ANNEX 3

TEMPLATE FOR NATIONAL REPORTS

National Reports will be posted to the ICG/PTWS-XXVII web site without TWFP contact details

NATIONAL REPORT
Submitted by (country name)

BASIC INFORMATION

1. **ICG/PTWS 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: Silvia Chacón-Barrantes
   Title: Dr.
   Organization: RONMAC-UNA
   Postal Address: Depto. Fisica, Campus Omar Dengo, Universidad Nacional, 86-3000, Heredia, Costa Rica
   E-mail Address: silviachaconb@gmail.com
   Telephone Number: +506-22773617
   Fax Number: +506-22773616
   Cellular Telephone Number: +506-83096690

2. **ICG/PTWS Tsunami Warning Focal Point (TWFP)**

   *A 24 x 7 point of contact (office, operational unit or position, not a person) officially designated by the NTWC or the government to receive and disseminate tsunami information from an ICG Tsunami Service Provider according to established National Standard Operating Procedures. The TWFP may or not be the NTWC.*

   TWFP Agency name: CNE (Comisión Nacional de Emergencias)
   (if different from NTWC agency)
   TWFP Agency Contact or Officer in Charge (if different from NTWC Agency):
   Name:
   Position: Jefe de Operaciones
   Telephone Number:
   Email Address: 
   Postal Address: CNE, Frente al Aeropuerto Tobías Bolaños, Pavas, Costa Rica

   **TWFP 24x7 point of contact** (office, operational unit or position, not a person):

   Name of office, operational unit or position: Operador de Telecomunicaciones
   E-mail Address: 
   Telephone Number:
   Cellular phone number:
   Fax:

   National Tsunami Warning Centre (if different from the above)
A centre officially designated by the government to monitor and issue tsunami warnings and other related statements within their country according to established National Standard Operating Procedures

NTWC Agency Name: SINAMOT (Sistema Nacional de Monitoreo de Tsunamis)

NTWC Agency Contact or Officer in Charge (person):

Name:

Position: Coordinator
Telephone Number:
Email address:
Postal Address: Depto. Fisica, Campus Omar Dengo, Universidad Nacional, 86-3000, Heredia, Costa Rica

3. Tsunami Advisor(s), if applicable
(Person, Committee or Agency managing Tsunami Mitigation in country)
Name: Silvia Chacón-Barrantes
Title: Dr.rer.nat., expertise on tsunami modeling
Postal Address: Departamento de Fisica, Universidad Nacional, Apdo. 86-3000, Heredia, Costa Rica
E-mail Address:
Emergency Telephone Number:
Emergency Fax Number:
Emergency Cellular Telephone Number:

Name: Marino Protti
Title: Ph.D. Seismologist, Advisor on tsunami sources
Postal Address: OVSICORI, Universidad Nacional, Apdo. 86-3000, Heredia, Costa Rica
E-mail Address:
Emergency Telephone Number:
Emergency Fax Number:
Emergency Cellular Telephone Number:

4. Tsunami Standard Operating Procedures for a Local Tsunami
(when a local tsunami hazard exists)

• What organization identifies and characterizes tsunamigenic events?

SINAMOT obtains seismic data from OVSICORI, RSN and/or LIS (the three seismic networks in Costa Rica). These data include: Mw, depth, location and source (local fault, subduction, etc.)

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

A coastal earthquake Mw>=6.5

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

CNE

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

If time is enough, it is sent to Municipal Emergency Committees through radio and telephone. They should communicate to coastal communities.
How is the emergency situation terminated?

When SINAMOT recommends and CNE decides. If there are no tsunami reports near the source region within two hours, the emergency situation is terminated.

5. Tsunami Standard Operating Procedures for a Distant Tsunami (when a distant tsunami hazard exists)

- What organization identifies and characterizes tsunamigenic events?
  
  We receive seismic information from PTWC, USGS and CISN.

- What is the threshold or criteria for declaring a potential tsunami emergency?
  
  There are several criteria. Seismic magnitude, depth, travel time, historical events, etc.

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

- How is the tsunami information (warning, public safety action, etc) disseminated within country? Who is it disseminated to?
  
  The CNE communicates the information to radio bases in coastal communities, to the officer in turn and to the link officers of the affected regions. They shall communicate to the Regional, Local and Community Emergency Committees, and those Committees to the public.

- How is the emergency situation terminated?

  When SINAMOT recommends it to the CNE, the CNE decides and communicates it further.

- For Distant Tsunami Procedures:

  What actions were taken in response to warnings issued by PTWC and/or US NTWC, during the intersessional period?

  SINAMOT analyzed the information for the 83 Tsunami Bulletins issued during the intersessional period, and sent a Report to CNE. In all cases there was no tsunami threat for Costa Rica. In most cases the information was posted at our Facebook page.

6. National Sea Level Network

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

<table>
<thead>
<tr>
<th>Name</th>
<th>Code</th>
<th>Lat.</th>
<th>Lon.</th>
<th>Status</th>
<th>Sensors</th>
<th>Rec. Rate</th>
<th>Transm. Rate</th>
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<td>1. Pressure 2. Aquatrak</td>
<td>1min</td>
<td>5min</td>
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<td>Operational</td>
<td>1. Pressure 2. Radar</td>
<td>1min</td>
<td>5min</td>
</tr>
</tbody>
</table>

All stations are administrated by RONMAC Program from the National University of Costa Rica. Same contact person as TNC.

Map: current stations shown in yellow. Future stations shown in orange and red.
7. **Information on Tsunami occurrences**

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

The Chilean tsunami of September 2015 (Mw 8.3) was recorded by our Quepos gauge with a maximum height of 17.8 cm. It was also filmed at Genius River in Coco’s Island: [https://www.youtube.com/watch?v=RePvCfoCTss](https://www.youtube.com/watch?v=RePvCfoCTss)
Recently were found records of the arrival of 1979 Colombia tsunami to Puntarenas and the arrival of 1985 twin México tsunamis, 2006 Tonga, 2007 Kuril Islands and 2014 Chile tsunami to Quepos. Those records were processed and incorporated to Costa Rica tsunami database. A scientific publication including those records was submitted to Natural Hazard and it’s currently under review.

For PacWave17 an evacuation drill was held in Ostional (Guanacaste). The drill included only public schools but it was a big success. The community is motivated to improve their tsunami preparedness.
8. Web sites (URLs) of national tsunami-related web sites
   www.facebook.com/sinamot.cr
9. **Summary plans of future tsunami warning and mitigation system improvements.**
   
   *This information will be used to aid the development of the PTWS Medium Term Strategy and the PTWS Implementation Plan.*
   
   - Re-installation of Puntarenas and Golfito stations, which have been out of service for several years now (see map).
   - Installation of a new station at Coco’s Island (see map). This is going to be done as collaboration between RONMAC-UNA, CNE, MINAE and NOAA. A site survey was performed in January by UHSLC and a recommendation was done. We are currently working on the bureaucracy of buying the equipment.
   - Elaboration of tsunami evacuation maps, using tsunami inundation maps. The first 6 maps are ready for Ostional, Sámara, Carrillo, Guiones, Garza and Pelada. Fourteen more maps will be done in the following two years.

**NATIONAL PROGRAMMES AND ACTIVITIES INFORMATION**

10. **EXECUTIVE SUMMARY**

   *Brief statement of no more than one page addressing all items discussed in the National Report. Should include 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), as well as public education programmes or other measures taken to heighten awareness of the tsunami hazard and risk.*

   Tsunami communication protocols are tested regularly.

   One tsunami was recorded during the intersessional year, and six old records were discovered and processed.

   Six tsunami evacuation maps were elaborated and 14 more will be ready in the next intersessional year. For the first time an evacuation drill was held during a PacWave, for two schools at Ostional (Guanacaste).

   There is an agreement to deploy a new tidal gauge in Cocos Island, initial survey was held, purchase is undergoing. Very likely two more gauges will be deployed in Puntarenas and Golfito as well.

   

   Date: …March 15th, 2017….. Name: …Silvia Chacón-Barrantes..