

RESILIENCE FOR
EDUCATIONAL AND
CULTURAL
INFRASTRUCTURE:
PROTECTION OF THE
HISTORICAL AND CULTURAL
HERITAGE

DELMARES WHITE, DIRECTOR OF INFORMATION AND
TRAINING - OFFICE OF DISASTER PREPAREDNESS
AND EMERGENCY MANAGEMENT, JAMAICA

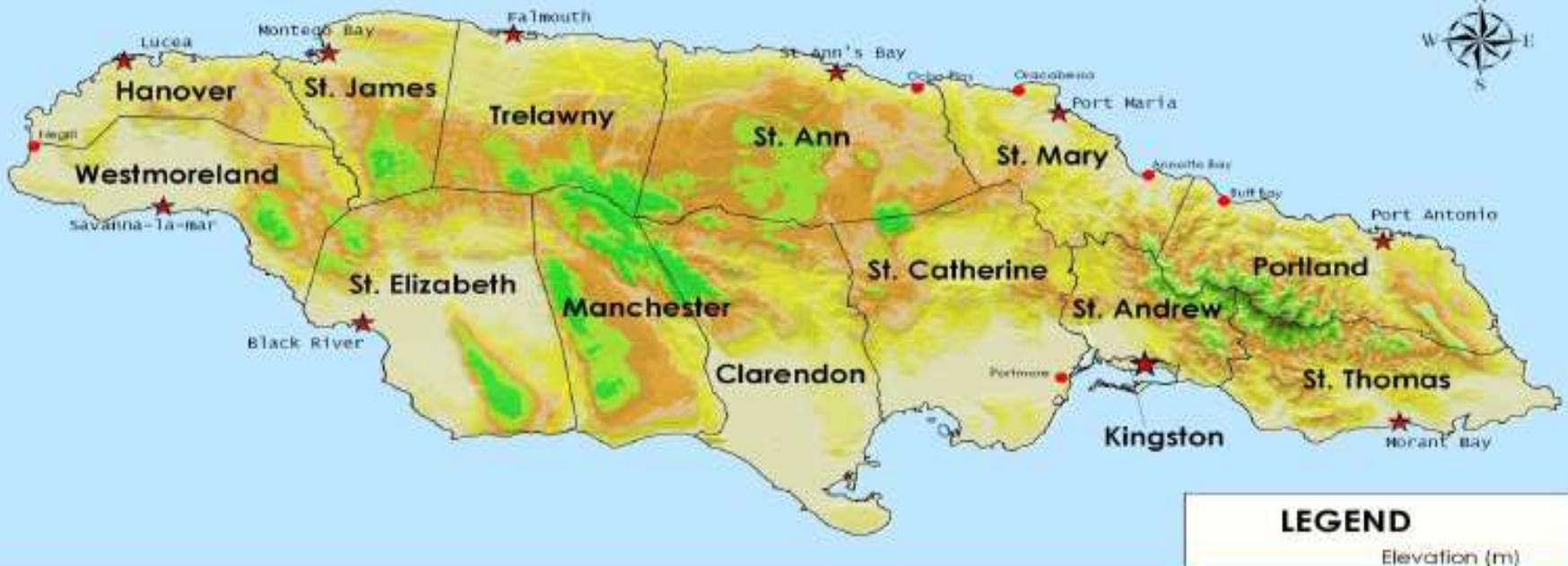
OUTLINE

- Jamaica's Vulnerability to Disasters
- Disasters and Jamaica's Economy
- Shelter Rationalization Initiative
 - Issues Affecting Resilience
 - Areas of Focus for Improving Resilience

JAMAICA'S VULNERABILITIES

NATURAL

Floods, Hurricanes, Storm surges, Earthquakes, Landslides
Droughts



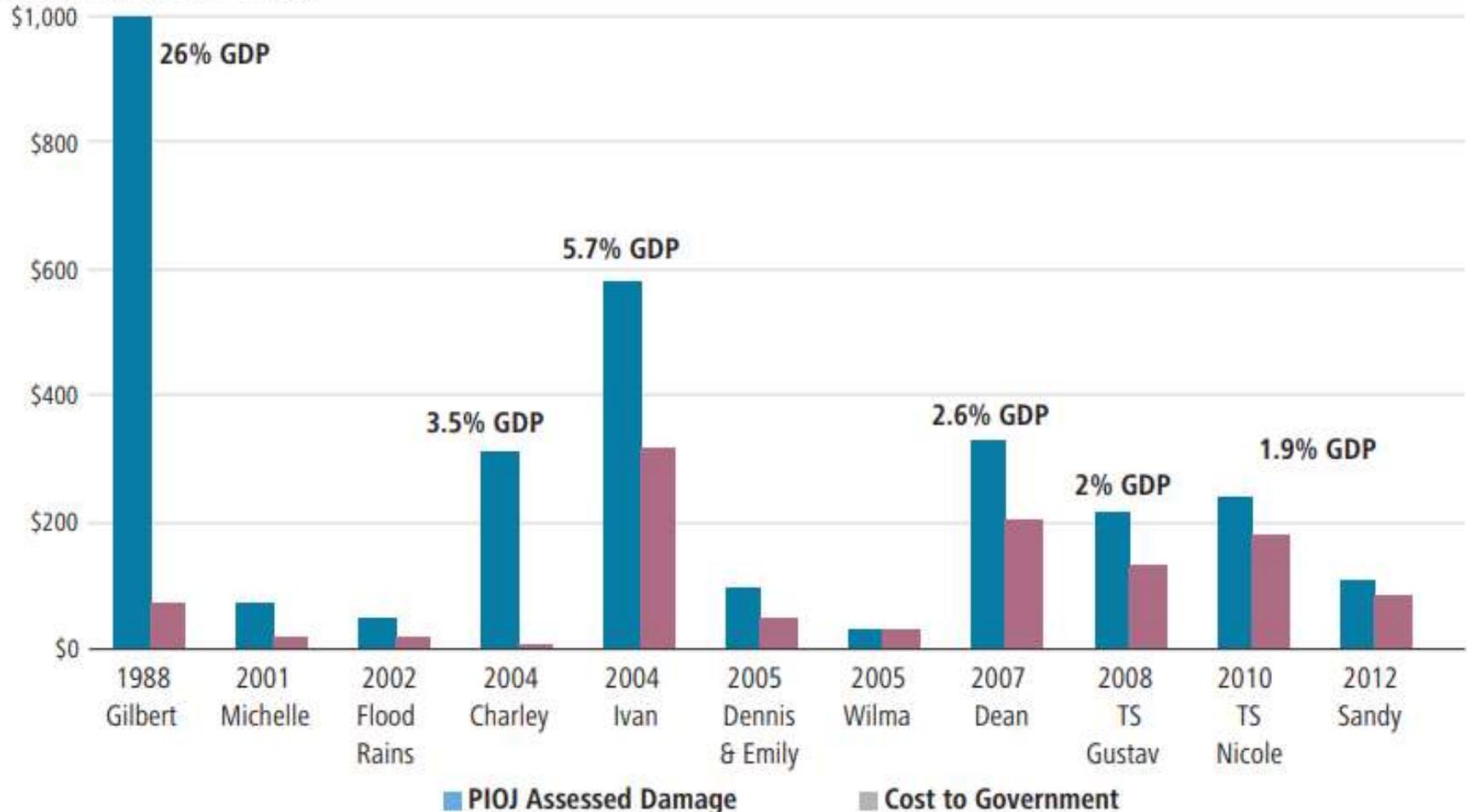
TECHNOLOGICAL

– Hazardous Material release, Epidemics, Plant and animal diseases, **Fires**

DISASTERS AND JAMAICA'S ECONOMY

Figure 5: Damage and Losses from Major Natural Disasters in Jamaica

(values in current USD million)¹³



Source: Authors, based on Planning Institute of Jamaica (PIOJ).

GLOBAL TARGETS OF THE SENDAI FRAMEWORK

- (c) Reduce direct disaster economic loss in relation to global gross domestic product (GDP) by 2030;
- (d) Substantially reduce disaster damage to critical infrastructure and disruption of basic services, among them health and educational facilities, including through developing their resilience by 2030;**
- (e) Substantially increase the number of countries with national and local disaster risk reduction strategies by 2020;

Reference: Sendai Framework for Disaster Risk Reduction 2015-2030

MEASURING RESILIENCE

- Technological capacity
- Skills and Education levels
- Economic Status and Growth Prospects
- Quality of Environment & Natural Resource Management Institutions
- Livelihood Assets
- Political Structures and Processes
- **Infrastructure**
- Flows of knowledge and information
- Speed and breath of innovation

***Reference: United Nations Office for Disaster Risk Reduction
Website <https://www.preventionweb.net/risk/resilience>***

EDUCATIONAL INSTITUTIONS

“Educational infrastructure in most countries around the world is underfunded and overextended and schools are more vulnerable to natural hazards than other building types not only putting children at risk but also reducing the quality of education and limiting opportunities for economic and social growth and other community benefits. This quote came from the **School Infrastructure Resilience** CoLab Workshop in Cali, Colombia February 2018.

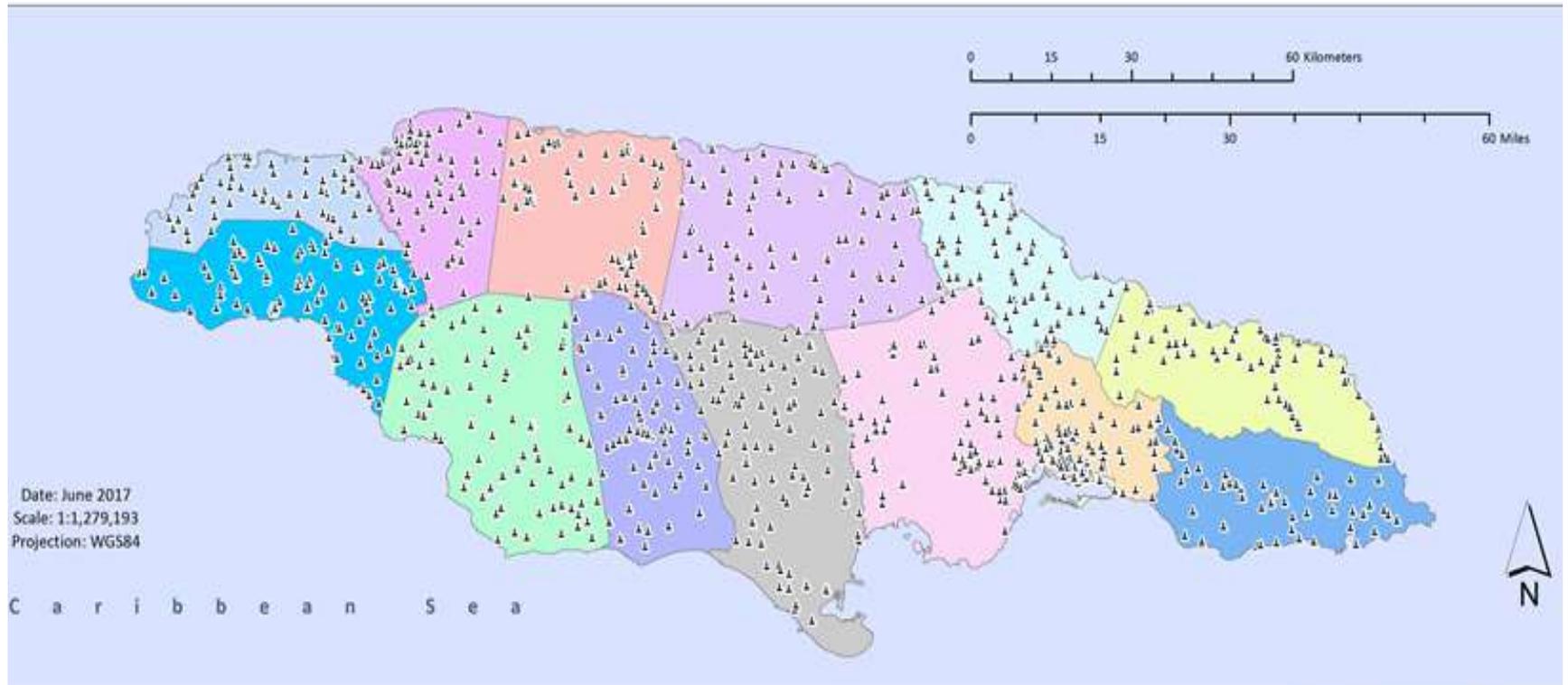


EDUCATIONAL INSTITUTIONS AS SHELTERS

The Government of Jamaica has designated schools, churches and community centres “to be utilized for the purpose of assisting persons with accommodation in times of emergencies” (National Disaster Plan, 1997).

Island of Jamaica

Emergency Shelters Distribution 2017



id

Emergency Shelters 1055

Clarendon

Hanover

Kingston

Manchester



Clarendon - 102

Hanover - 59

Kingston and St. Andrew - 115

Manchester - 69

Portland - 79

St. Ann - 88

St. Catherine - 94

St. Elizabeth - 87

St. James - 73

St. Mary - 72

St. Thomas 50

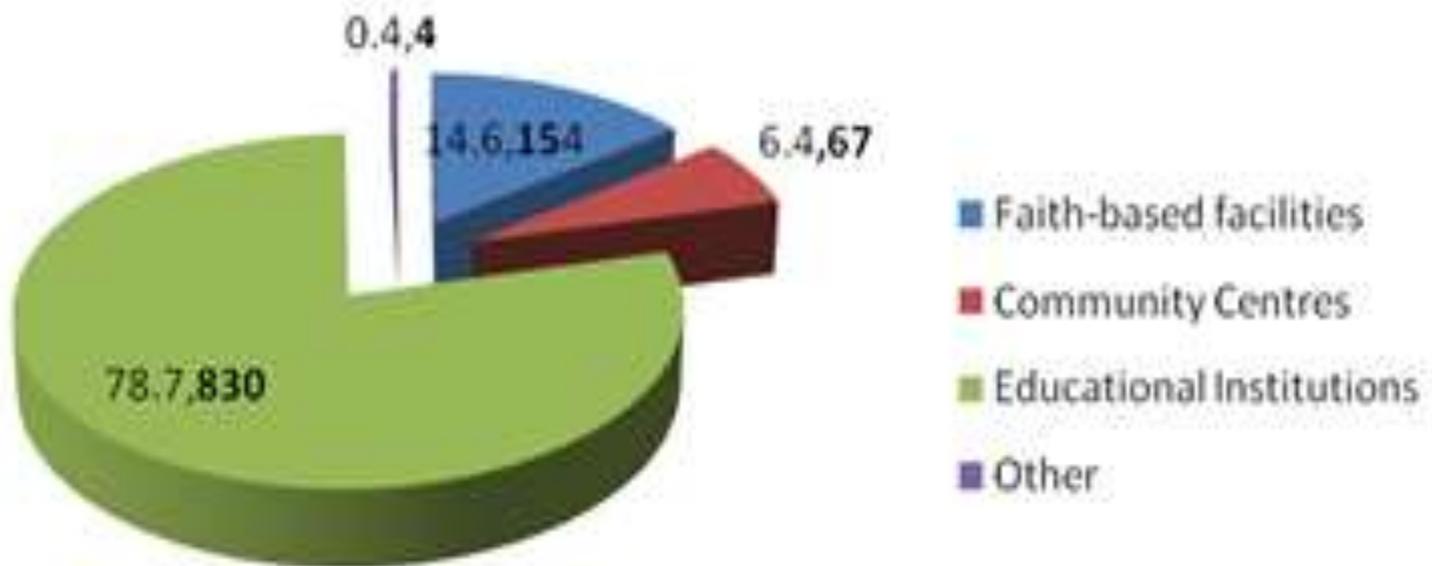
Trelawny - 79

Westmoreland - 88



SHELTER DESCRIPTION

The majority (78.7% or 830 shelters) were educational institutions, while 14.6% or 154 were faith based facilities and 6.2% or 67 were community centres.



SHELTER AUDIT – MARCH 2018

Parishes	Total number of shelters per ODPEM 2016 listing	# Based on Rationalization of Listing from ODPEM & from Municipal Corporations	# of audits completed
Kingston and St. Andrew	113	123	115
Trelawny	97	80	79
Clarendon	94	93	102
Westmoreland	90	101	88
St Ann	78	88	88
St Elizabeth	87	86	87
Portland	84	83	79
St Catherine (Portmore included)	82	80	94
St Mary	70	71	72
St James	64	70	73
Manchester	66	69	69
Hanover	53	53	59
St Thomas	52	52	50
Total	1030	1049	1055

ISSUES AFFECTING THE SHELTER – MARCH 2018

Issues	Number of Shelters Affected	Total Shelters Nationally	% Affected Nationally
No/Limited Access for the Disabled	771	1,055	73.7%
Shelters Inaccessible by roadway during heavy rainfall	40	1,055	3.9%
Existence of fully retrofitted shelters to accommodate the disabled	0	1,055	100%
Unavailability of proper/adequate transportation	64	1,055	6.06%
Difficult terrain due to elevation and land slippage	189	1,055	17.9%
Difficulty with access due to risks in crossing community boundaries	52	1,055	4.9%
Located in Flood prone area	91	1,055	8.6%
Location usually affected by Flooding	45	1,055	4.3%
No hurricane straps on Facility	255	1,055	24.2%
Facility located near coastline	92	1,055	8.7%
Facility located on re-claimed land	38	1,055	3.6%

ISSUES AFFECTING RESILIENCE IN SHELTERS

- Only some parishes have Crisis teams for the mentally ill
- Shelter Managers should not have sole responsibility for calling on the services of a mental health team. Based on location some shelters will not be able to be accessed by the mental health team based on resources and accessibility.
- Shelter Manager is trained to be able to detect mental health problems but not necessarily to diagnose the problem/issue.

ISSUES AFFECTING RESILIENCE IN SHELTERS

- Issue of “extended stay”. When residents extend their stay there is the need for direct intervention from other skill sets e.g. Police, Nurse, NSWMA etc. Schools days are impacted.
- Reiteration of the point that schools are government institutions and as such it could not be the responsibility of the ODPEM to effect repairs. ODPEM was however in a position to say which agency “the who” is to effect the said repairs. Repairs have also been done in a reasonable time frame after a disaster.

AREAS OF FOCUS FOR IMPROVING RESILIENCE

- More space is required at priority shelters as the current capacity is inadequate in the event of a major dislocation.
- Approximately 170 shelters are to be considered for closure (as they have never been used) and resources reallocated to adequately equipping (shelter supplies) shelters that are often used or deemed priority.
- Create and maintain a shelter usage data base

AREAS OF FOCUS FOR IMPROVING RESILIENCE

- All emergency shelters are to be properly retrofitted to accommodate the vulnerable population (physically challenged and elderly).
- It should be mandatory that all shelter managers are fittingly trained and shelter assignment established prior to annual hurricane season.
- Disaster Shelter Coordinators island- wide should be adequately supported to undertake re- inspection of all shelters on an annual basis.
- Existing community centres currently not used as emergency shelters, should be assessed/inspected with the view of utilizing suitable centres as such.

FOCUS ON RISK REDUCTION TO PHYSICAL INFRASTRUCTURE

1. Risk Prioritization Complete
2. Protocol for Action Complete
3. Resilient Schools Network Ongoing
4. Student Constructing Safe Schools Ongoing
5. Rapid Solutions for Resilient Schools Ongoing
6. Educate Students and Communities Ongoing
7. Government Integration Ongoing
8. Compulsory Training School Contractors To Commence
9. Update Regulations to Reflect Local Needs and Resilience (To Commence)

∞ The end ∞