



Tsunami Exercises, Community Response Plans, and Drills - Chile examples

Agosto 2024

Key Points about Chile and Socionatural Disasters

Throughout history, our country has been exposed to a series of catastrophic events, whether of natural origin due to its orographic configuration or attributable to human actions, but always leaving us with the lesson of the urgent need to improve community preparedness and response to various threats



SENAPRED: LEY 21.364

The functions C, D, and E establish the following:

C) Coordinate and supervise the implementation of Disaster Risk Management Instruments at the national level as established in this law. **For example, Community Emergency Plans and Annexes for earthquakes and tsunamis.**

D) Coordinate, evaluate, and supervise the Disaster Risk Management Instruments at the regional, provincial, and communal levels as established in this law. **For example, through drills.**

E) Advise and support the members of the System in developing capacities for Disaster Risk Management. Additionally, the Service must provide technical support in the creation of all kinds of instruments concerning all phases of the disaster risk cycle. **For example, through the planning of evacuation drills.**



Exercises coordinated by SENAPRED

Prepare and train the community, as well as the staff of SINAPRED and SENAPRED, to face various socio-natural threats. Advise SINAPRED organizations on exercises coordinated by SENAPRED and/or their own training initiatives.

SENAPRED plans and coordinates the following from this team:

- **Earthquake and tsunami evacuation drills, coastal border type.**
- **Earthquake and tsunami evacuation drills, education sector.**
- **Mass removal evacuation drill.**
- **Volcanic eruption evacuation drills, for volcanoes.**
- **Protocol simulations.**
- **COGRID simulations."**



Simulacro Borde costero, provincia de cauquenes,2012



Simulacro por erupción volcánica, Planchón Peteroa, 2018

EVACUATION MAPS

Visual representation of the evacuation system

Meeting points
Evacuation routes



EMERGENCY PLANS

Sections of the Emergency Plan

Roles and functions of first response agencies in the tsunami evacuation process. Dissemination of the tsunami alarm



OBJECTIVES

Define what you want to test and who will participate

Target audience, individuals and communities exposed to tsunami threats; Test the emergency plan; Achieve the highest possible participation from individuals exposed to the tsunami threat



AWARENESS CAMPAIGN

Participate in the drill

Media plans, social media, printed evacuation maps, recommendations, etc."



THE DRILL

DURING THE DRILL

On the day of the drill: first response agencies practice their roles and functions, regional and local authorities participate in the activity, evaluators are deployed to different locations to assess, and SENAPRED tests the alert system



EVALUATION

What do we seek to evaluate in the drill

Safety conditions on public roads, presence of emergency signage, community behavior during evacuation, evacuation times, etc.



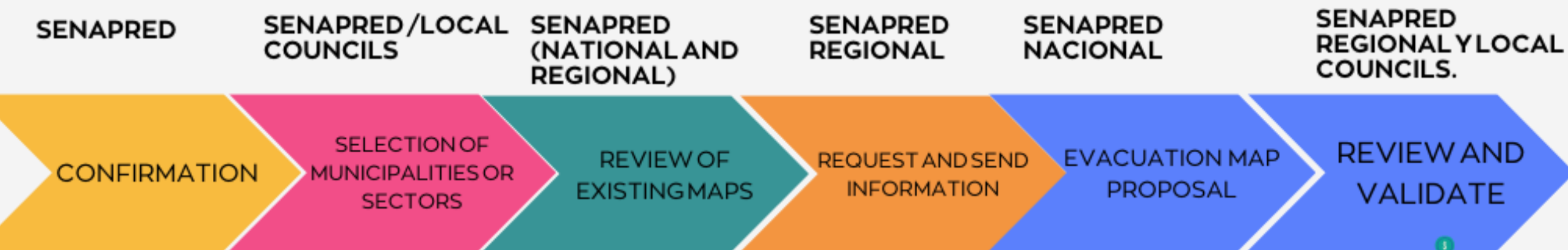
UPDATE EMERGENCY PLAN AND MAPS

Identify gaps and opportunities for improvement

We encourage local authorities and their communities to update existing management tools as soon as possible in preparation for a potential evacuation process



Process of developing/updating tsunami evacuation maps



WHAT IS PRACTICED IN A DRILL? EMERGENCY PLANS

TYPES OF EMERGENCY PLANS	CONTENTS	CHALLENGES
Regional Emergency Plans	Dissemination of tsunami alarm, roles and functions of agencies within the system, members, depending on the most recurrent threats in the area, and annexes by threats. For example: earthquake and tsunami	outdated emergency plans, which do not include all expected roles and functions.
Emergency plans prepared by the municipality and supervised by SENAPRED. and their annexes.	Tsunami threat zones existing in the area, roles and functions of municipal officials and first response agencies	Municipalities are currently subjecting their emergency plans to service oversight; however, the process has been slow. It's important to remember that in Chile, municipalities are autonomous. There are generic plans that have not been disseminated within the municipalities or to the community
Community emergency plans,	Community alert systems Role of the communities members.	This type of planning exists; however, not in all communities in the area. Information is currently being gathered. Community plans are not

WHAT IS PRACTICED IN A DRILL?: SCENARIO

PARÁMETROS DEL SISMO (7,8 Mw)			
Latitud	-35,010°	Ancho de Falla	61 km
Longitud	-72,800°	Longitud de Falla	126 km
Profundidad	28 km	Referencia Geográfica	46 km al nor-oeste de Constitución

Fuente: CSN elaborado para SENAPRED.

SCENARIO: BOLETINES SHOA



SERVICIO HIDROGRÁFICO Y OCEANOGRÁFICO DE LA ARMADA DE CHILE

Certificación ISO 9001 para los procesos de producción de Cartas y Publicaciones Náuticas

EJERCICIO EJERCICIO EJERCICIO AMENAZA DE TSUNAMI PARA LAS COSTAS DE CHILE EJERCICIO EJERCICIO EJERCICIO

BOLETIN: 1

EVENTO: 06/11/2017 2024 11:00

MAGNITUD: 7.8, 45 KM AL NW DE CONSTITUCION HORA RECEPCION INFORMACION 06/11/2017 2024

EVALUACION:

BASADO EN LOS PARAMETROS PRELIMINARES DEL SISMO Y LA EVALUACION DE LA AMENAZA DE TSUNAMI EFECTUADA POR EL SISTEMA DE PREDICCION DE ALARMA DE TSUNAMIS (SIPAT). SE ESTABLECEN LOS SIGUIENTES ESTADOS PARA EL TERRITORIO NACIONAL:

VI	OHIGGINS	ALARMA
VII	MAULE	ALARMA
VIII	BIO BIO	ALERTA

BOLETIN: 2

EVENTO: 06/11/2017 2024 11:00

MAGNITUD: 7.8, 45 KM AL NW DE CONSTITUCION HORA RECEPCION INFORMACION 06/11/2017 2024 11:02

EVALUACION:

DE ACUERDO A LA AMENAZA DE TSUNAMI ESTABLECIDA POR LOS ESTADOS INFORMADOS EN BOLETIN ANTERIOR, LAS HORAS ESTIMADAS DE ARRIBO SERIAN LAS SIGUIENTES.

NO SE INCLUYEN LOCALIDADES CON ESTADO INFORMATIVO:

Constitucion	03-10-2017 11:10	ARRIBADO
Bucalemu	03-10-2017 11:13	ARRIBADO



OBJECTIVES: EXAMPLES

- Achieve high participation from the target audience for the exercise.
- Practice roles and functions during an evacuation process, according to emergency plans.
- Evaluate the behavior and organization of participants, evacuation routes, and meeting points.
- Identify strengths, gaps, and opportunities for improvement regarding the evacuation process and the public alert system.

HOW TO ACTIVATE AND DEACTIVATE A DRILL?

- Based on the information contained in the plans, the existing mechanisms in the region for alerting the community to a tsunami warning will be tested:
- Carabineros, Firefighters, the Navy, and Municipal Staff will initiate the earthquake through their means (sound systems and others) and issue the tsunami evacuation alert to the community.
- Additionally, SENAPRED, through its National Early Warning Unit, will activate the Emergency Alert System (EAS), sending text messages and audible alarms to all compatible cell phones within the coastal border polygon of the participating municipalities

EVALUATION

The drill evaluator must accompany the community evacuation process on the evacuation routes or at the meeting points. With the information gathered through the evaluation, it is possible to prepare the drill evaluation report, which allows:

- Analyzing the community evacuation process in general.
- Identifying strengths and areas for improvement in the evacuation processes.
- Providing guidance to authorities and related organizations: Regional and Provincial Presidential Delegation, Municipalities, Mutual Insurance Companies, etc.

Simulacro
Coquimbo
2023





BIENVENIDO
COMUNA DE
RIO IBAÑEZ

Simulador
Sísmico en
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