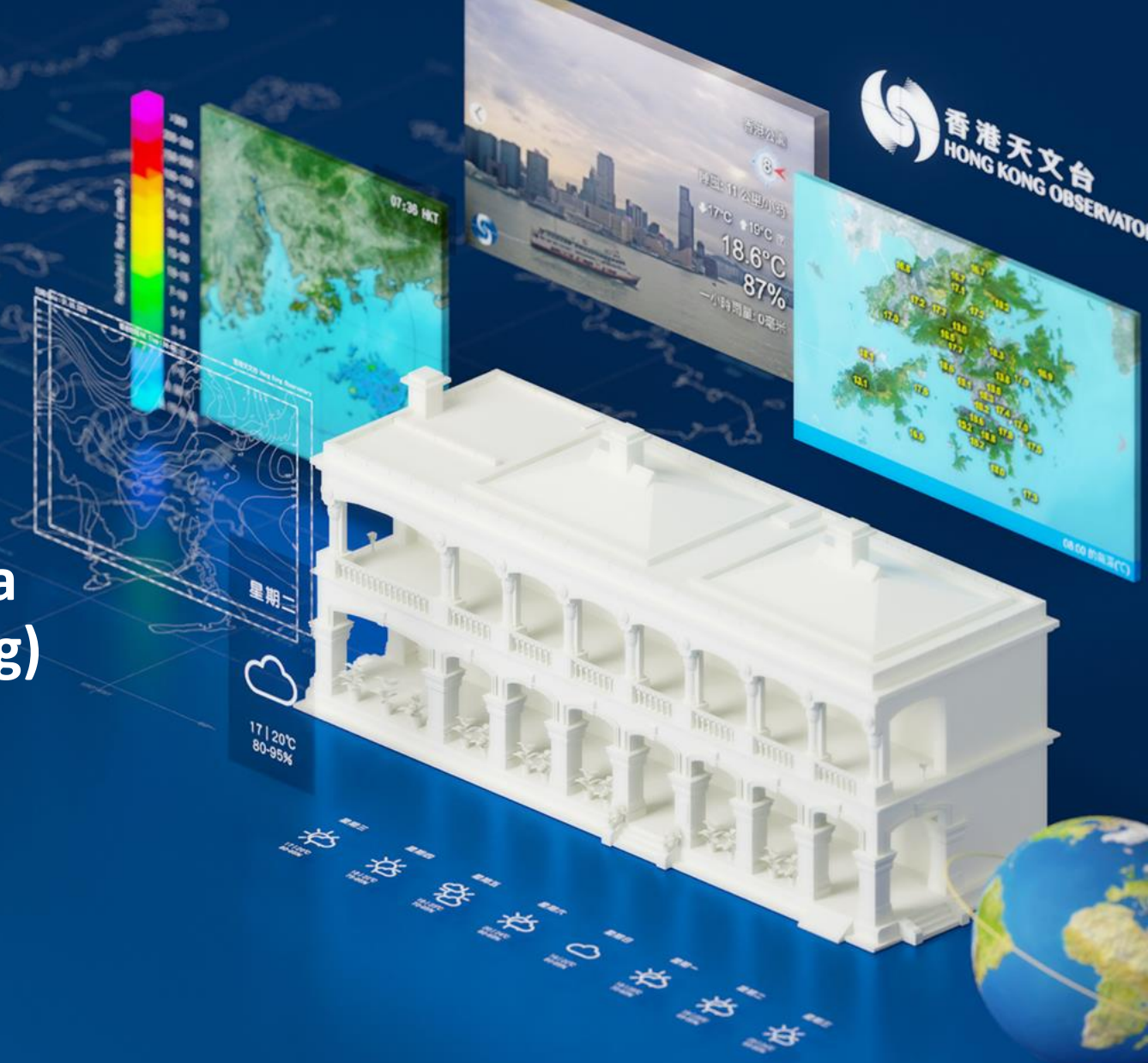
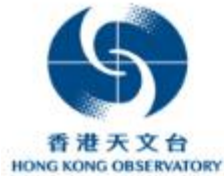


# Report from Backup South China Sea Tsunami Advisory Center (Hong Kong)

*Queenie Lam  
Hong Kong Observatory*





# 南中國海區域海嘯預警中心備份中心(香港) Backup South China Sea Tsunami Advisory Center (Hong Kong)



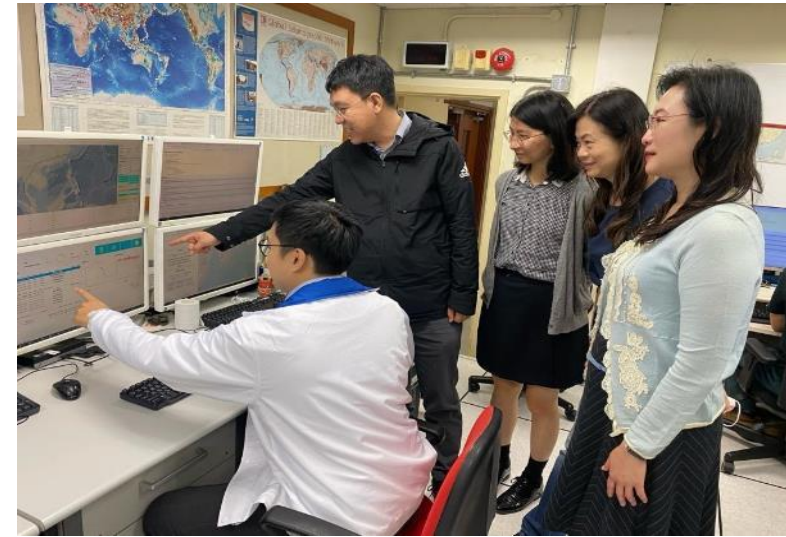
- BSCSTAC officially launched on 29 March 2023 and is operating round-the-clock:
  - Hot Standby for SCSTAC
  - Scheduled activation during winter time as pre-agreed with SCSTAC
- Response to Earthquakes within AoS:
  - Follow SOP to prepare advisory products
  - Record products for internal evaluation
- Watchstander conducts system check twice a day to ensure system availability



# The First Scheduled Activation of BSCSTAC

(11 - 22 December 2023)

- Communication tests were performed before the scheduled operation
- Switchover procedure laid down at ICG/PTWS-WG-SCS-X was followed. Messages were issued:
  - by BSCSTAC about one week before the scheduled activation via email
  - by BSCSTAC upon the scheduled activation of BSCSTAC via email, fax and GTS
  - by SCSTAC at the end of scheduled operation via email, fax and GTS
- No event triggered the BSCSTAC to issue tsunami bulletins during the scheduled activation period



## SCSTAC\_Notification of activation

WESS31 VHHH 110200

ISSUED BY BACKUP SOUTH CHINA SEA TSUNAMI ADVISORY CENTER (HONG KONG) (BSCSTAC) AT 0200 UTC DEC 11 2023.

THIS IS FOR INFORMATION ONLY THAT THE BACKUP SOUTH CHINA SEA TSUNAMI ADVISORY CENTER (HONG KONG) (BSCSTAC) WILL OPERATE STARTING FROM 0200 UTC DEC 11 2023 TO 0200 UTC DEC 22 2023 INCLUSIVE IN PLACE OF THE SOUTH CHINA SEA TSUNAMI ADVISORY CENTER (SCSTAC).

IN CASE OF QUESTIONS, PLEASE CONTACT SCSTAC (EMAIL: [TSU@NMEFC.CN](mailto:TSU@NMEFC.CN)) OR BSCSTAC (EMAIL: [INFO-BSCSTAC@HKO.GOV.HK](mailto:INFO-BSCSTAC@HKO.GOV.HK)).

## SCSTAC\_Notification

WESS31 BABJ 220200

ISSUED BY SOUTH CHINA SEA TSUNAMI ADVISORY CENTER (SCSTAC)

ISSUED AT 0200Z 22 DEC 2023

THIS IS FOR INFORMATION ONLY THAT THE SOUTH CHINA SEA TSUNAMI ADVISORY CENTER (SCSTAC) WILL RESUME OPERATION SINCE 0200 UTC DEC 22 2023 IN PLACE OF THE BACKUP SOUTH CHINA SEA ADVISORY CENTER (HONGKONG)(BSCSTAC).

# Key Performance Indicators of BSCSTAC in hot standby operation and during scheduled activation since its official launch on 29 March 2023 (up to 31 October 2024)

Key Performance Indicators of SCSTAC	Target Values of SCSTAC Operations	Performance of BSCSTAC in hot standby
Elapsed time from earthquake to issuance of initial tsunami products with preliminary earthquake parameters	Within 12 minutes	9.5 minutes
Probability of detection of earthquakes with $M_w \geq 6.0$	100%	100%
Accuracy <sup>1</sup> of preliminary earthquake parameters on hypocenter location/magnitude/depth	0.3° / 0.3 / 30 km	0.12° / 0.2 / 21 km
Accuracy of the Estimated Time of Arrival (ETA) and amplitudes of the tsunamis actually triggered	Within 10% of Travel Time	No event with forecast $\geq 0.3m$ tsunami occurred
Percentage of Member States that receive products issued by BSCSTAC	100%	Products not issued to member states in hot standby mode; No event occurred during scheduled activation
Percentage of time the BSCSTAC is operating and able to respond to a tsunami event	100%	100%
Regular communication tests	Twice a year	2 times in 2023

1 Measured by mean absolute difference as compared with USGS final PDE (Preliminary Determination of Epicenters)

# SeisComP focal mechanism solution used by BSCSTAC as compared with that published by USGS

(29/3/2023 - 31/10/2024)

Event Datetime (UTC)	2023-04-21 10:21	2023-06-15 02:19	2023-09-09 14:43	2023-09-11 12:51	2023-09-12 11:03	2024-01-08 20:48	2024-04-02 23:58	2024-04-09 09:48
SeisComP Moment Tensor								
USGS Moment Tensor								

# SeisComP focal mechanism solution used by BSCSTAC as compared with that published by USGS

(29/3/2023 - 31/10/2024)

Event Datetime (UTC)	2024-04-22 18:26	2024-07-11 02:13	2024-9-23 19:51					
SeisComP Moment Tensor								
USGS Moment Tensor								

# ICG/PTWS Pacific Tsunami Exercise 2024 (PacWave24)

- HKO participated in PacWave24 and organised a **government-wide table-top exercise** of tsunami on 31 October 2024 based on a **Mw 8.8 earthquake at Manila Trench**, assuming a **multi-hazard scenario (coupled with storm surge)**
- It involved nearly **90 staff from more than 30 government departments/organisations** in the exercise
- A government-wide briefing was organised before the exercise
- A debriefing session will be organised in early December 2024
- **Dummy BSCSTAC tsunami bulletins were issued** to an internal website for performance monitoring
- **Local tsunami warning and situation reports were issued** through intragovernmental communication channels



# Operational Arrangement in 2024

- The 2024 scheduled activation is scheduled for 02 UTC 9 December - 02 UTC 20 December
- Communication test by BSCSTAC will be conducted on 22 November 2024
- An email notification of the above will be issued on 12 November 2024







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