ANNEX 3: TEMPLATE FOR NATIONAL REPORTS

National Reports will be posted to the ICG/CARIBE EWS-XV website without TWFP contact details

NATIONAL REPORT
Submitted by (country name)

BASIC INFORMATION

1. ICG/CARIBE EWS Tsunami National Contact (TNC)

The person designated by a Member State to an Intergovernmental Coordination Group (ICG) to represent his/her country in the coordination of international tsunami warning and mitigation activities. The person is part of the main stakeholders of the national tsunami warning and mitigation system. The person may be the Tsunami Warning Focal Point, from the national disaster management organization, from a technical or scientific institution, or from another agency with tsunami warning and mitigation responsibilities.

Name: Marcelino Hernández González.
Title: Oceanologist Engineer, PhD in Meteorological Sciences.
Organization: Instituto de Ciencias del Mar.

2. ICG/CARIBE EWS Tsunami Warning Focal Point (TWFP)

The 7x24 contact person, or other official point of contact or address, is available at the national level for rapidly receiving and issuing tsunami event information (such as warnings). The Tsunami Warning Focal Point either is the emergency authority (civil defense or other designated agency responsible for public safety), or has the responsibility of notifying the emergency authority of the event characteristics (earthquake and/or tsunami), in accordance with national standard operating procedures. The Tsunami Warning Focal Point receives international tsunami warnings from the PTWC, or other regional warning centres.

Name: Aislen Jiménez García.
Title: Specialist in Early Warning Systems and Hazards of Natural and Technological Origin (Especialista en Sistemas de Alerta Temprana y en Peligros de Origen Natural y Tecnológicos).
Responsible Organization: Coordination Office of the National Headquarter for the Civil Defence (Puesto de Direción del Estado Mayor Nacional de la Defensa Civil).

National Tsunami Warning Centre (if different from the above).
Person in Charge: Enrique Diego Arango Arias.
Title: Doctor en Ciencias de la Tierra con Especilidad en Geofisica.

3. Tsunami Advisor(s), if applicable

(Person, Committee or Agency managing Tsunami Mitigation in country)
Name: Marcelino Hernández González.
Title: Oceanologist Engineer, PhD in Meteorological Sciences.

4. Tsunami Standard Operating Procedures for a Local Tsunami (when a local tsunami threat exists, less than 1 hour travel time)

- *What organization identifies and characterizes tsunamigenic events?*

Instituto de Ciencias del Mar (ICIMAR) and Centro Nacional de Investigaciones Sismológicas (CENAIS). These institutions obtains information about tsunami occurrence from PTWC by email and seismic data (Mw, depth, location, source and other) and carry out data analysis and modelling.

- *What is the threshold or criteria for declaring a potential tsunami emergency?*

A coastal earthquake Mw>=7.0 and earthquake characteristics and origin.

- *What organization acts on the information provided by the agency responsible for characterizing the potential tsunami threat?*

EMNDC (Estado Mayor Nacional de la Defensa Civil - National Headquarter for the Civil Defence).

- *How is the tsunami information (warning, public safety action, etc) disseminated within country? Who is it disseminated to?*

EMNDC (Estado Mayor Nacional de la Defensa Civil - National Headquarter for the Civil Defence) sent warning status to Municipal Civil Defense Offices by means email, radio and telephone which would be work directly with the coastal communities.

- *How is the emergency situation terminated?*

When EMNDC (Estado Mayor Nacional de la Defensa Civil - National Headquarter for the Civil Defence) decides, taking into consideration, all available information coming from CENAIS, ICIMAR and PTWC.

5. Tsunami Standard Operating Procedures for a Regional Tsunami (when a regional tsunami threat exists, 1–3 hour travel time)

The same that for local tsunami.

6. Tsunami Standard Operating Procedures for a Distant Tsunami (when a distant tsunami threat exists, more than 3-hour travel time)

The same that for local tsunami.

7. National Sea Level Network

Please include a table with position and description of stations/sensors, and a map.

All stations are managed by National sea level network (Red Mareográfica Nacional) belongs to Geocuba Geodesa (Figure 1).

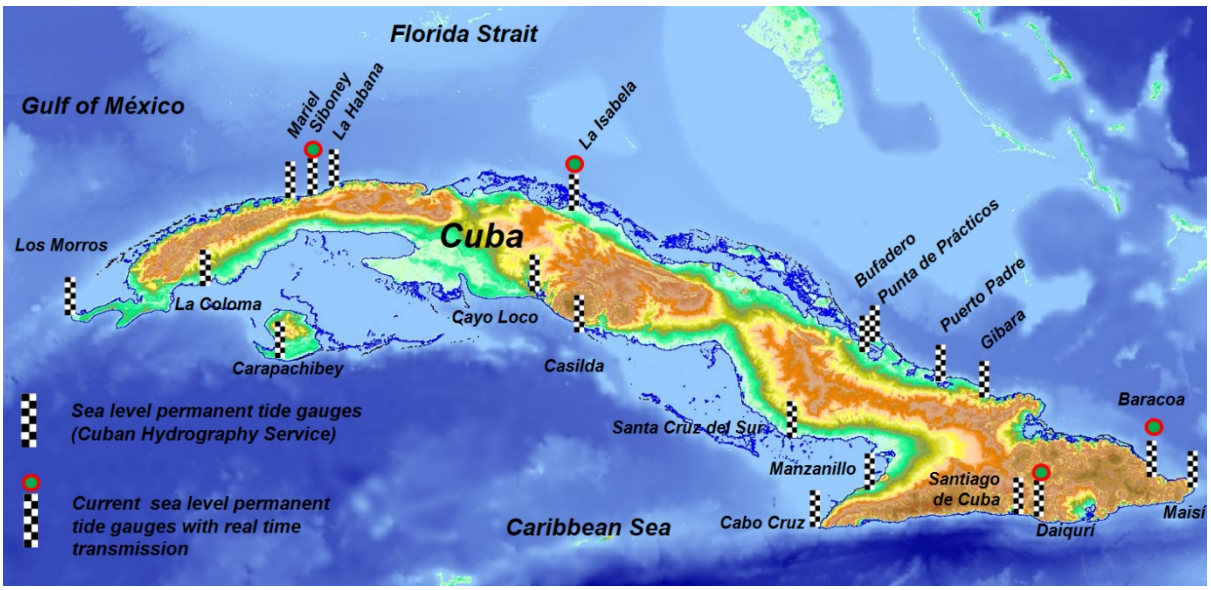

Figure 1. National sea level network 2021.

8. Information on Tsunami occurrences/Tsunami Exercises

Please include sea level observations, pictures, wave arrival descriptions, public, media, or other responses to warnings, lessons learned, etc.

During the intersessional period there was no tsunami event in the country. Carried out Caribe Wave 2021 without evacuation activities because Covid -19 pandemic. Only was carried out conferences, seminars, instructive meetings, and several activities to improve information systems.

9. Web sites (URLs) of national tsunami-related web sites

www.facebook.com/IcimarAmaCitma
http://www.icimar.cu/
http://www.cenais.cu/cenais/

10. Summary plans of future tsunami warning and mitigation system improvements

This information will be used to aid the development of the CARIBE-EWS Implementation Plan.

The Cuban priorities are the establishment of real time international data transmission for de main sea level coastal and non – coastal stations and to develop and to improve evacuations maps.

NATIONAL PROGRAMMES AND ACTIVITIES INFORMATION

11. EXECUTIVE SUMMARY

Brief statement of no more than one page addressing all items discussed in the Narrative section of the National Report (below).

1. The Cuban National Tide Gauge Network staff have installed real time data transmission in the following tide gauges: Siboney (Havana City at ICIMAR location), La Isabela, Baracoa y Daiquirí (Figure 1).
2. Computerized tools and operational models have been implemented to work 24/7 at ICIMAR and CENAIS.

3. Tsunami modeling is developed with the participation of specialists from ICIMAR, CENAIS and the Risk Assessment Group from Cuban Environment Agency. They are working on the creation of a database including wave arrival time and height for relevant coastal localities, for operational and risk assessment purposes.
4. Tsunamogenic sources with higher probability of impact for Cuba have been identified, located north in the Caribbean, and information is available about the assessment of the most hazardous tsunamogenic sources for Cuba and the most threatened zones in the country.
5. Evacuation maps in case of tsunami events are being created and implemented for Baracoa City.
6. Experts Marcelino Hernandez (ICIMAR) and Enrique Arango (CENAIS) are leading the process for the edition of methodological guidelines for tsunami risk studies in Cuba, under the general coordination of the Risk Assessment Group from Cuban Environment Agency (AMA), and involving the participation of a group of other national experts.
7. The investment process that has guaranteed a GNSS network at a national level has continued.
8. Cuban Seismic and Sea level networks received a significant equipment strengthening during this intersessional period; the equipment modelling capacity for tsunami operational work at ICIMAR (Institute of Marine Sciences) was also significaly strengthened.
9. Eleven researchers from ICIMAR, CENAIS and the Risk Assessment Group from AMA, received a training on a modelling software specifically devoted to tsunami events.

12. NARRATIVE

Detailed description of innovations or modifications to National tsunami warnings procedures or operations since last National Report, tsunami research projects, tsunami mitigation activities and best practices (especially in preparedness and emergency management), tsunami exercises, as well as public education programmes or other measures taken to heighten awareness of the tsunami hazard and risk.

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Date: Abril 29 2021 Name: Marcelino Hernández González.