NATIONAL SYSTEM FOR THE ALERT ON TSUNAMIS (SINAT)
ALERT ON TSUNAMIS CENTRAL (CAT)

DECEMBER 2013.
PARTICIPANTS:
ORGANIZATIONS OF THE FEDERAL GOVERNMENT

- Gobierno Federal SEMAR
- Gobierno Federal SEGOB
- Gobierno Federal SCT
- Alert on Tsunamis Central
- Center of Command and Control of the Mexican Navy’s Staff General
- Dirección para la General Protección Civil
- National Center for Disaster Prevention
- CENAPRED
- National Center of Communication
- CENACOM

RENOWED ACADEMIC INSTITUTIONS

- National Autonomous University of Mexico
- CICESE
- National Seismological Service
- México SSN
- Tide Gauging Service
- Scientific Research and Undergraduate Education Center in Ensenada, Baja California
OBJECTIVE:

Being an institution that joins altogether the structures, functional relationships, methods and procedures of different organizations of the Public Federal Administration and Mexican Academic Institutions so as to bring into operation a system for the detection, monitoring and tsunami forecasting that provides both, useful information about the arising of fartherly located, regional or local tsunamis that may affect the Mexican coasts, thus leading to the mitigation of its effects, and permitting the rescue of lives and goods reducing their loss to the minimum.
IN ORDER TO ACHIEVE SINAT´S OBJECTIVE, THERE HAVE BEEN CREATED 5 WORKGROUPS FORMED BY THE PARTICIPATING GOVERNMENT INSTITUTIONS, ALL OF THEM HOLDING SPECIFIC OBJECTIVES WHICH IN TURN HAVE HAD THEM DETERMINE THE REQUIREMENTS NEEDED TO BE MET IN ORDER TO CREATE A STRONG, SOLID AND RELIABLE SYSTEM.

GT1 MONITORING AND DETECTION

GT2 EVALUATION OF RISKS

GT3 WARNING AND COMMUNICATIONS

GT4 STRATEGIES FOR DIFFUSION, PREPARATION AND RECOVERY

GT5 LAW

TO CREATE LAW ORIGINATED COOPERATION MECHANISMS ACCORDING TO THE CURRENT LEGAL FRAME.

ANALYZE AND MAKE RECOMMENDATIONS ABOUT PRIORITIES AND THE NECESSARY MEASURES TO BE TAKEN AS FOR THE IMPLEMENTATION OF SINAT.

TO GIVE SOME ADVICE ON THE DETERMINATION, DEFINITION AND ASSESSMENT OF THE THREATENS AFFECTING THE COASTS, AS WELL AS THE ELABORATION OF THE REQUIRED MODELING.

TO DETERMINE THE STRATEGIES AND INCREASE THE OPERATIONAL CAPABILITIES FOR PREPARATION AND RECOVERY.

TO BRING INTO EFFECT PROCEDURES, ALERTS AND COMMUNICATIONS.
To process and analyze the information generated by seismic monitoring services and sea level at real time (coastal and offshore), using both a permanent communication network and other international tsunami alert systems, providing the designated institution with the information required for the reception and official distribution of tsunami alert bulletins.

SINAT operational site and headquarters will be constituted by the Alert on Tsunamis Central (CAT) that will count on the personnel, material and equipment required for meeting its objective:
ORGANIC STRUCTURE OF CAT

6 OCEANOLOGISTS, (3 MASTER´S )
1 GEOLOGIST (WITH MASTER´S )
1 GEOGRAPHER
4 ENGINEERS WITH SPECIALTY IN OCEANOGRAPHY
1 INFORMATIC

DIRECTION OF AREA
ALERT ON TSUNAMIS CENTRAL

DETECTION, MONITORING AND FORECASTING
PREPARATION AND COORDINATION OF ALERT

OPERATORS (6)
RESEARCH PROJECTS (3)
SYSTEM MAINTENANCE
PROCESSING ANALYSIS AND ALERTS
TRAINING
OPERATIONAL STRUCTURE OF CAT

National Tide Gauging Network (SEMAR, SCT, CICESE Y UNAM)

National Seismologic Service SSN (UNAM)

Pacific Tsunami Warning Center (PTWC) (Hawaii)


Alert on Tsunamis Central

Will work on a 24 hour availability basis
Telephone link
E-mail

Center of Command and Control

Naval Commanders of the ports

NATIONAL CENTER FOR DISASTER PREVENTION

Civilian Protection Units

GENERAL DIRECTION FOR CIVILIAN PROTECTION

Civilians

Harbor Master
The analysis of the probable transformation into a tsunami of a seism with magnitude M ≥ 6.8.

- Uninterrupted communication with observers of the sea conditions.
- Cancellation of tsunami alarm.

Model TIME for local tsunamis along the Western Coast in Mexico.

- Through the selection of Fault Planes of 30 x 30 Km, assigning a coseismic dislocation.
- Designs inter plate seisms of different magnitudes, also estimating the height of the tsunami along the coast.
- Issues the tsunami’s preliminary bulletin.
The analysis of the probable transformation of a seism with magnitude \( M > 8.5 \) into a tsunami and that takes place in South America.

- **Model TIME of Regional Tsunamis:**
  - Through the selection of Fault Planes of 100 x 200 Km, assigning a coseismic dislocation.
  - Designs interplate seisms of different magnitudes and estimates the height of the tsunami along the coasts of South America.
  - Issues the preliminary bulletin of a regional tsunami.
The analysis of the probable transformation of a seism with magnitude $M > 9$ into a tsunami and that takes place in Subduction Zones in the Western Pacific.

- The alerts for transoceanic tsunamis in Mexico are received through the massive distribution in the Mexican Ministry of the Navy of bulletins issued by the PTWC to the personnel that will belong to the Center for the Alert on Tsunamis.

- The information of the alerts is processed and sent to the focal spot and national contact entities for tsunamis, in charge of warning the population taking into account the criterion included in the bulletins.
THANKS