

TSP Indonesia Report on Service Updates

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Content of the report

- 1. TSP Indonesia Performance 2021**
- 2. TSP Indonesia development since last ICG**
- 3. TSP Indonesia development plans**
- 4. TSP Indonesia Innovation 2021**



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1. TSP Indonesia Performance 2021

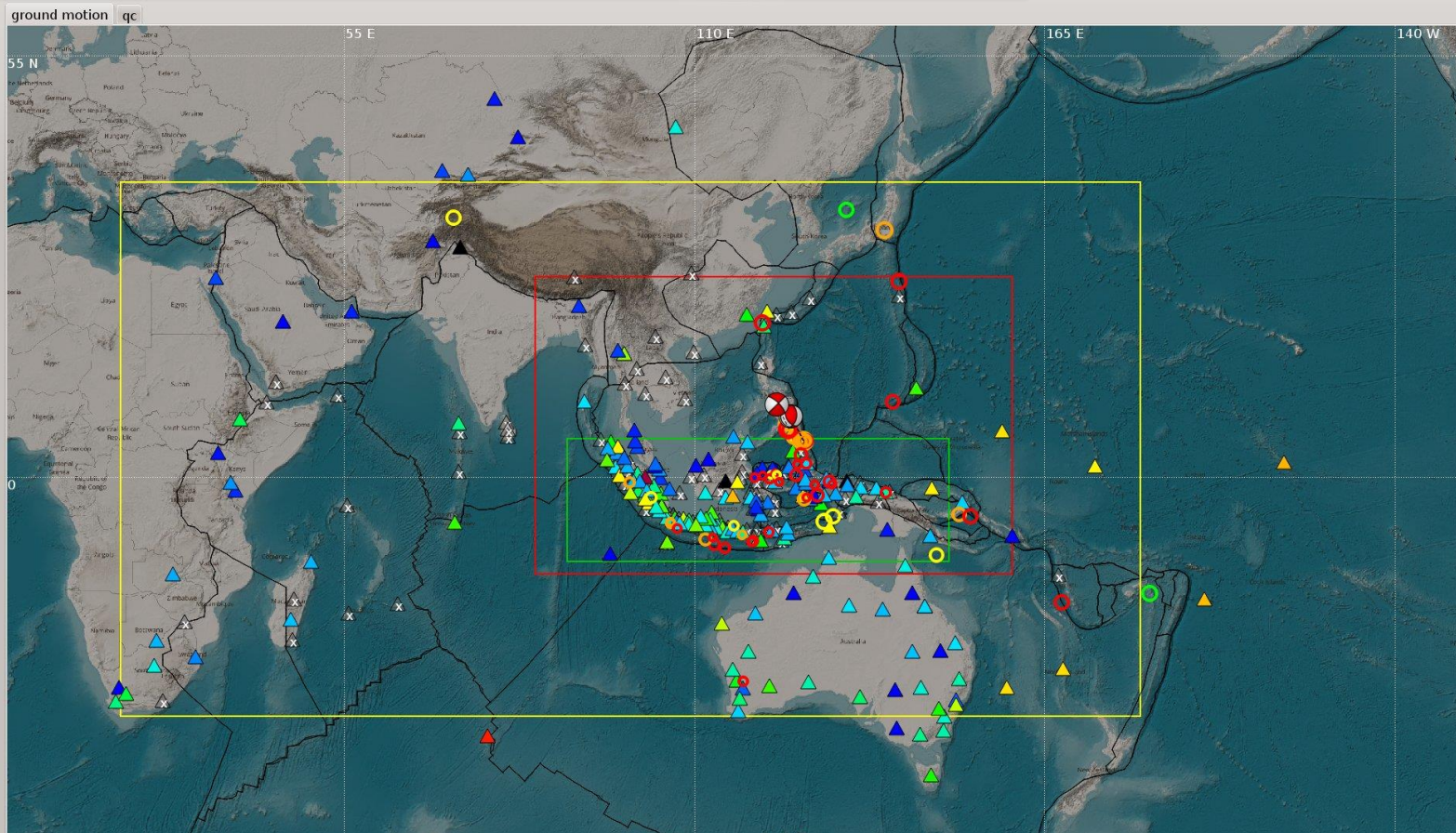


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InaTEWS Seismic Monitoring

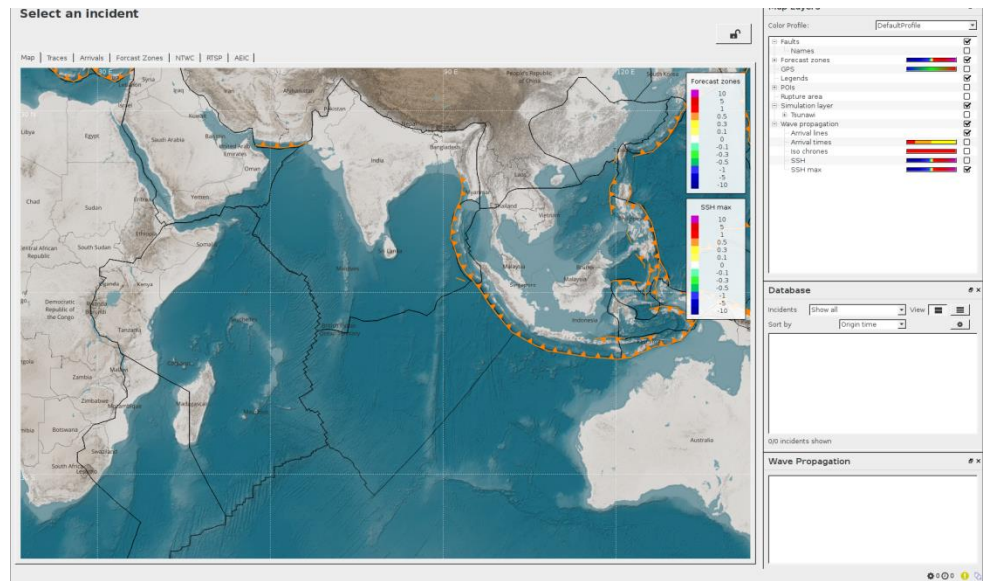
INDONESIAN : 411 STATIONS
FROM OTHER COUNTRIES : 93 STATIONS



TSP Data Processing

TOAST (Tsunami Observation And Simulation Terminal)

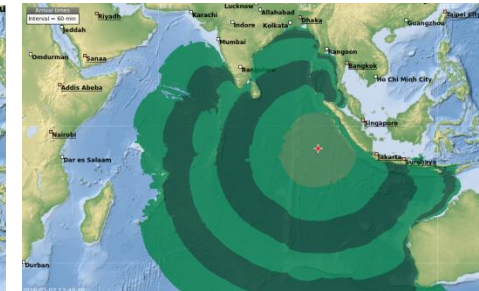
Seicomp 3 – Eq Analysis



Earthquake Information

Tsunami Warning

- Origin Time
- Magnitude
- Depth
- Location



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TSP Indonesia Dissemination System

SMS



FAX



EMAIL



GTS

TSP Website

A screenshot of the InaTSP website. The header includes the BMKG logo, the text "INDONESIA TSUNAMI SERVICE PROVIDER", and the "InaTSP" logo. Below the header is a navigation bar with links for "Home", "Public Bulletin", "About InaTSP", "Contact Us", and "Logout". The main content area is titled "Event Detail" and shows information for a magnitude 9.2 event. The event details include: Origin Time: 2016-09-07 03:00:00 UTC; Location: 1.938 - 99.22E (Southern Sumatra, Indonesia (IDWave-Sep-2016)); Depth: 10 Km; Bulletin: 4.5.5 (CONFIRMED TSUNAMI THREAT IN THE INDIAN OCEAN); Type: TEST EVENT. There are several tabs for "Exchange Bulletin", "Notification Bulletin", "Threat Table", "Threat Map", "Threatline Map", and "ASDMax Map". On the right side, there is a "Current Time (UTC)" widget showing "Dec 03, 2016 11:05:32" and a "Miscellaneous" widget with links to "Earthquake Event List", "Earthquake Event Map", "NTWC Contacts", "Performance Indicator", and "User and Password Information".

TSP Indonesia Password Protected Web

The screenshot displays the InaTEWS website interface. At the top, the header includes the BMKG logo, the text "AGENCY FOR METEOROLOGY CLIMATOLOGY AND GEOPHYSICS", and "Indonesia Tsunami Service Provider". Below the header is a navigation bar with links for "Home", "Public Bulletin", "About InaTSP", "Seismic Network", and "Contact Us".

The main content area is titled "Public Bulletin" and features two tabs: "Event List" (selected) and "Event Map". The "Event Map" tab shows a map of the Indian Ocean region with various colored circles representing seismic events. A legend at the bottom left of the map indicates the magnitude ranges: red for $\text{Mag} \geq 8.5$, orange for $8.5 > \text{Mag} \geq 7.5$, and yellow for $\text{Mag} < 7.5$. The map shows several events, with a notable cluster of red and orange circles near the Indonesian archipelago.

On the right side of the page, there is a "Public Bulletin" section with a link to "InaTSP Public Bulletin" and a "User Login" section. The login form includes fields for "Username:" and "Password:", a "Forgot Password?" link, and a "Login" button.

At the bottom of the page, the copyright information reads: "Copyright © 2020 Badan Meteorologi, Klimatologi dan Geofisika (BMKG)".

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

TSP Indonesia Performance 2021 (*Jan – Oct*)

During 2021, TSP Indonesia has issued 29 events for both inside (5) and outside (24) IO region

	Service Level 1 EQ Bulletins					Service Level 2 Threat / No Threat Bulletins		
TSP	KPI 1	KPI 2	KPI 3	KPI 4	KPI 5	KPI 6	KPI 7	KPI 8
	ET First EQ Bull	POD IO EQs GE M6.8	EQ Mag	EQ Depth	EQ Location	ET First Threat Bull	POD Tsunami Waves	Tsunami Height Accuracy
	Target: 10 mins (% met)	Target: 100%	Target: 0.3 (% met)	Target: 30 km (% met)	Target: 30 km (% met)	Target: 20 mins (% met)	Target: 100%	Target: Factor of 2
Indonesia	10.09 min (68.97%)	(100%)	0.22 (79.31%)	16.14 (79.31%)	23.10 (65.52%)	33 (0%)	n/a	n/a

NOTES

KPI 6:
Indonesia issued 1 No Tsunami Threat Bulletin.

KPI 7,8: No events caused threat-level tsunami waves.

Meets Target	Near Target	Misses Target
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2. TSP Indonesia development since last ICG

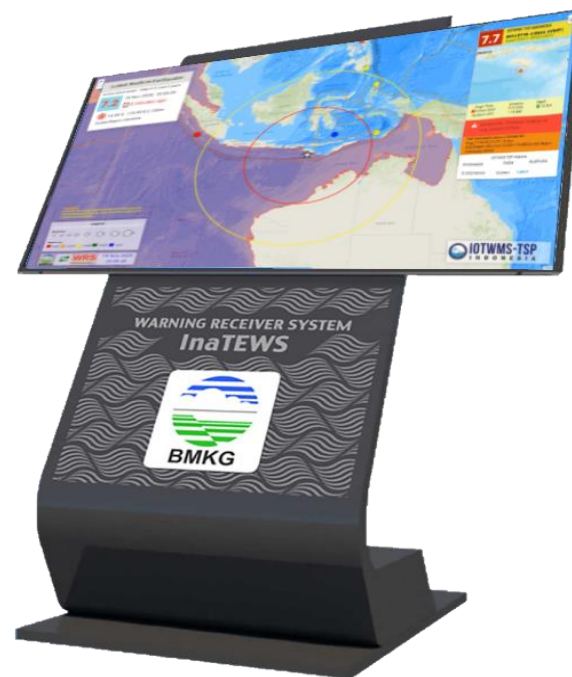
- Deployed 39 new seismic stations (2020).
- Deployed 17 new seismic stations (2021).
- Participation on the regular IOTWMS communication test in 2020 and 2021.
- Hardware upgrade of TSP web site 2021.
- Upgrade WRS TSP 2021.
- First stage of Gns integration into processing system 2021.
- Start Inundation modeling 2021.
- Establishment of national consortium to support development of InaTEWS in 2021.

4. TSP Indonesia Inovation 2020-2021

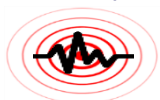
WRS-TSP Indonesia (stands for Warning Receiver System of TSP Indonesia) is the real-time system to receive tsunami bulletin using a recommended set of hardware such as a large or **smart display**. WRS-TSP connected online to the processing and dissemination system of TSP Indonesia at BMKG head quarter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

WRS-TSP ensures NTWCs of the Indian Ocean Countries **keep informed tsunami bulletin** timely and properly.

NTWCs could immediately take further essential actions right after they received the tsunami bulletin.



Earthquake



TSP Indonesia



WRS-TSP
Indonesia



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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



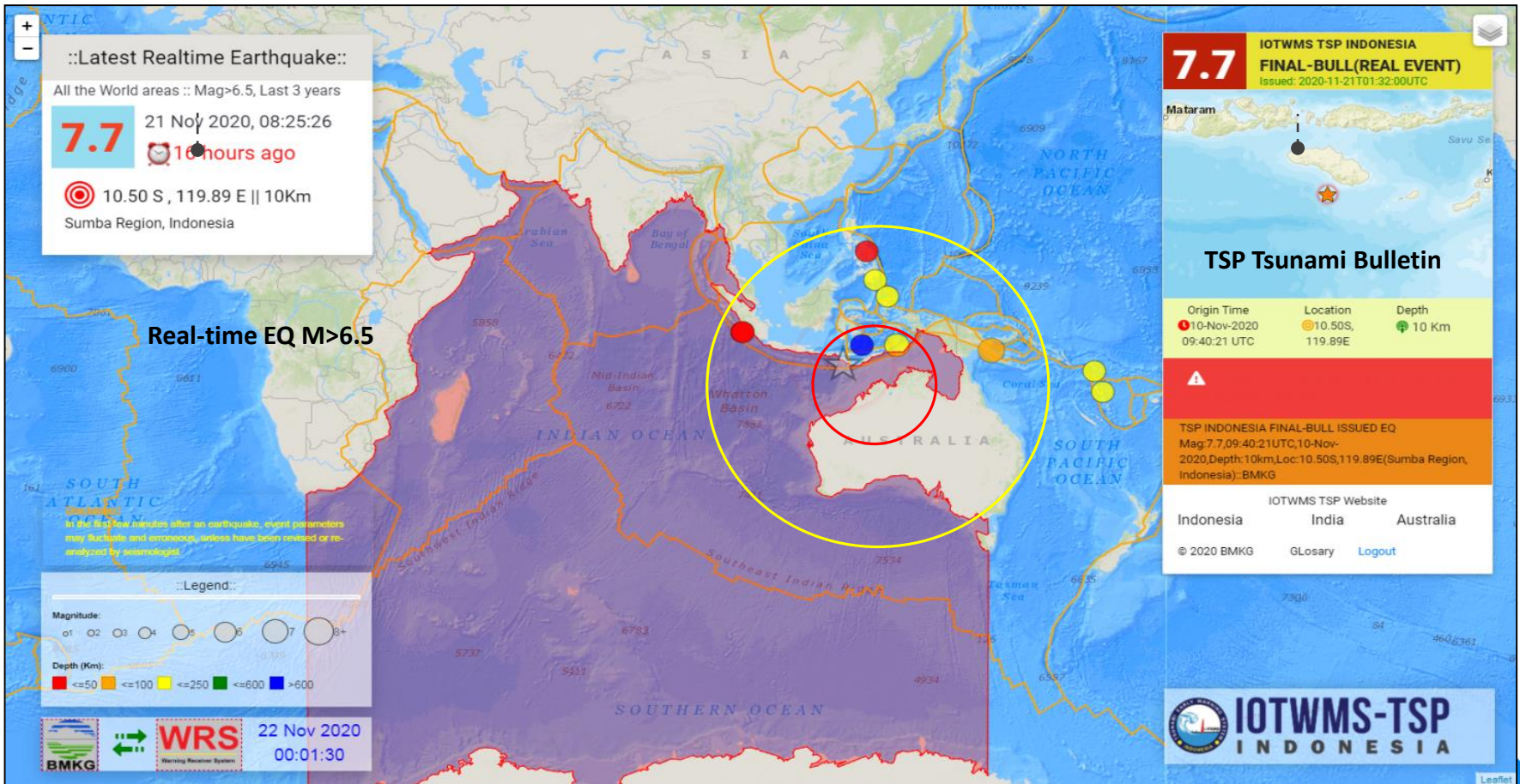
Cloud web based application



User password protected access



TSP Tsunami Bulletin with popup window



3. TSP Indonesia Development Plans

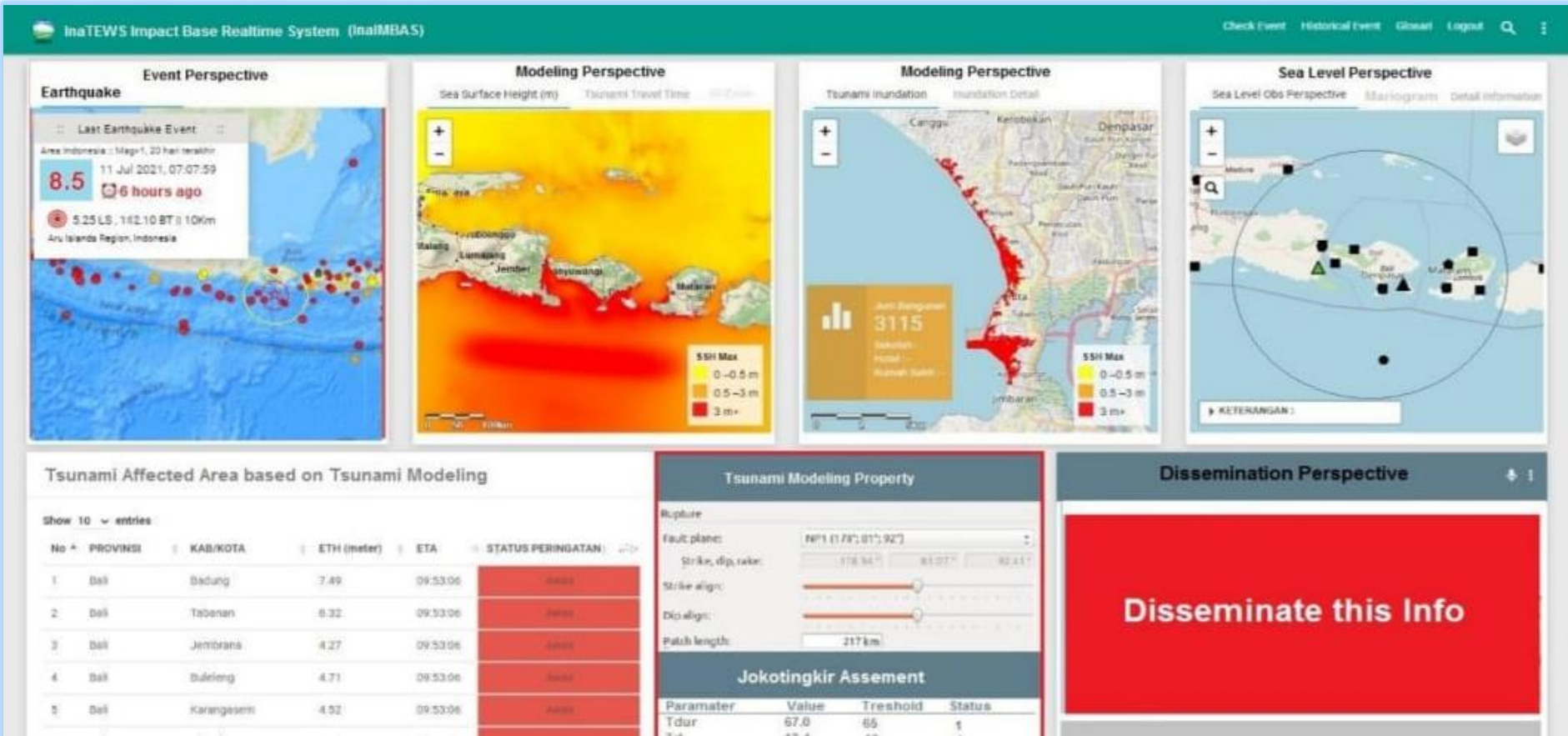
- **Deploy 110 new seismic stations (2021-2022)**
- **Develop system to handle atypical event**
- **Regular Upgrade Computer hardware of TSP**
- **Development InaTEWS impact base real time system**
- **Operator on duty certification**



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InaTEWS Impact Base Realtime System



Thank you

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