

How to Fill out 'Response against Tsunami Checklist'

- Check the guidance on "How to Fill out 'Response against Tsunami Checklist' " in our website.
- In preparation for a Tsunami occurring, it is recommended to actively seek information on tsunami in advance.
- Each Ship's Captain fills in the blanks **on consultation with ship's agents.**
- **Even if Captain may not fill in all the blanks in the front page,** this sheet can work as a checklist.
- It should be noted that the use of this sheet is not obligatory by statute.

Example of information collection from related organizations

Table of Response against Tsunami		Actions to be Taken by a Ship	
Tsunami Warning & Recommendation	Time Allowance for Tsunami Arrival	Large/Mini/Small/Ship (Including Fishing Vessels)	Small Ship (Fishing Vessels, Tugboats, etc.)
Major Tsunami	No	Suspend Cargo Handling/Works Immediately / Emergency Departure	Suspend Cargo Handling/Works Immediately / Emergency Departure
	Yes	Suspend Cargo Handling/Works Immediately / Emergency Departure	Suspend Cargo Handling/Works Immediately / Emergency Departure
Tsunami	No	Suspend Cargo Handling/Works Immediately / Emergency Departure	Suspend Cargo Handling/Works Immediately / Emergency Departure
	Yes	Suspend Cargo Handling/Works Immediately / Emergency Departure	Suspend Cargo Handling/Works Immediately / Emergency Departure
Tsunami	Minor	Suspend Cargo Handling/Works Immediately / Emergency Departure	Suspend Cargo Handling/Works Immediately / Emergency Departure
Tsunami	Low	Suspend Cargo Handling/Works Immediately / Emergency Departure	Suspend Cargo Handling/Works Immediately / Emergency Departure

Time series chart Tsunami caused by earthquakes in the past Assumed Tsunami submergence map

Example of Required Working Time

Emergency Departure	Working Time (minutes)
Suspend the cargo handling work	5
Call the crew	2
Prepare for leaving pier/port (Start the engine and thruster)	17
Reestablish the Mooring → Departure	5
Notify the land and operating company after departure	1
Call the crew	2
Tight and add mooring lines and tighten the brake of mooring winch	3
Prepare for anchoring	2
Prepare the engine and thruster as a readiness for mooring the break and drifting	3
Discuss and instruct to suspend cargo handling	3
Check the waterproofing, and close the waterproof doors and sea water valves	1
Notify and confirm with the land and operation company	1
Count the number of crew and check the tally	3
Instruct to complete evacuation to the land	3
Shipside works required until evacuation to the land is completed	4

Fill in the blank table (decision guideline) based on the information obtained.

Response against Tsunami by Arrival Time (decision guideline)					
Warning Level	Tsunami Height	Berthing		Anchoring	
		Within 30 minutes	More than 30 minutes	Within 30 minutes	More than 30 minutes
Major Tsunami Warning	More than 3m	Evacuation to the Land	Emergency Departure	Emergency Departure	Emergency Departure
Minor Tsunami Warning	1 - 3 m	Staying Alongside	Emergency Departure	Emergency Departure	Emergency Departure
Low Tsunami Recommendations	Less than 1m	Staying Alongside	Emergency Departure	Emergency Departure	Emergency Departure

Example

Name: John Smith [Port: Port of XX] Cargo Ship

Response against Tsunami Checklist
(This sheet is not authorized as obligation by statute.)

Port and Ship Information

Port: Port of XX Berthing direction: Inbound / Outbound
 Berth / Quay: Berth A Quay: Seismic design / Non-seismic design
 Ship name: Kaji manu Gross Tonnage: 499GT
 Ship type: bulk carrier Crew: 5 Cargo: iron ores

Basic Information

Safe water area: From (XX lighthouse), (45) Degree (300) m Water depth: 50 m
 Location: latitude:000'00"N Longitude:000'00"E Distance from berth to safe water area:50m
 Time to arrive safe water area: 10 minutes
 Place of evacuation area on land: XX park Handling support: Tug (Yes / No)

Contact Point

Agent: XX company 00-0000-0000 Operating company: XX company 00-0000-0000
 Stevedore: XX company 00-0000-0000 Harbor Master: XX company 00-0000-0000
 Liner: XX company 00-0000-0000 Japan Coast Guard: 00-0000-0000
 Tug Company: XX company 00-0000-0000 Other:

Confirm Tsunami information in advance, if possible. The assumed maximum Tsunami height: 5 m (time of arrival: 45 minutes)

Response against Tsunami (Basic Policy)

Warning level	Tsunami height	On berthing		On anchoring	
		Within 30 minutes	More than 30 minutes	Within 30 minutes	More than 30 minutes
Major Tsunami warning	More than 3m	Evacuation to the Land	Emergency Departure	Emergency Departure	Emergency Departure
Tsunami warning	1~3m	Evacuation to the Land	Staying Alongside	Staying Alongside	Staying Alongside
Tsunami advisory	Less than 3m	Staying Alongside	Staying Alongside	Staying Alongside	Staying Alongside

Earthquake, Tsunami is occurred !!

Earthquake Information (Date -)

Time	h	m	Scale	M	Place	Seismic Intensity
Tsunami Information						
Major Tsunami warning						
Tsunami warning						
Tsunami advisory						
Time to arrival of Tsunami			m	Anticipated height		m

Captain Judgement

Emergency departure Stay alongside Evacuation to the land

[Port: Port of XX] Cargo Ship

Basic Response List (Fill in as far as practicable)

Keep monitoring the latest information of Tsunami (from TV, Radio or VHF) Confirm Tsunami occurrence indication (from Port master, Harbor administrator, etc.)

Emergency departure *Continue to obtain the information of Tsunami (from TV, Radio or VHF)

- ① Interruption of cargo work (5 minutes)
- ② Crew readiness (2 minutes)
- ③ Standby for departure (Engine and Thruster if provided) (17 minutes)
- ④ Consider support Tug, handler and Mooring crew are necessary or not (2 minutes)
- ⑤ Confirm store landing facilities (Crane, Loading Arm, Belows Chute, etc...) available (3 minutes)
- ⑥ Check the suitability of the departure route (Proximity of hazards and other vessels in way of departure route) (2 minutes)
- ⑦ Unmooring or cutting lines (5 minutes)
- ⑧ Give notice to the shore (relevant departments or the operating company), after departure (30 minutes)

Staying alongside *Continue to obtain the information of Tsunami (from TV, Radio or VHF)

- ① Crew readiness (2 minutes)
- ② Tending mooring lines / Tightening brakes of mooring winches (3 minutes)
- ③ Standby anchor (2 minutes)
- ④ Standby engine and thruster if provided (To avoid damaging of lines, Surging) (3 minutes)
- ⑤ Discuss or instruct for the interruption of cargo work, etc... (2 minutes)
- ⑥ Check watertight measures (close all the watertight doors / openings, etc...) (2 minutes)
- ⑦ Give notice to the shore (relevant departments or the operating company) (15 minutes)
- ⑧ Check the ways to obtain the latest information.

(Preparing vessel on the advice or the indication from Harbor Master / Harbor administrator, etc...)
 (Check the safe water area in advance for the emergency departure)
 (Check the safe area, the evacuation route for evacuation to the land)

Evacuation to the land *Continue to obtain the information of Tsunami (from TV, Radio or VHF)

- ① Crew readiness (3 minutes)
- ② Check the safe area, the evacuation route, the required time to evacuate etc... (3 minutes)
- ③ Instruct crew to evacuate to land (4 minutes)
- ④ Carry out the required work on board till Evacuation to the land (4 minutes)
- ⑤ Discuss the connections such as loading facilities between the ship and the land (10 minutes)

Attention in case of drifting (Additional points)

When the ship drifts from berth, the mooring may break, and cargo handling facilities, such as cranes etc. may collapsed, therefore crew shall evacuate to the safe area.

Protect ships from Tsunami

- Probability of a large, M8-M9 class earthquake occurring within 30 years is appx. 70%.
- A large tsunami may arrive at a short notice on several fronts in Japan.

To decide on evacuation actions quickly, it is important to make **Ship's Tsunami evacuation manual & Response against Tsunami Checklist in advance.**



Damaged ships by Tsunami in Great East Japan Earthquake

Response against Tsunami Checklist

Format of the "Ship's Tsunami Evacuation Manual" with **one sheet (front/back)** for **3 important steps** on tsunami evacuation measures

- ① Basic items to be filled in advance
- ② Information to be confirmed when earthquake / tsunami occurs
- ③ Checklist for tsunami evacuation measures

Response against Tsunami Checklist

Fill in the basic information in advance, and the captain check the information when earthquake / tsunami occurs

Port and Ship Information

Basic Information

Contact Points

Response against Tsunami (Basic policy)

Response against Tsunami Checklist

Emergency departure

Staying alongside

Evacuation to the land

Tsunami evacuation measures

Earthquake, Tsunami occurred !!

Collect information (immediately after warning is issued)

Captain judges on tsunami evacuation actions to be taken

Emergency departure Stay alongside Evacuate to the land

Carry out tsunami evacuation measures

Tsunami arrival

Captain judges on actions to be taken when earthquake / tsunami occurs

Captain confirms the checklist during tsunami evacuation measures

Website

Guidance and Formats in English, Chinese, Korean, Russian and Spanish are available on our website.
http://www.mlit.go.jp/en/maritime/maritime_fr6_000002.html



Safety Policy Division, Maritime Bureau, MLIT, Japan

Name:

【Port: 】 Cargo Ship

【Port: 】 Cargo Ship

Response against Tsunami Checklist
(This the sheet is not authorized as obligation by statute.)

Basic Response List

(Fill in the as far as practicable)

Confirming before port entry in advance

Port and Ship Information		
Port:	Berthing direction: Inbound / Outbound	
Berth / Quay:	Quay: Seismic design / Non-seismic design	
Ship name:	Gross Tonnage:	
Ship type:	Crew:	Cargo:

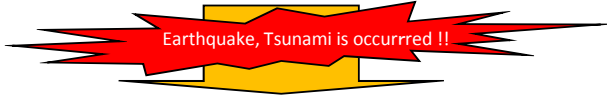
Basic Information	
Safe water area: From (<input type="text"/>), (<input type="text"/>) Degree (<input type="text"/>)m	Water depth: <input type="text"/> m
Location : Latitude: <input type="text"/> Longitude: <input type="text"/>	Distance from berth to safe water area : <input type="text"/> nm
Time to arrive safe water area: <input type="text"/> minutes	
Place of evacuation area on land :	Handling support: Tug (Yes ▪ No)

Contact Point	
Agent:	Operating company:
Stevedore:	Harbor Master:
Liner:	Japan Coast Guard:
Tug Company:	Other:

Confirm Tsunami information in advance, if possible.	The assumed maximum Tsunami height: <input type="text"/> m (time of arrival: <input type="text"/>)
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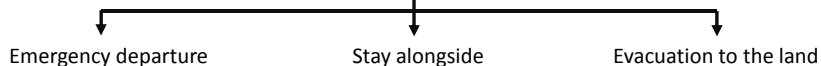
Response against Tsunami (Basic Policy)

Response against Tsunami (Basic Policy)					
Warning level	Tsunami height	On berthing		On anchoring	
		Within ~minutes	More than ~minutes	Within ~minutes	More than ~minutes
Major Tsunami warning	More than 3m				
Tsunami warning	1~3m				
Tsunami advisory	Less than 1m				



Judge if Earthquake, Tsunami is occurred
Captain shall Judge

Earthquake Information (Date - <input type="text"/>)			
Time	Scale	Place	Seismic Intensity
h m	M		
Tsunami Information			
Major Tsunami warning	Tsunami warning	Tsunami advisory	
Time to arrival of Tsunami	m	Anticipated height	m
Captain Judgement			



Keep monitoring the latest information of Tsunami.
(from TV, Radio or VHF)

Confirm Tsunami occurrence indication
from Port master, Harbor administrator,
etc...

Emergency departure *Continue to obtain the information of Tsunami (from TV, Radio or VHF)

- ① Interruption of cargo work (minutes)
- ② Crew readiness (minutes)
- ③ Standby for departure (Engine and Thruster if provided) (minutes)
- ④ Consider support Tug, handler and Mooring crew are necessary or not
- ⑤ Confirm store landing facilities (Crane, Loading Arm, Bellows Chute, etc...) available
- ⑥ Check the suitability of the departure route (Proximity of hazards and other vessels in way of departure route) (minutes)
- ⑦ Unmooring or cutting lines (minutes)
- ⑧ Give notice to the shore (relevant departments or the operating company), after departure (minutes)

Staying alongside *Continue to obtain the information of Tsunami (from TV, Radio or VHF)

- ① Crew readiness (minutes)
- ② Tending mooring lines / Tightening brakes of mooring winches (minutes)
- ③ Standby anchor (minutes)
- ④ Standby engine and thruster if provided (To avoid damaging of lines, Surging) (minutes)
- ⑤ Discuss or instruct for the interruption of Cargo work, etc... (minutes)
- ⑥ Check watertight measures (close all the watertight doors /openings, etc...) (minutes)
- ⑦ Give notice to the shore (relevant departments or the operating company) (minutes)
- ⑧ Check the ways to obtain the latest information.
(Preparing vessel on the advice or the indication from Harbor Master/ Harbor administrator, etc...)
(Check the safe water area in advance for the emergency departure)
(Check the safe area, the evacuation route for evacuation to the land)

Evacuation to the land *Continue to obtain the information of Tsunami (from TV, Radio or VHF)

- ① Crew readiness (minutes)
- ② Check the safe area, the evacuation route, the required time to evacuate etc... (minutes)
- ③ Instruct crew to evacuate to land (minutes)
- ④ Carry out the required work on board till Evacuation to the land (minutes)
(Disengaging the connections such as loading facilities between the ship and the land)

Attention in case of drifting (Additional points)

When the ship drifts from berth, the mooring may break, and cargo handling facilities, such as cranes etc. may collapsed, therefore crew shall evacuate to the safe area.