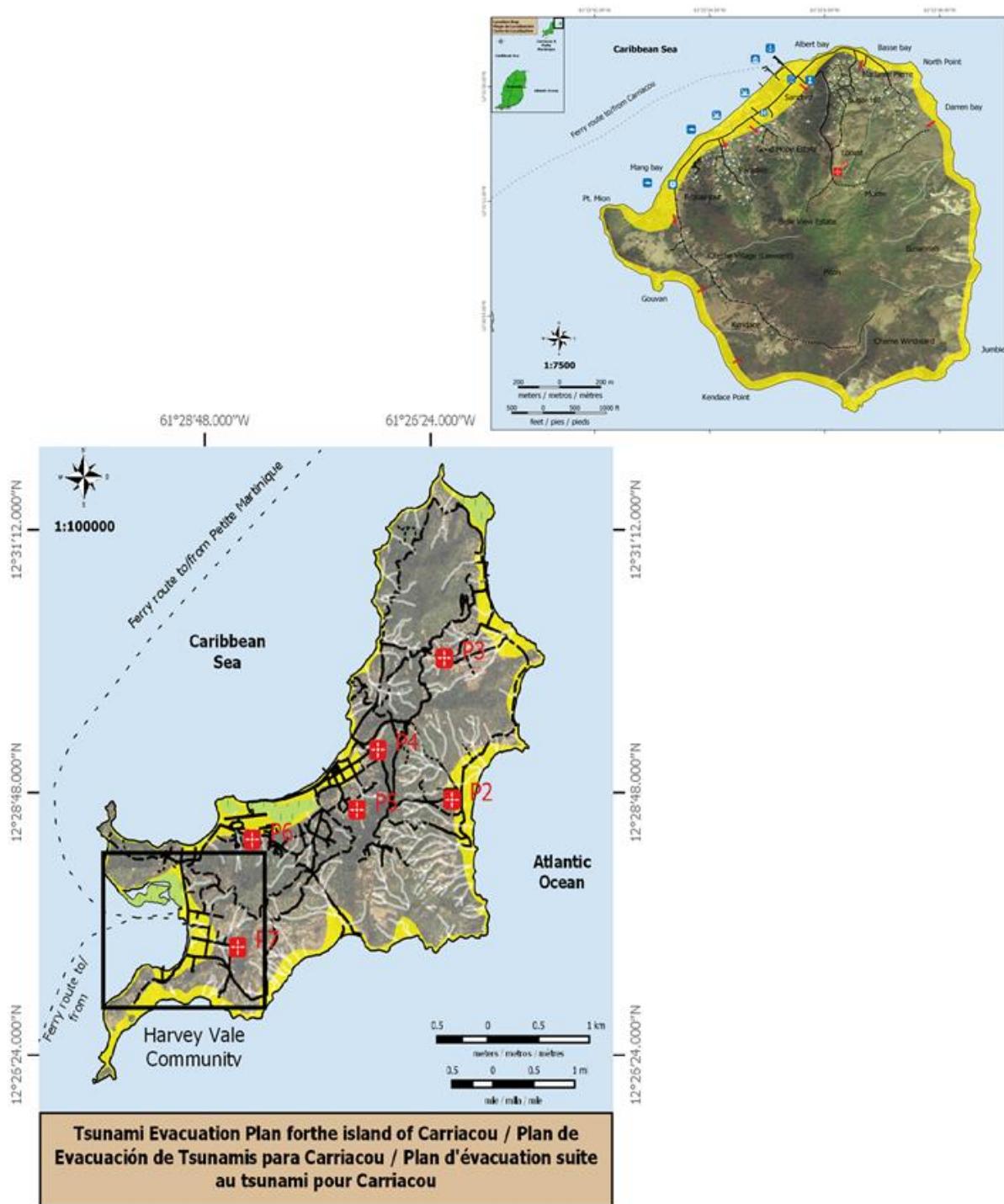


# TSUNAMI STANDARD OPERATING PROCEDURE (SOP) FOR CARRIACOU AND PETITE MARTINIQUE, GRENADA



## **GENERAL INFORMATION**

This SOP is to provide procedural guidance for actions to be taken in the event of a tsunami affecting Carriacou and Petite Martinique. It defines actions to be taken by institutions/ community to coordinate early warning and response to mitigate the impact of a tsunami.

Tsunamis result typically from large earthquakes; however tsunamis can also be generated from submarine and sub-aerial landslides, volcanic eruptions and asteroids. Tsunamis can affect a region from within minutes up to several hours following an earthquake.

This SOP outlines initial alert and warning protocols, and responsibilities and actions to be taken.

## **RISK PROFILE**

Grenada is part of a volcanically and tectonically active ridge formed along the Lesser Antilean island arc system. The island has two active volcanic centers, Mt. St. Catherine (land) and Kick Em Jenny (sub marine). The Islands of Carriacou and Petite Martinique are directly threatened by the presence of 'Kick 'em Jenny' located 21.8 and 38 km South of Carriacou and Petite Martinique respectively. The potential impact to Carriacou and Petite Martinique is extremely high given the fact that most of the population lives on the coastline. While Carriacou and Petite Martinique are at risk to a tsunami originated from Kick em Jenny, the community is also at risk to tsunamis that can be caused by other hazards namely earthquakes or under water landslides.

## **NATIONAL TSUNAMI WARNING CENTER:**

The Meteorological Office is the National Tsunami Warning Center and Focal point that will evaluate the tsunami product from the Pacific Tsunami Warning Center. They will also determine the level of warning that will be issued directly to the communication department in the Headquarters of the Royal Grenada Police Force (local Tsunami warning center) and to the National Disaster Management Agency (NaDMA).

## **TYPES OF TSUNAMI PRODUCTS ISSUED NTWC**

The National Tsunami Warning Centre (MET) will issue Tsunami Warning products based on its own assessments and data gathering points.

### **Tsunami Warning**

If Grenada is included within the countries where there might be hazardous tsunami waves, a warning will be issued only if the estimated time of arrival (ETA) is 3 hours or under. (5 minutes to 60 minutes if the event is locally generated - Persons should be aware of the natural warning signs). The Tsunami warning alert will be indicated by the color **Red**.

When a tsunami is imminent residents will be advised to run to higher ground away from the sea to the MUSTER POINTS (ASSEMBLY POINTS). They must use all possible evacuation routes as indicated on the tsunami evacuation maps; (which is indicated by the color red) and also any

local route, not parallel to the coast that will take them away from the hazard zone to higher ground. However if you **FEEL** a strong earthquake, **SEE** a sudden fall in sea level, **HEAR** a loud roar from the sea **RUN TO HIGH GROUND**.

**Tsunami Advisory:** is issued when there is the threat of possible dangerous currents and flooding. Residents are expected to move away from marinas, beaches and low lying areas and follow official instructions. (If the event is generated regionally, the time span is 60 minutes to 3 hours); the color used to indicate this level is **ORANGE**.

**Tsunami Watch:** In Grenada a watch product is issued when and if the ETA is greater than 3 hours, indicating the threat to local area is under evaluation. In this case the islands of Carriacou and Petite Martinique.

When a distant event occurred and is under investigation /evaluation. The color for this alert level is **YELLOW**.

**Tsunami Information Statement:** is given when an event occurred with no imminent danger to the public but citizens need to be informed. For example, an earthquake has occurred, however there is no tsunami waves forecasted. This alert is indicated by the color **GREEN**.

### **Tsunami Warning Protocol for Carriacou and Petite Martinique**

In the event of a tsunami threat to the parish of Carriacou and Petite Martinique information will be disseminated in the following sequence.

The Head office of the Royal Grenada Police Force, (LTWFC) will then inform the people of Carriacou and Petite Martinique. The Carriacou and Petite Martinique district Police Station will then inform NaDMA and the churches to initiate the tolling of their bells. The district RGPF will then initiate the following:

- Fire Station Sirens
- Police Sirens/Vehicle Loud Speakers

The Christ the King Anglican Church (Hillsborough), L'Esterre, Holy Rosary Church, St. Peter and Paul (Windward) Roman Catholic Church, St. Francis Anglican Church (Harvey Vale) and St. Lawrence Catholic Church (Harvey Vale) Mt. Pleasant, Harbor Light of the Windward's Church, Sacred Heart Catholic Church (Petite Martinique). Suggestions were also made as it relates to utilizing the police siren on the Lauriston Airport and the use of drums in the communities throughout the island.

This signals the beginning of the evacuation procedure. This process will continue until a Tsunami Cancellation and/or All Clear is given by NaDMA.

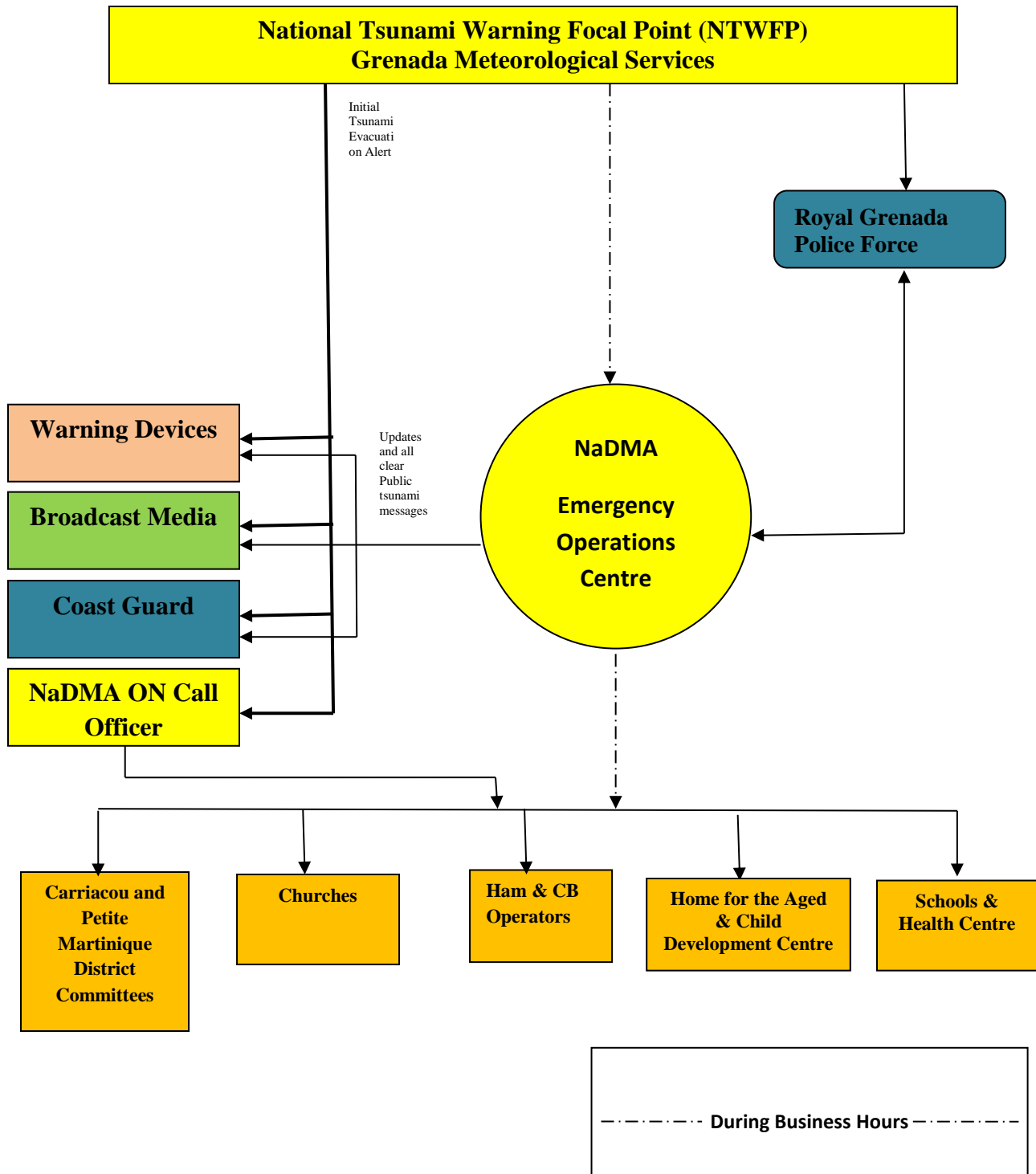
**The Following is a table stating the various organizations, and their contact information.**

<u>NAMES</u>	<u>POSITION</u>	<u>NUMBER/ EMAIL</u>
Ethlin Alexander	District Coordinator Carriacou	456- 1527 ethlinalexander@gmail.com
Kisha McFarlane	Deputy Coordinator/Carriacou	416-6522 Kisham_23@hotmail.com
Bernice Date	Community Programme Officer	443-9335/420-7301 datebernice@gmail.com
Diana Deroche	Assistant Community Programme Officer	415-3996 dianaderoch@gmail.com
Gary Blair	Petite Martinique Disaster Coordinator (AG)	414-3915 Garyblair22@icloud.com
Maxanne Francis	Chief Officer Ministry (Petite Martinique	403-4654 maxannefrancis@gmail.com
Aria Bethel	Outreach Officer NaDMA Petite Martinique	421-0167 Aria_bethel19@outlook.com
Dexter Miller	PM .Fisherman Cooperation	Dextermiller42@gmail.com
Mr. Kimberly Mills	Vibes Radio Station/Manager	443-0101 Vibes101@gmail.com
		443-8141

Linton Lendore	Sister isle Radio/Manager	sisterisle@gmail.com
		443-7628
Randy Cornelius	Harbour light/Manager	harbourlight@spiceisle.com
St. Francis Anglican Church	Hillsborough	
St. Lawrence Catholic Church	Harvey Vale	
St.Peter Catholic	Windward	
The Rosary Catholic Church	L'Esterre	
ASP. Lynda Francis	Officer In Charge Northern District	459-2352/443-7482 lyndafrnces@gmail.com
Church of Christ Anglican	Hillsborough	
Dester Legarrd	Grenada Port Authority	536-0436 dexterleggard@gmail.com
Ms. Sheena Bristol	YEAC Youth Emergency Action Committee	414-1063 yeacgrenada@gmail.com
Ruth Clement	Officer Red Cross Carriacou	537-8984 redcrossccou@gmail.com
	Minister	423-5014

Hon. Kindra Maturine-Stewart	Legal Affairs Carriacou and P.M Affairs	parlicon@hotmail.com
Ms.Rholda Quamina	Permanent Secretary Carriacou and P.M Affairs	404-8879 minccoupm@gmail.com
Rawle Patterson	Reporter	456-0456 rcpnetintl@gmail.com
Jemmone Adams	Ministry PRO	410-8646
Kendal Mark/Gay	Reporter	Kendelmark2@hotmail.com

# COMMUNICATION MATRIX



**Muster Points**

Mrs. Marcelle Bethel yard (P1)

Open area in front Mt. Pleasant Medical (P2)

Open area near Mr. Lennox Cox (Pro) Shop (P3)

Open area near Boyok Lawrence shop (P4)

Open area in Prospect Hall crossroad (P5)

Open area in front Mrs. Lynette Gay residence (P6)

Harvey Vale Government School Compound (P7)

***RESIDENTS WILL RUN AWAY FROM THE SEA AND NOT ALONG THE COAST***



# TSUNAMI SIGNS USED IN CARRIACOU & PETITE MARTINIQUE



## ROLES AND RESPONSIBILITIES

ROLES	RESPONSIBILITIES
ALARMS Sounding of sirens Ringing of bells Beating of drums	Carriacou and Petite Martinique Police Anglican Churches Harbor Light Roman Catholic Churches
Evacuation	Carriacou and Petite Martinique Police
Muster point management	District Management Committees
Shelter management	District Shelter Management Sub-committee
Search and rescue	Carriacou and Petite Martinique Police