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TSP Indonesia Product Demonstration

Yedi Dermadi

ICG Indian Ocean Tsunami Warning & Mitigation System SOP Workshops July 2023:
*Standard Operating Procedures (SOPs) for
National Tsunami Warning Centres (NTWCs) and
Disaster Management Organisations (DMOs)*

Outline



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- TSP Indonesia Password-Protected Web
- **WRS-TSP Indonesia**
- **Indonesia Tsunami Non-Tectonic (InaTNT) for Indian Ocean**



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TSP Indonesia Password-Protected Web

URL address: <https://rtsp.bmkg.go.id/>

Can be accessed by any various web browser apps:



Firefox



chrome



Internet Explorer



Opera



Safari



Microsoft Edge



TSP Indonesia Password-Protected Web



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The screenshot shows the website for the Agency for Meteorology, Climatology, and Geophysics (BMKG), specifically the Indonesia Tsunami Service Provider (InaTEWS). The page features a header with the agency name and a navigation menu including Home, Public Bulletin, About InaTSP, Seismic Network, and Contact Us. A 'Welcome' section provides information about the system's purpose. A 'Public Bulletin' section is highlighted with a dashed blue box, and a 'User Login' section is also highlighted with a dashed blue box. Arrows from these sections point to external boxes on the right.

Services to be provided

- TSP Exchange Products
- TSP Public Products

Public Access

Password Protected Access
user authentication is needed

TSP Indonesia Password-Protected Web



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Exchange Products

TSP Exchange bulletins

- **Type 1:** Earthquake Bulletin
- **Type 2:** Threat Assessment Bulletin
 - No Threat Bulletin
 - Potential Threat Bulletin
- **Type 3:** Confirmed Threat Bulletin
- **Type 4:** Final Bulletin

The exchange bulletins issued for an event shall be sequentially numbered regardless of the bulletin type.

Origin Time (UTC)	Mag	Depth (Km)	Latitude	Longitude	Location	Type	Bulletin Number	Bulletin Type	Event Group
2023-06-15 18:06:22	6.9	161	22.82S	176.44W	South of Fiji Islands	REAL EVENT	1	EARTHQUAKE BULLETIN	202306151806
2023-06-07 06:00:00	9.0	10	7.2N	92.9E	Nicobar Islands, India Region (CommTEST-Jun-2023)	TEST EVENT	4	FINAL BULLETIN	202306070600COM
2023-06-07 06:00:00	9.0	10	7.2N	92.9E	Nicobar Islands, India Region (CommTEST-Jun-2023)	TEST EVENT	3.3.1	CONFIRMED THREAT BULLETIN	202306070600COM
2023-06-07 06:00:00	9.0	10	7.2N	92.9E	Nicobar Islands, India Region (CommTEST-Jun-2023)	TEST EVENT	2	THREAT ASSESSMENT BULLETIN	202306070600COM
2023-06-07 06:00:00	9.0	10	7.2N	92.9E	Nicobar Islands, India Region (CommTEST-Jun-2023)	TEST EVENT	1	EARTHQUAKE BULLETIN	202306070600COM
2023-05-20 01:50:59	7.5	17	22.96S	170.57E	Southeast of Loyalty Islands	REAL EVENT	1	EARTHQUAKE BULLETIN	202305200150
2023-05-19 02:57:05	7.9	28	23.13S	170.81E	Southeast of Loyalty Islands	REAL EVENT	1	EARTHQUAKE BULLETIN	202305190257
2023-05-10 16:02:01	7.5	224	15.67S	174.48W	Tonga Islands	REAL EVENT	1	EARTHQUAKE BULLETIN	202305101602
2023-04-28 03:13:36	6.5	589	24.95S	179.04E	South of Fiji Islands	REAL EVENT	1	EARTHQUAKE BULLETIN	202304280313
2023-04-24 20:00:57	6.9	84	0.93S	98.39E	Southern Sumatra, Indonesia	REAL EVENT	2	THREAT ASSESSMENT BULLETIN	202304242000

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Exchange Bulletin Notification Message

Exchange Bulletin

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AGENCY FOR METEOROLOGY CLIMATOLOGY AND GEOPHYSICS
Indonesia Tsunami Service Provider

You are logged as: USER

Event Detail

« Back to the lists

Magnitude **9,0**

Origin Time : 2023-06-07 06:00:00 UTC
 Location : 7.2N - 92.9E (Nicobar Islands, India Region (CommTEST-Jun-2023))
 Depth : 10 Km
 Bulletin : 2 (THREAT ASSESSMENT BULLETIN)
 Type : TEST EVENT

Public Bulletin | Exchange Bulletin | Notification Bulletin | Threat Table | Threat Map | Travelttime Map | SSHMax Map

Country	Location	T1 (UTC)	T2 (UTC)	T3 (UTC)	T4 (UTC)	EWI	Status
ALL IO COUNTRIES							
1. AUSTRALIA							
2. BANGLADESH							
3. BRITISH INDIAN OCEAN TERRITORY							
4. COMOROS							
5. DJIBOUTI							
6. FRENCH SOUTHERN AND ANTARCTIC LA							
7. INDIA							
8. INDONESIA							
9. IRAN							
10. KENYA							
11. MADAGASCAR							
12. MALAY SIA							
13. MALDIVES							
14. MAURITIUS							
15. MOZAMBIQUE							
16. MYANMAR							
17. OMAN							
18. PAKISTAN							
19. REUNION							
	COCOS ISLAND	2023-06-07 08:25:30	2023-06-07 08:28:30	2023-06-07 13:57:30	2023-06-07 17:41:15	1.32	Threat
	CHRISTMAS ISLAND	2023-06-07 08:45:00	2023-06-07 11:59:45	2023-06-07 15:48:30	2023-06-07 17:57:45	1.15	Threat
	GASCOYNE COAST	2023-06-07 11:40:00	2023-06-07 12:06:15	2023-06-07 17:37:30	2023-06-07 18:00:00	1.18	Threat
	LEEUEWIN COAST	2023-06-07 12:43:00	2023-06-07 13:36:45	2023-06-07 17:43:15	2023-06-07 17:47:00	0.88	Threat
	PILBARA COAST WEST	2023-06-07 11:32:15	2023-06-07 13:49:30	2023-06-07 17:32:15	2023-06-07 17:58:00	0.85	Threat
	NINGALOO COAST	2023-06-07 10:55:15	2023-06-07 14:01:00	2023-06-07 17:44:15	2023-06-07 18:00:00	0.71	Threat
		2023-06-07	2023-06-07	2023-06-07	2023-06-07		

Threat Table

AGENCY FOR METEOROLOGY CLIMATOLOGY AND GEOPHYSICS
Indonesia Tsunami Service Provider

You are logged as: USER

Event Detail

« Back to the lists

Magnitude **9,0**

Origin Time : 2022-12-07 06:00:00 UTC
 Location : 12.65N - 93.5E (Andaman Islands, India Region (CommTEST-Dec-2022))
 Depth : 10 Km
 Bulletin : 2 (THREAT ASSESSMENT BULLETIN)
 Type : TEST EVENT

Public Bulletin | Exchange Bulletin | Notification Bulletin | Threat Table | Threat Map | Travelttime Map | SSHMax Map

Download KMZ Threat Map for Google Earth

Current Time (UTC)
Jul 02, 2023
05:35:58

Miscellaneous

- Earthquake Event List
- Earthquake Event Map
- Performance Indicator

Links

- NTWC Status Reporting Form (India)
- TSP Australia Website
- TSP India Website
- IOC-UNESCO Website
- ICG/IOTWS Secretariat Website
- PTWC Website
- JMA Website

Documentation

- TSP Indonesia User Manual
- TSP Australia User Manual
- TSP India User Manual

Threat Map

TSP Indonesia Password-Protected Web



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Exchange Products

AGENCY FOR METEOROLOGY CLIMATOLOGY AND GEOPHYSICS
Indonesia Tsunami Service Provider

You are logged as: USER

Home Public Bulletin About InaTSP Seismic Network Contact Us Logout

Event Detail

« Back to the lists

Magnitude **9,0**

Origin Time : 2022-12-07 06:00:00 UTC
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Depth : 10 Km
Bulletin : 2 (THREAT ASSESSMENT BULLETIN)
Type : TEST EVENT

Public Bulletin Exchange Bulletin Notification Bulletin Threat Table Threat Map Travelttime Map SSHMax Map

Download KMZ Travel Time Map for Google Earth

Current Time (UTC)
Jul 02, 2023
05:37:44

Miscellaneous

- Earthquake Event List
- Earthquake Event Map
- Performance Indicator

Links

- NTWC Status Reporting Form (India)
- TSP Australia Website
- TSP India Website
- IOC-UNESCO Website
- ICG/IOTWS Secretariat Website
- PTWC Website
- JMA Website

Documentation

- TSP Indonesia User Manual
- TSP Australia User Manual
- TSP India User Manual

Travel Time Map

AGENCY FOR METEOROLOGY CLIMATOLOGY AND GEOPHYSICS
Indonesia Tsunami Service Provider

You are logged as: USER

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Event Detail

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Bulletin : 2 (THREAT ASSESSMENT BULLETIN)
Type : TEST EVENT

Public Bulletin Exchange Bulletin Notification Bulletin Threat Table Threat Map Travelttime Map SSHMax Map

Download KMZ SSHMax Map for Google Earth

Current Time (UTC)
Jul 02, 2023
05:39:08

Miscellaneous

- Earthquake Event List
- Earthquake Event Map
- Performance Indicator

Links

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- TSP Australia Website
- TSP India Website
- IOC-UNESCO Website
- ICG/IOTWS Secretariat Website
- PTWC Website
- JMA Website

Documentation

- TSP Indonesia User Manual
- TSP Australia User Manual
- TSP India User Manual

SSH Max Map

TSP Indonesia Password-Protected Web



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Public Products

TSP public bulletins are categorised into FOUR types, corresponding to the four types of Exchange bulletins:

- **Type 1:** Earthquake Bulletin
- **Type 2:** Threat Assessment Bulletin
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- **Type 4:** Final Bulletin

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2023-05-20	01:50:59	7.5	17	22.96S	170.57E	Southeast of Loyalty Islands	REAL EVENT	1	EARTHQUAKE BULLETIN	202305200150
2023-05-19	02:57:05	7.9	28	23.13S	170.81E	Southeast of Loyalty Islands	REAL EVENT	1	EARTHQUAKE BULLETIN	202305190257

Public Bulletin Page

WRS-TSP Indonesia



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WRS-TSP Indonesia (stands for **Warning Receiver System of TSP Indonesia**) is the real-time system to receive tsunami bulletin using a recommended set of hardware such as a large or smart display. WRS-TSP connected online to the processing and dissemination system of TSP Indonesia at BMKG head quarter Jakarta.



WRS-TSP Indonesia
User Guide:

<https://oceanexpert.org/document/30448>

<https://rtsp.bmkg.go.id/manual/Short-guide-wrstsp-indonesia.pdf>

FEATURES

WRS-TSP Indonesia



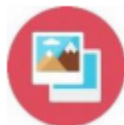
Text2voice Sound Alert (when new information available)



Historical events on TSP web sites.



Real time Earthquake Information (M>6.5) with visualization of time propagation of P and S wave

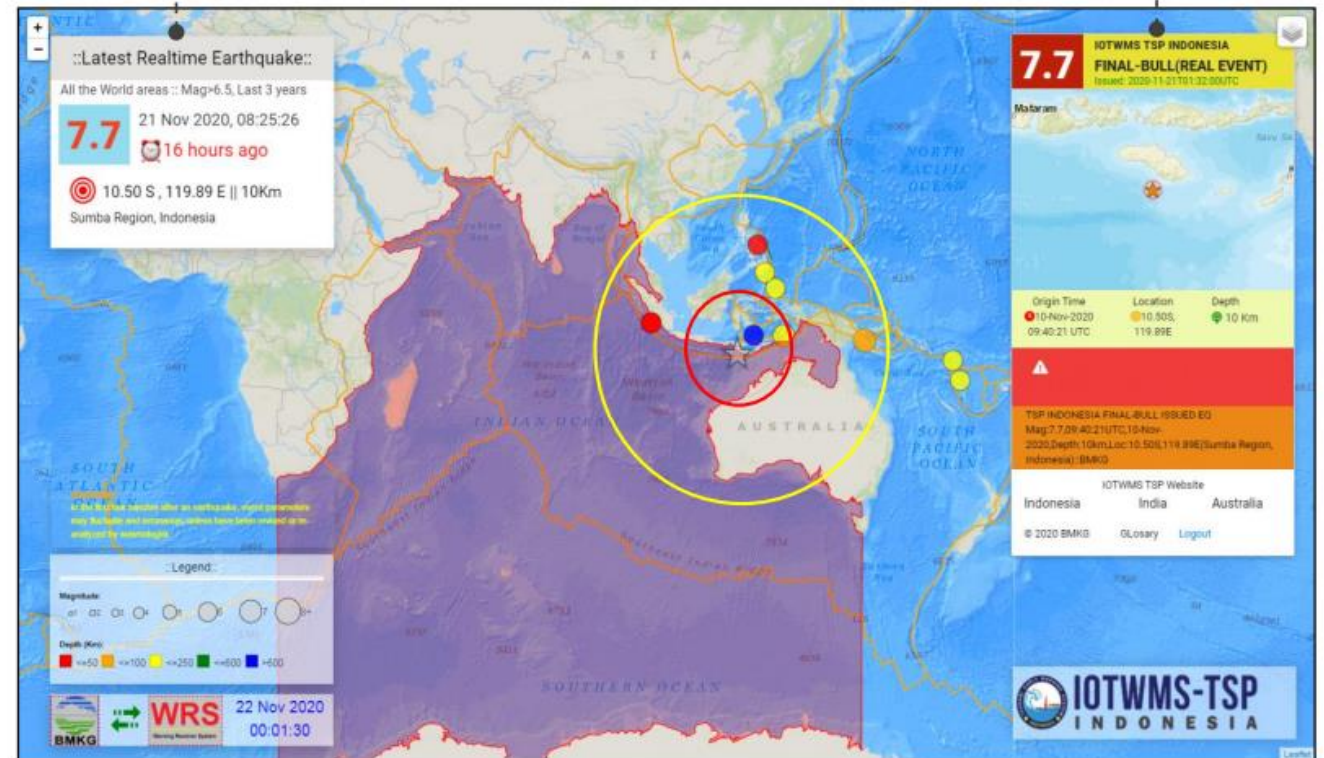


TSP Tsunami Bulletin with popup window



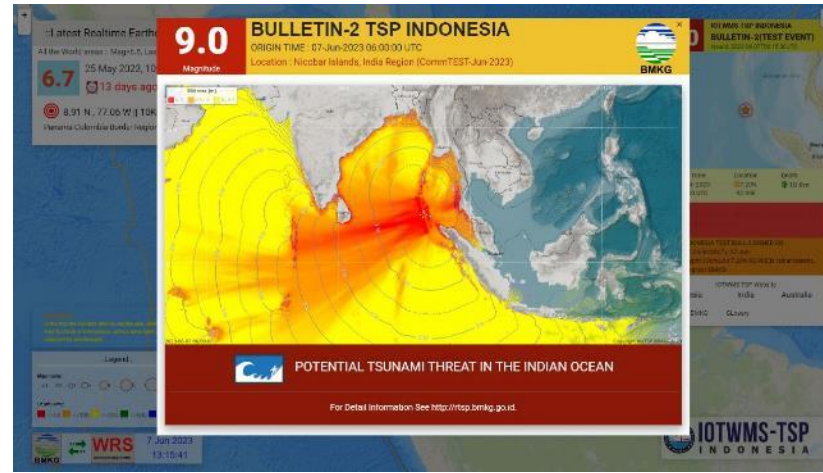
Cloud web base application

Real-time EQ M>6.5



WRS-TSP Indonesia

Example Bulletins (in Pop-Up Window)



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How to access?



NTWCs provide **internet connection**

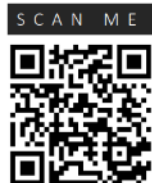


NTWCs provide common **PC Client** with sound card or active speaker, connect monitor PC to (preferred) large screen (display system). Please make sure that **you enable or allow audio and video setting in your internet browser.**



Through PC browser (firefox, chrome) open WRS-TSP Indonesia url :

<https://inatews.bmkg.go.id/wrs/tsp/index.html>



Recommended web browser apps:



Firefox



chrome

WRS-TSP Indonesia



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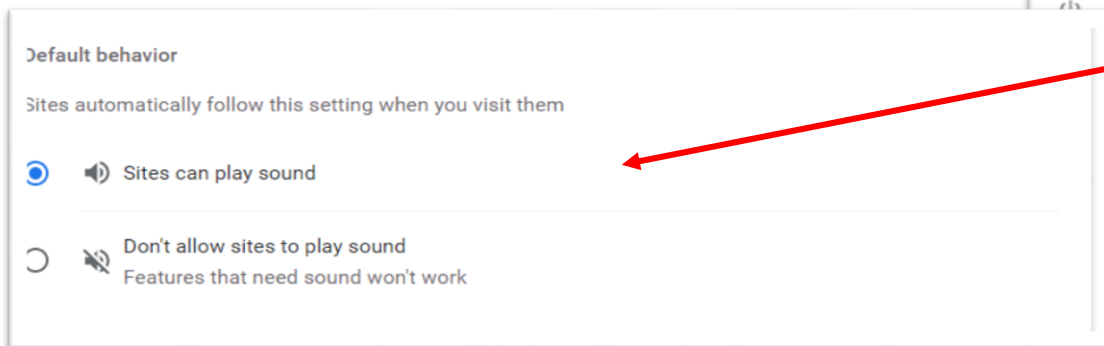
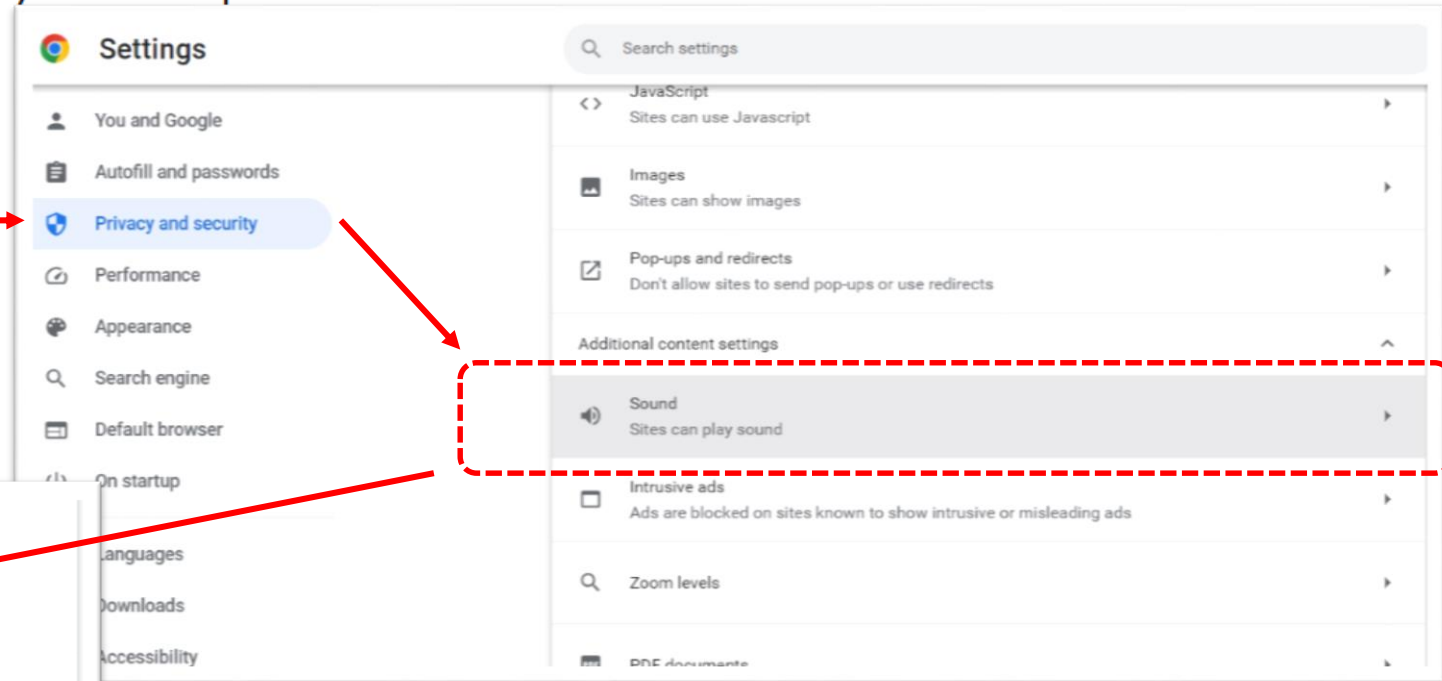
Enable or allow audio setting in your internet browser



Change your default Sound permissions on your computer


To let sites play sound when you visit them:

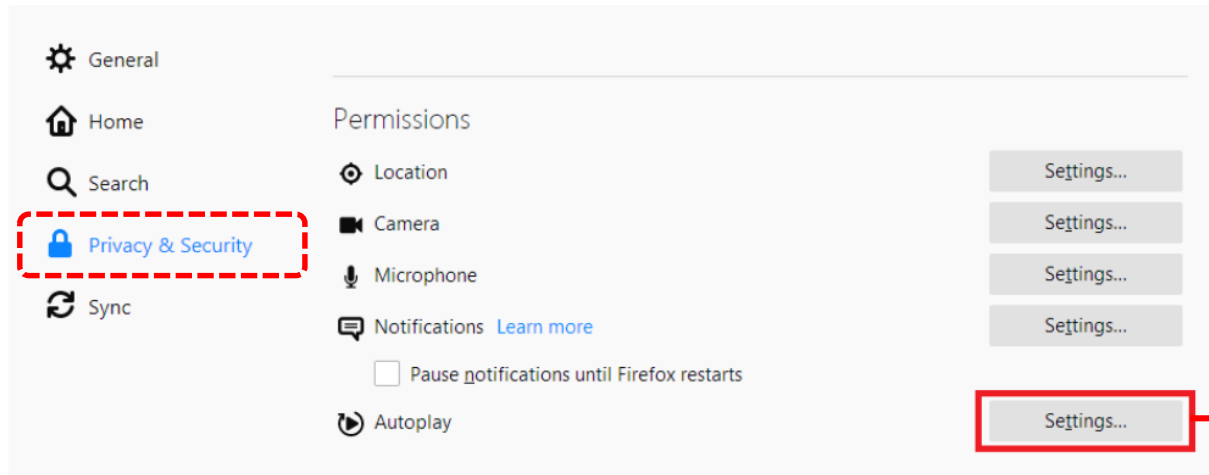
1. Open Chrome .
2. At the top right, click More  > **Settings**.
3. Click **Privacy and security** > **Site Settings** > **Sound**.
4. Select the option you want as your default setting.



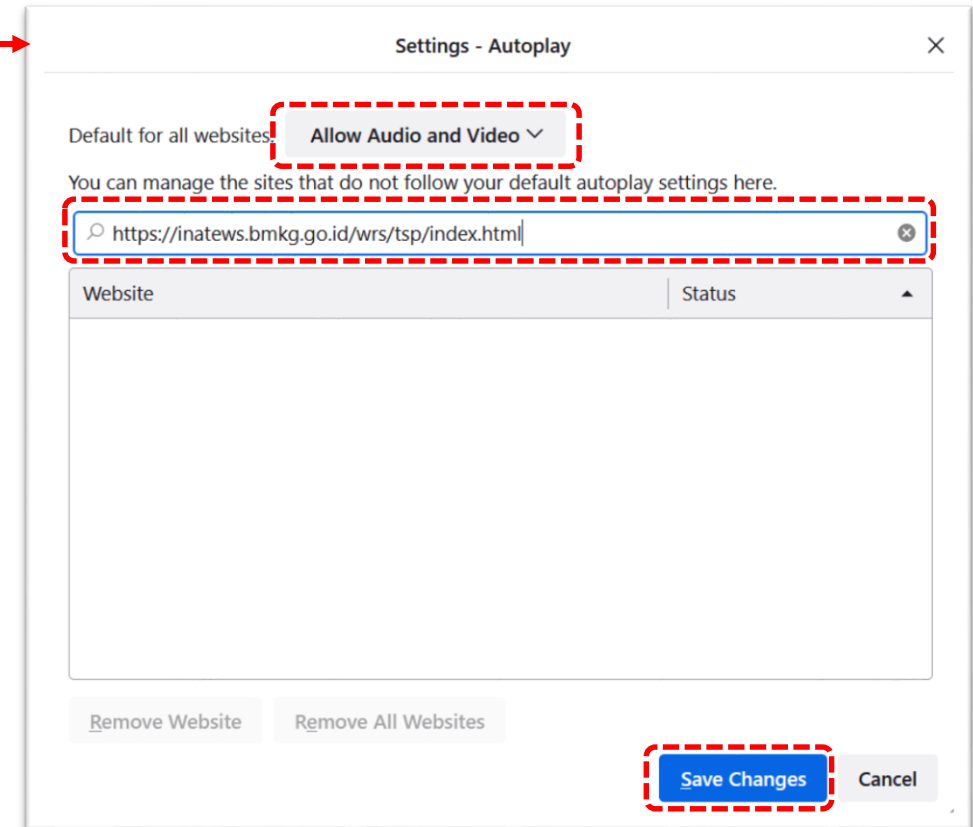
Enable or allow audio setting in your internet browser



1. Click the menu button  and select **Settings**.
2. Select the **Privacy & Security** panel and go down to the *Permissions* section (or enter **autoplay** in the *Find in Settings* search box).



3. Click the **Settings...** button next to *Autoplay*.



Indonesia Tsunami Non-Tectonic (InaTNT) for Indian Ocean

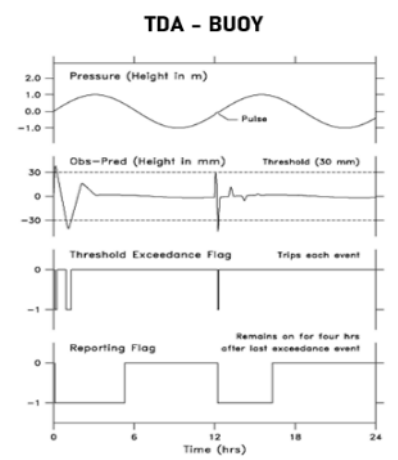
InaTNT is an integrated system that **detects sea level change anomalies that indicate a tsunami is recorded by sea level observation data** from internal (BMKG, BIG, BRIN (formerly BPPT), KKP) and external resources. The presence of InaTNT will improve the performance of the InaTEWS System in detecting tsunamis caused by tectonic and non-tectonic sources.

OBJECTIVES OF INATNT DEVELOPMENT

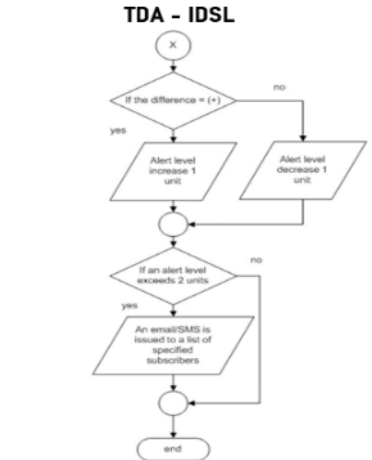
- 1 • **Integrate sea level observation data** from internal and external resources/stakeholders internal into a single integrated system and display
- 2 • **To provide sea level anomaly automatic detection facility** through mareogram data as heads up for the operator
- 3 • **To provide supporting system and SOP** for Non Tectonic Tsunami Warning System.



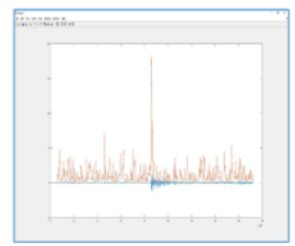
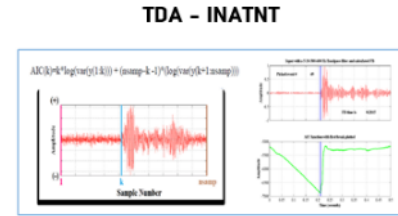
SEA LEVEL ANOMALY DETECTION ALGORITHM APPLIED IN INATNT



https://nctr.pmel.noaa.gov/tda_documentation.html



IDSL Alert Mechanism (Annuziato, 2015)



Indonesia Tsunami Non-Tectonic (InaTNT) for Indian Ocean

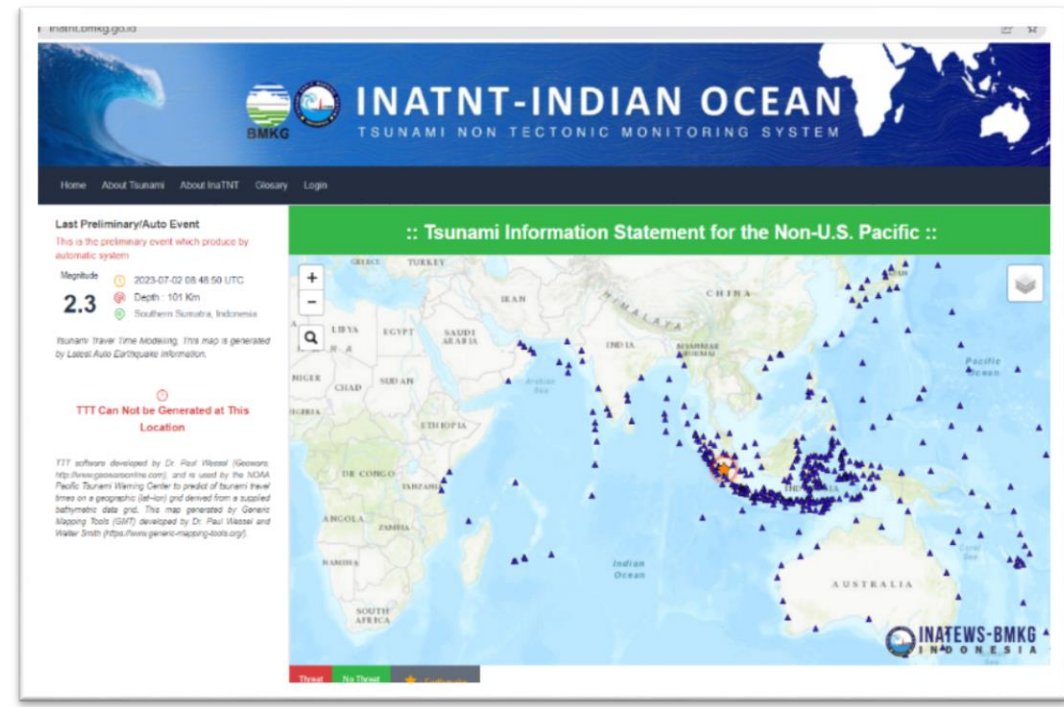
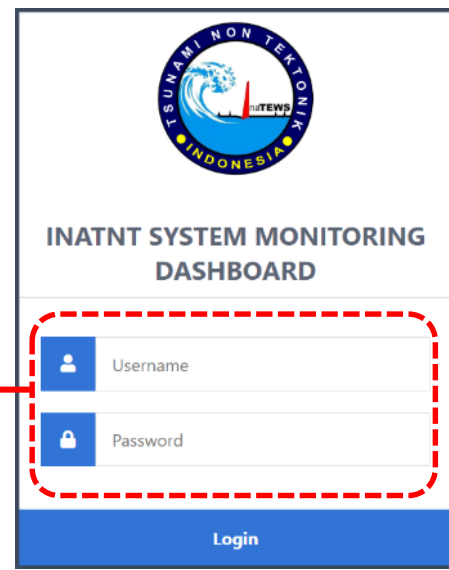
How to access?

URL address:

<https://inatnt.bmkg.go.id>

The user name and password are equal with the user name and password for accessing TSP Indonesia password protected web

Recommended web browser apps:





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THANK YOU