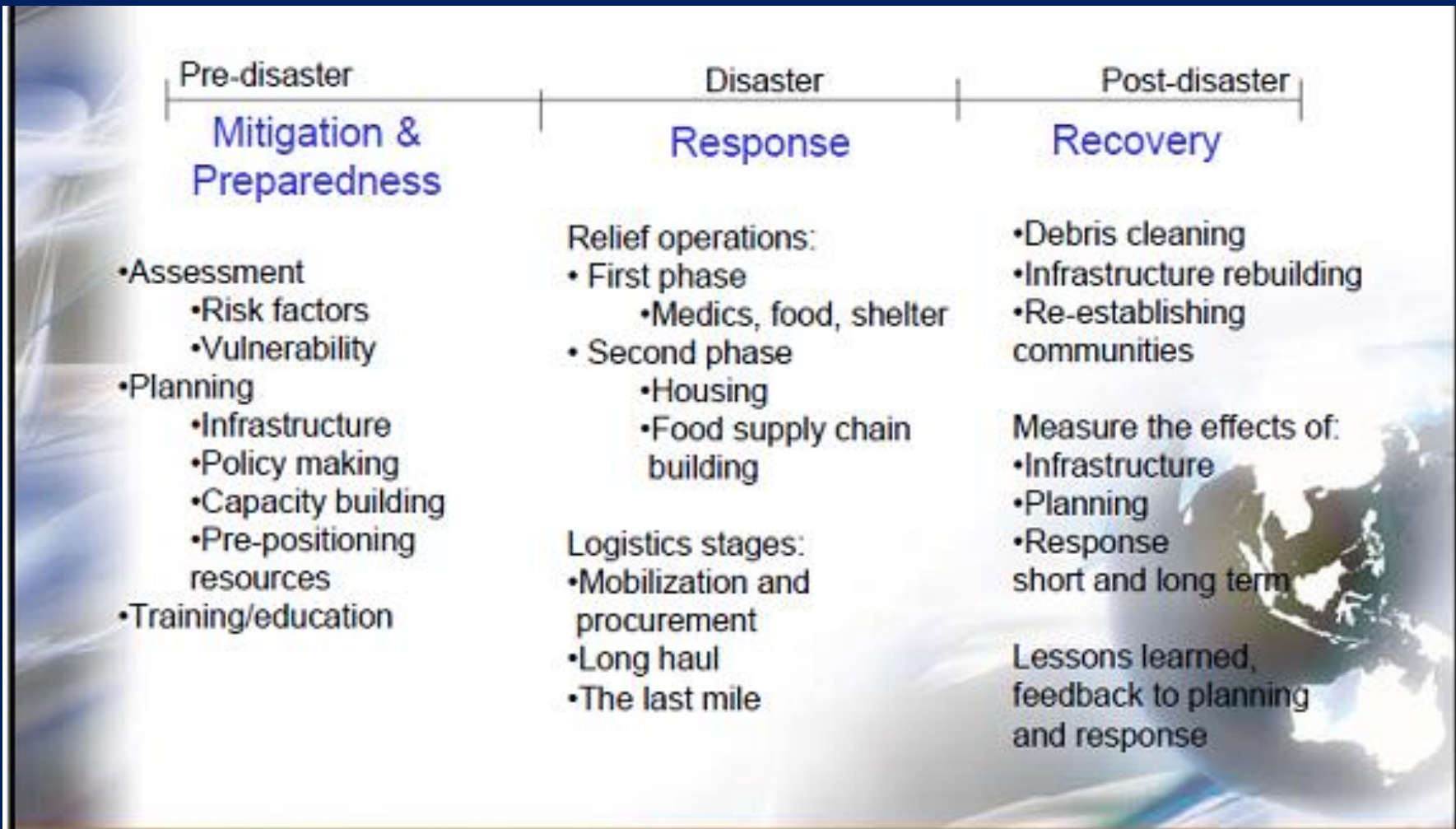
The Port removed vessels out the sea for safety for fishermen and other users.

Tropical storms & hurricanes 1851-2004



NORTH ATLANTIC TROPICAL STORMS AND HURRICANES, 1851-2004 (1325 STORMS)

Disaster Management Cycle



Humanitarian logistics

Humanitarian Logistics refers to the processes and systems involved in mobilizing people, resources, skills and knowledge to help vulnerable people affected by natural disasters and complex emergencies. Humanitarian logistics encompasses a range of activities, including procurement, transport, tracking and tracing, customs clearance, local transportation, warehousing and last mile delivery.

Disaster relief is as much about logistics as it is about fund raising – indeed it has been estimated that for every pound that is raised, some 80 pence is spent on logistics.

Source : (Christopher, 2011)

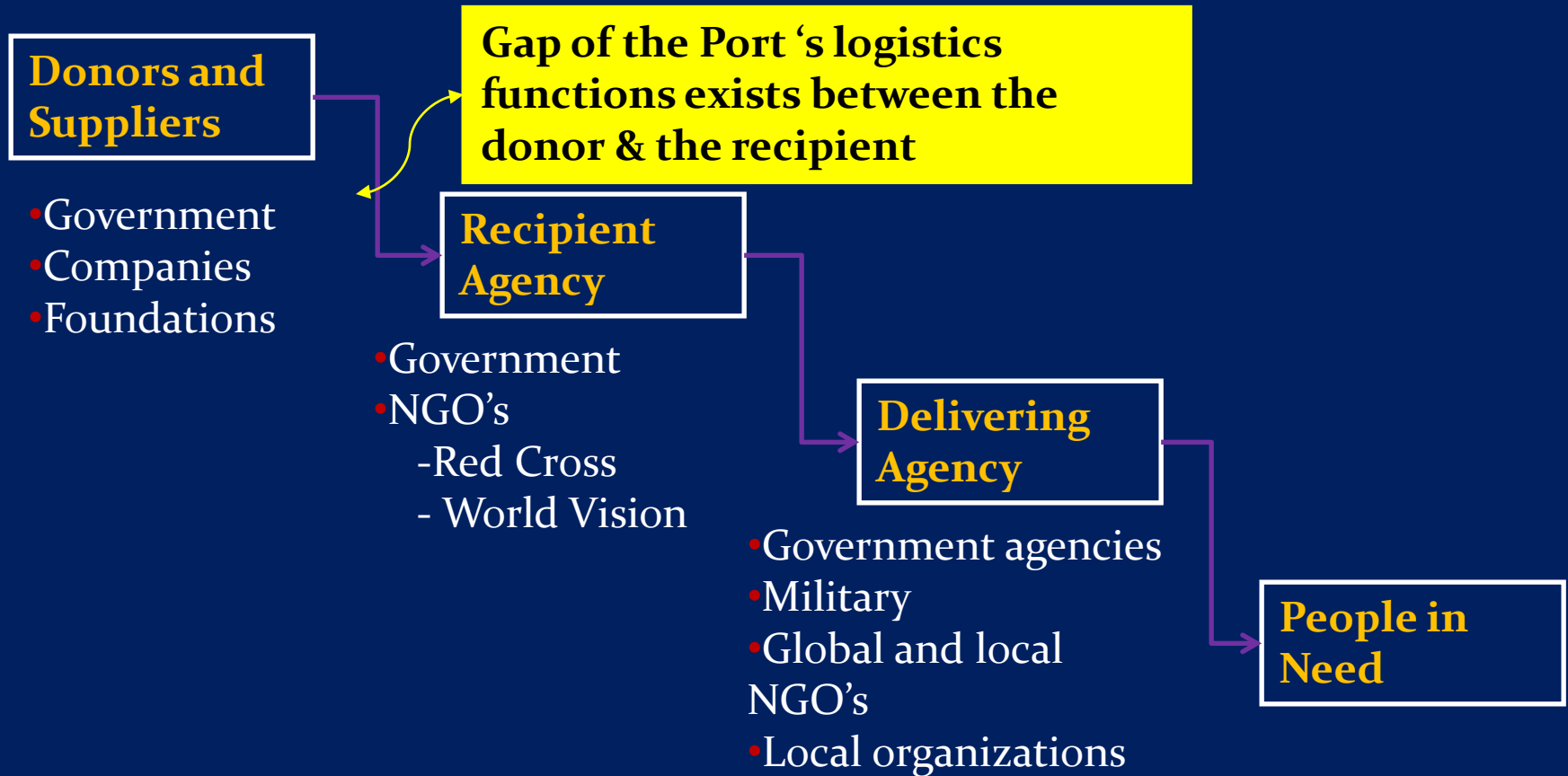
Humanitarian logistics

The essence of disaster management is rapid response: one of the areas on which leading practitioners of logistics and supply chain management have focused is agility: i.e. how do you develop processes that are capable of responding rapidly to unpredictable events? Agility must be at the heart of humanitarian logistics, where there is a huge potential for improvement, and consequential benefit to those.

Source : (Christopher, 2011)

Model of Emergency Relief Supply Chain

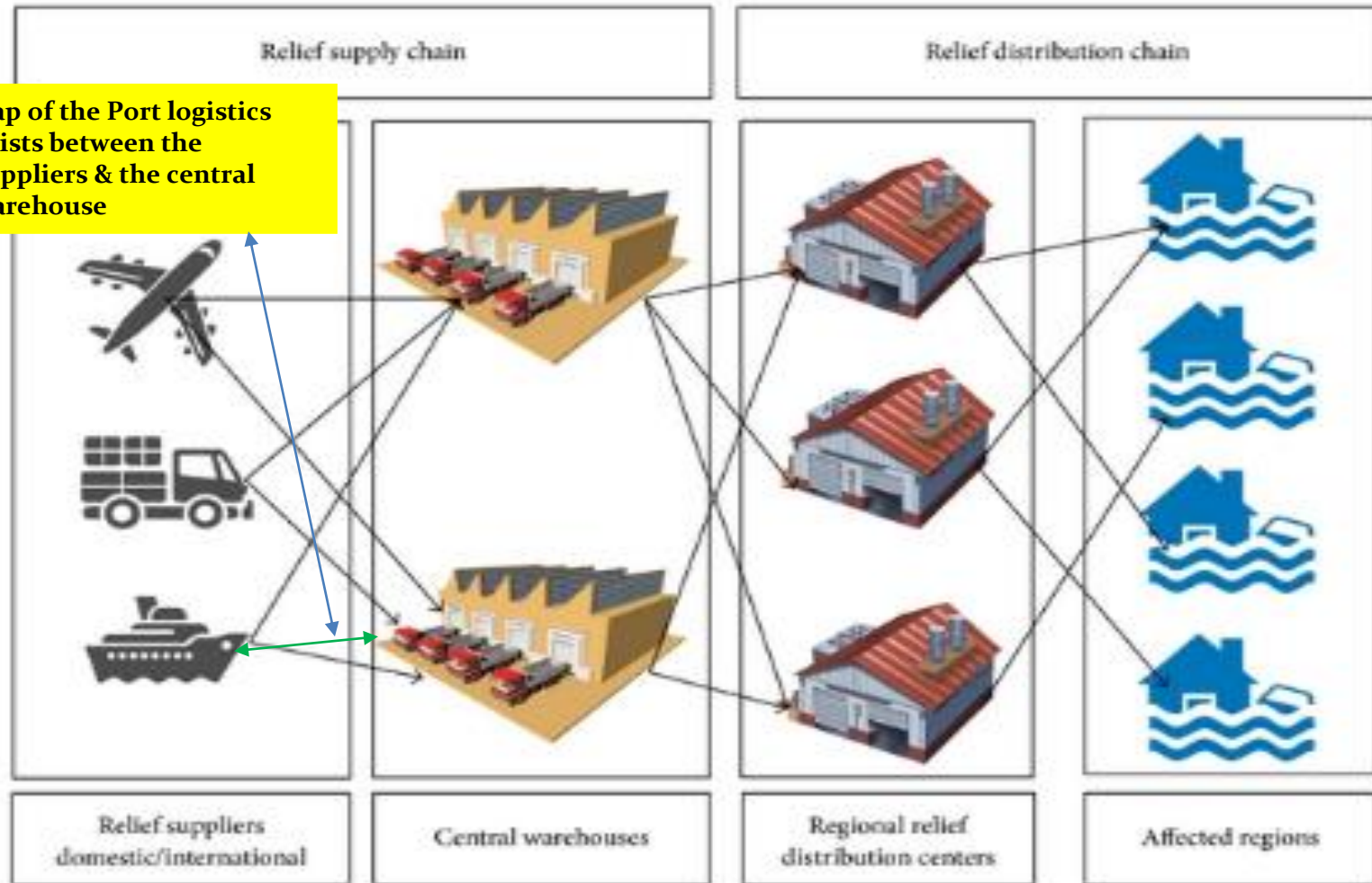
No major Role of the Port is defined.



Model of Emergency Relief Supply Chain

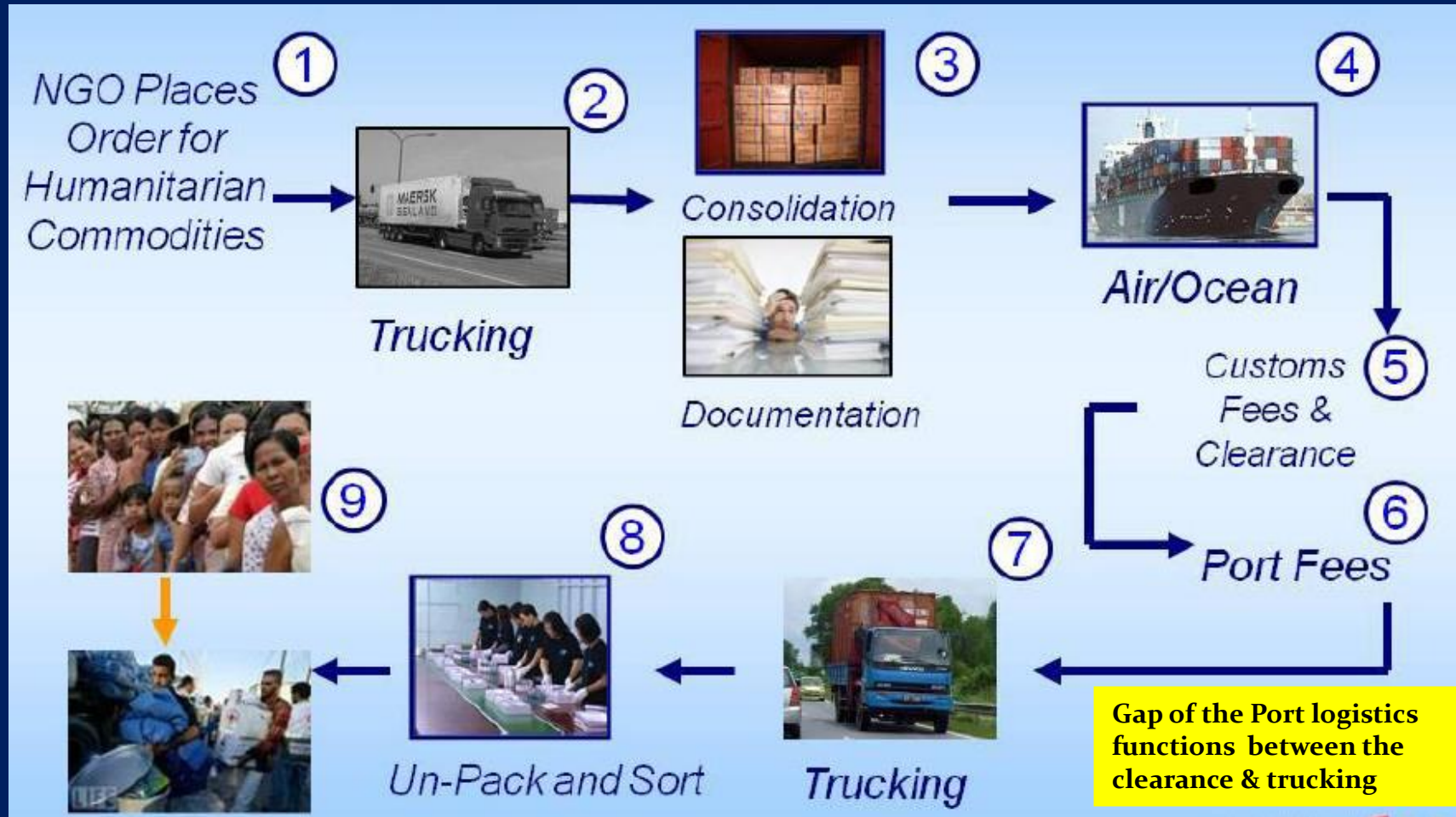
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Gap of the Port logistics exists between the suppliers & the central warehouse

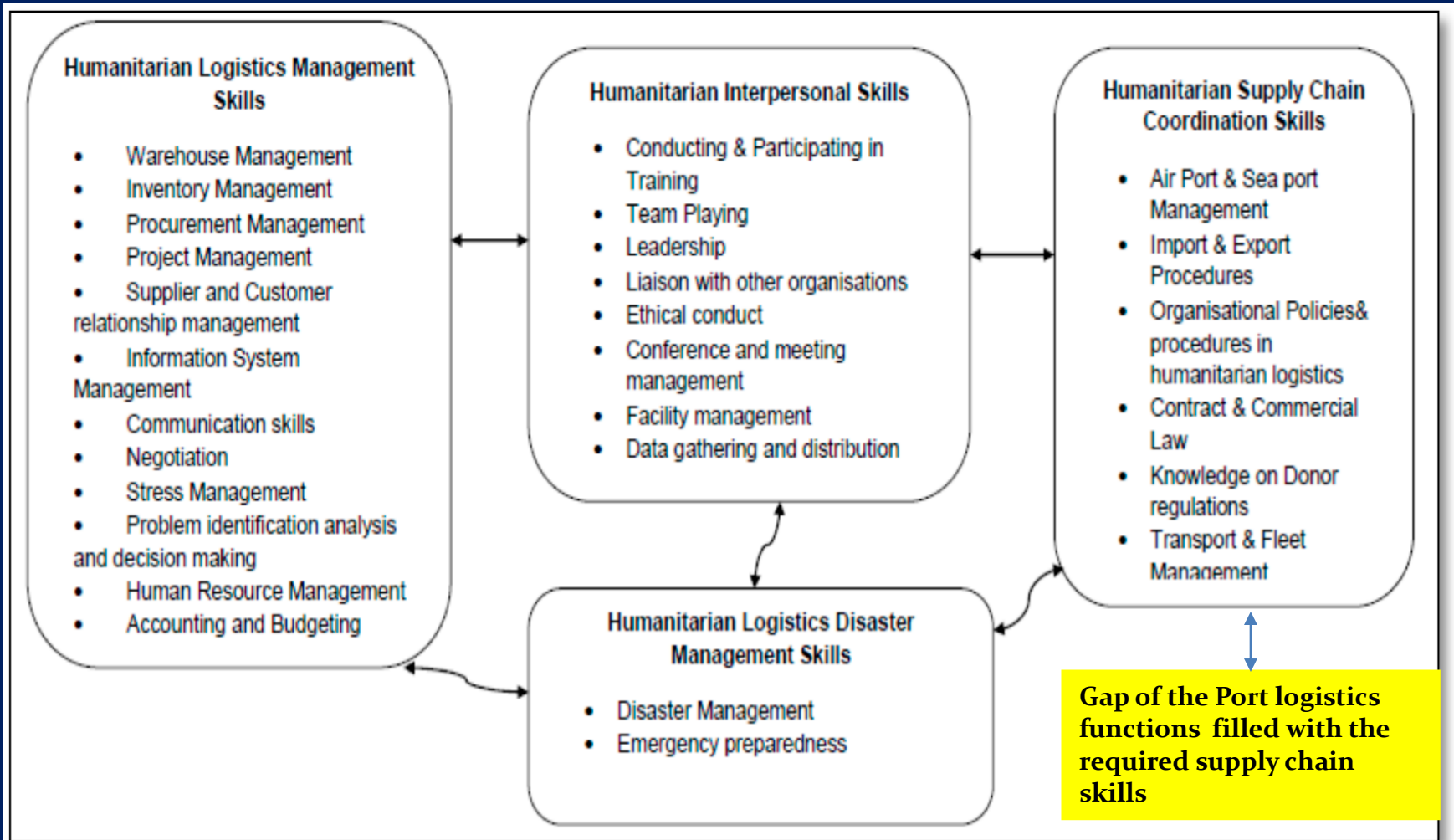


Model of Emergency Relief Supply Chain

No major Role of the Port is defined.



Skill Sets Analysis Supply Chain



Corruption Management



Challenges in Regional Emergency Logistics

- Lack of recognition of the importance of Logistics.
- Lack of professional staff in Logistics.
- Inadequate use of technology
- High level of employee turn over (donor agencies).
- Lack of institutional learning.
- Involvement of many stakeholders
- High levels of uncertainty (demand, supplies, assessment)
- Management of unsolicited donations
- Degraded infrastructure and no established logistics community
- Delivery constraints due to Government/ political or military involvement
- Language barrier & culture clashes

Recommendations - Lessons Learnt

- ✓ Prepare for post disaster port congestion (Inability to process cargo clearance & the lack of capacity to manage an overwhelming volume of incoming relief supplies).
- ✓ Transform 40 ft containers into warehouse
- ✓ Redesign hurricane plans; must include the unthinkable.
- ✓ Communicate the preparedness of the Port for business.
- ✓ Improve coordination between donor & local authorities of relief arrival is required.
- ✓ Harmonise response protocol of Sea Port & Airport in Logistics in the region is required.
- ✓ Limited skillsets in logistics exist – specialize & harmonize training is required in the region.
- ✓ Full engagement of the Lines is critical connectivity.

Recommendations Lessons Learnt

- ✓ Reevaluate critical suppliers relationships & inventory planning for supplies post storm due to vulnerability of food security.
- ✓ Improve capacity to mobilize resources quickly.
- ✓ Redesign first responders: logistics planners, schooners.
- ✓ Improvement in regional collaboration is required.
- ✓ Conduct a regional logistical audit of landing and operating space.
- ✓ Redesign strategic regional mobilization locations.
- ✓ Redesign packaging and distribution process of aid .
- ✓ Consolidate all logistics of Donor & NGOs reduce costs.

Remodeling of Containers



Conclusion

Hurricane response is about.....

