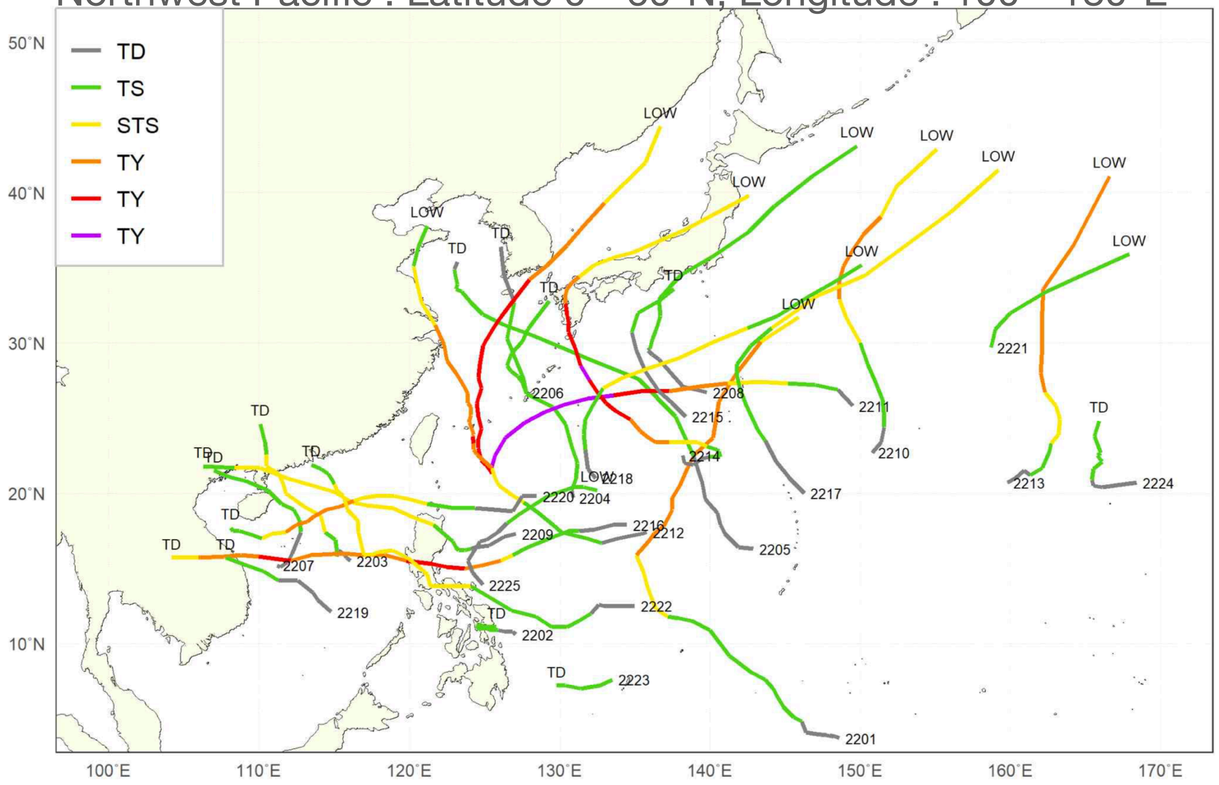
MET/ATM Seminar

Procedure for Typhoon detour flights

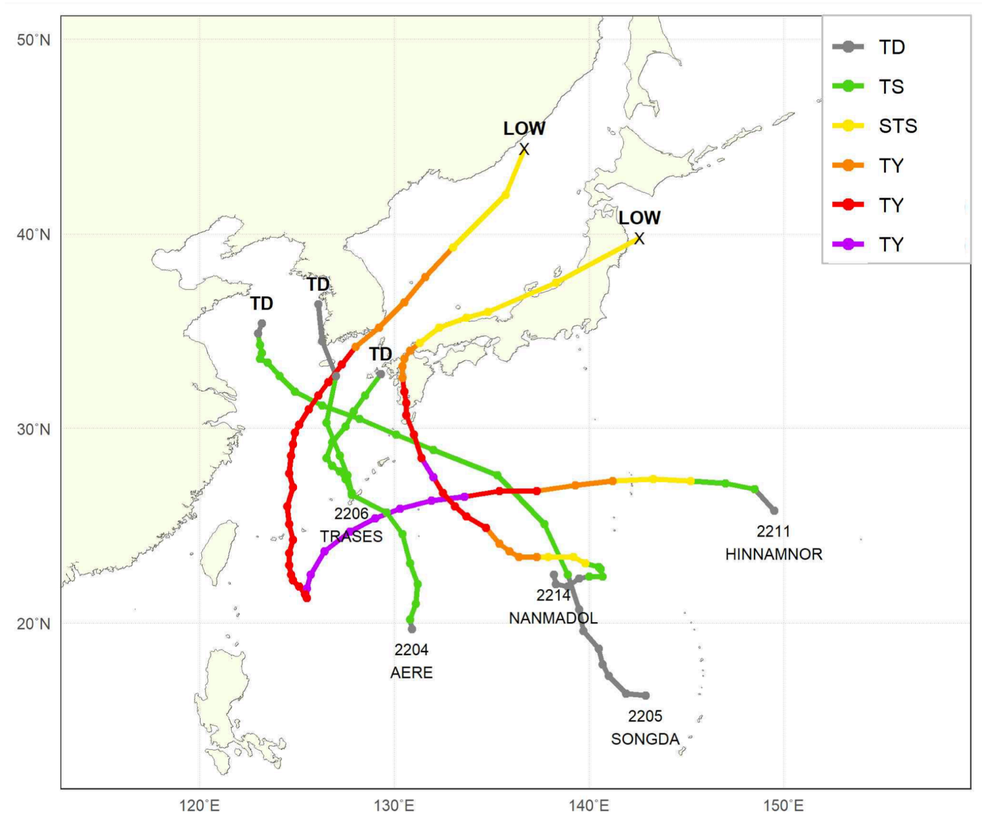
By NARAHG

Notheast Asia Regional ATFM Harmonization Group

Northwest Pacific : Latitude 0°~60°N, Longitude : 100°~180°E

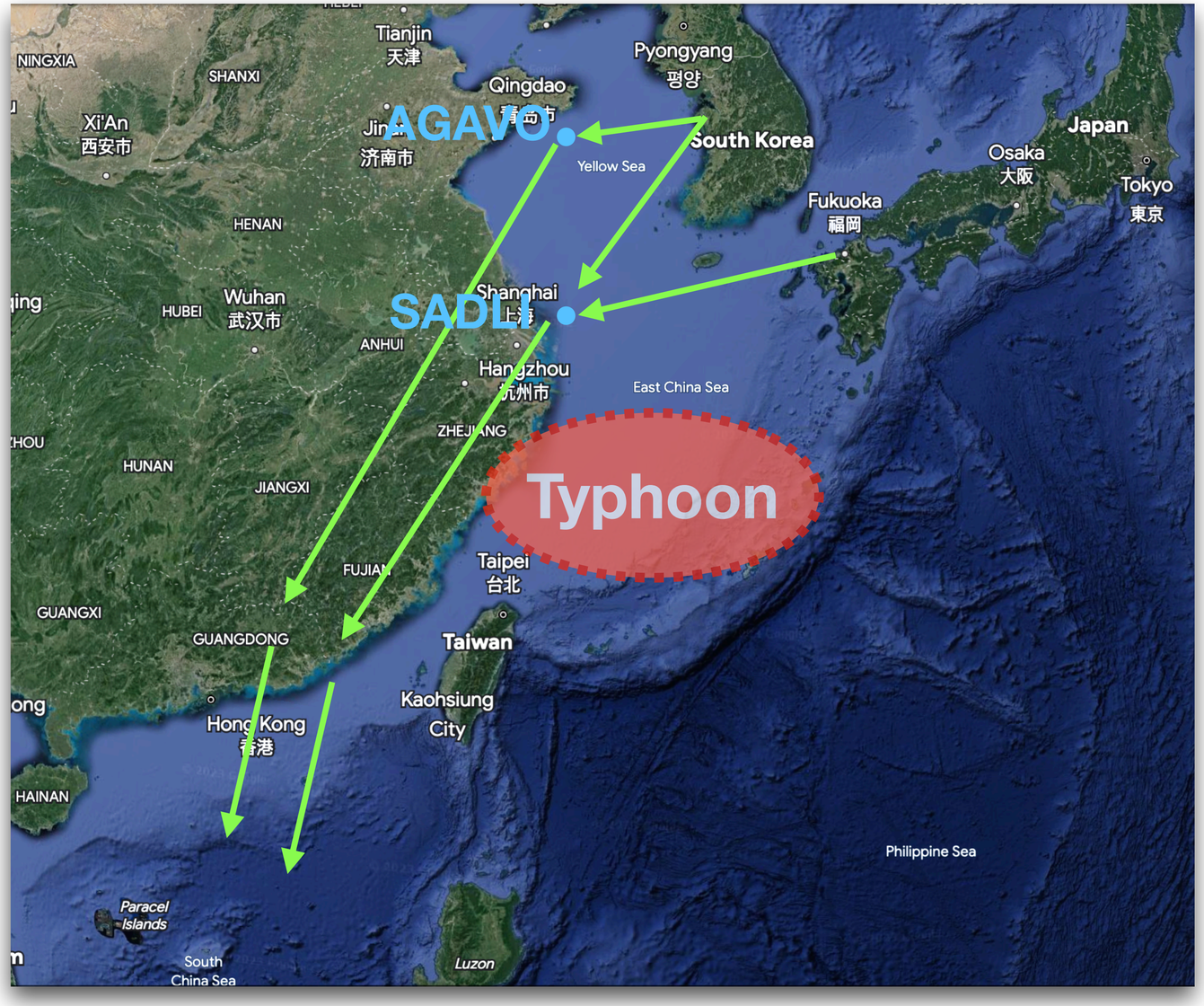


❑ 25 typhoons occurred in the Northwest Pacific in 2022.



❑ 5 typhoons directly impacted ROK and Japan.

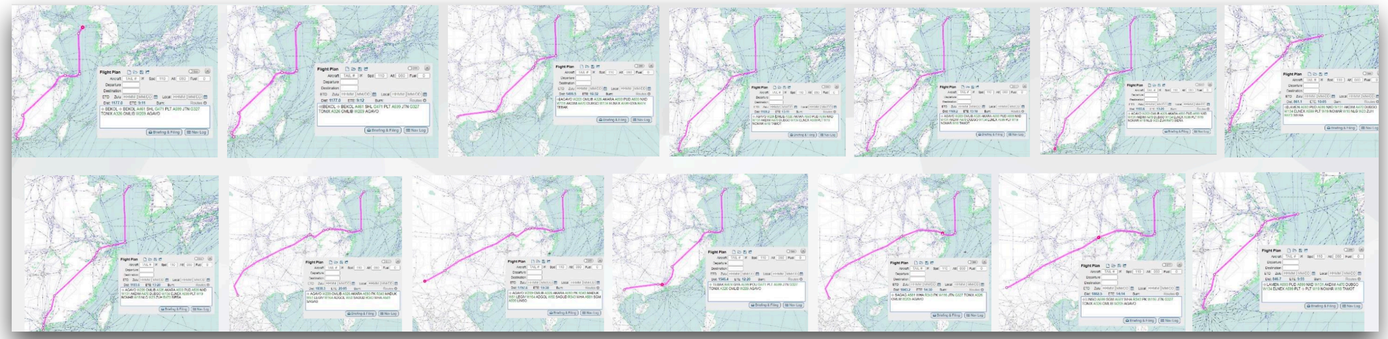
Flights from ROK and Japan to Southeast Asia will be detoured to inland China to avoid the typhoons.



- ❏ When flights are detoured China to avoid typhoons, they overlap with existing Chinese traffic.
- ❏ It causes “Demand-Capacity imbalancing”
- ❏ Large-scale and large-volume westbound detour flights are often caused large-scale delays including regular flights as the boundary SADLI and AGAVO become a bottleneck.
- ❏ To solve this problem, NARAHG jointly conducted the operation test of the procedure for typhoon detour flights.
- ❏ The purpose is to accurately manage the number of detour flights, to organize as many detour flights as possible without affecting regular flights.

Downstream **Upstream**

Issue Detour Plan → Inform A/Os the Detour Plan

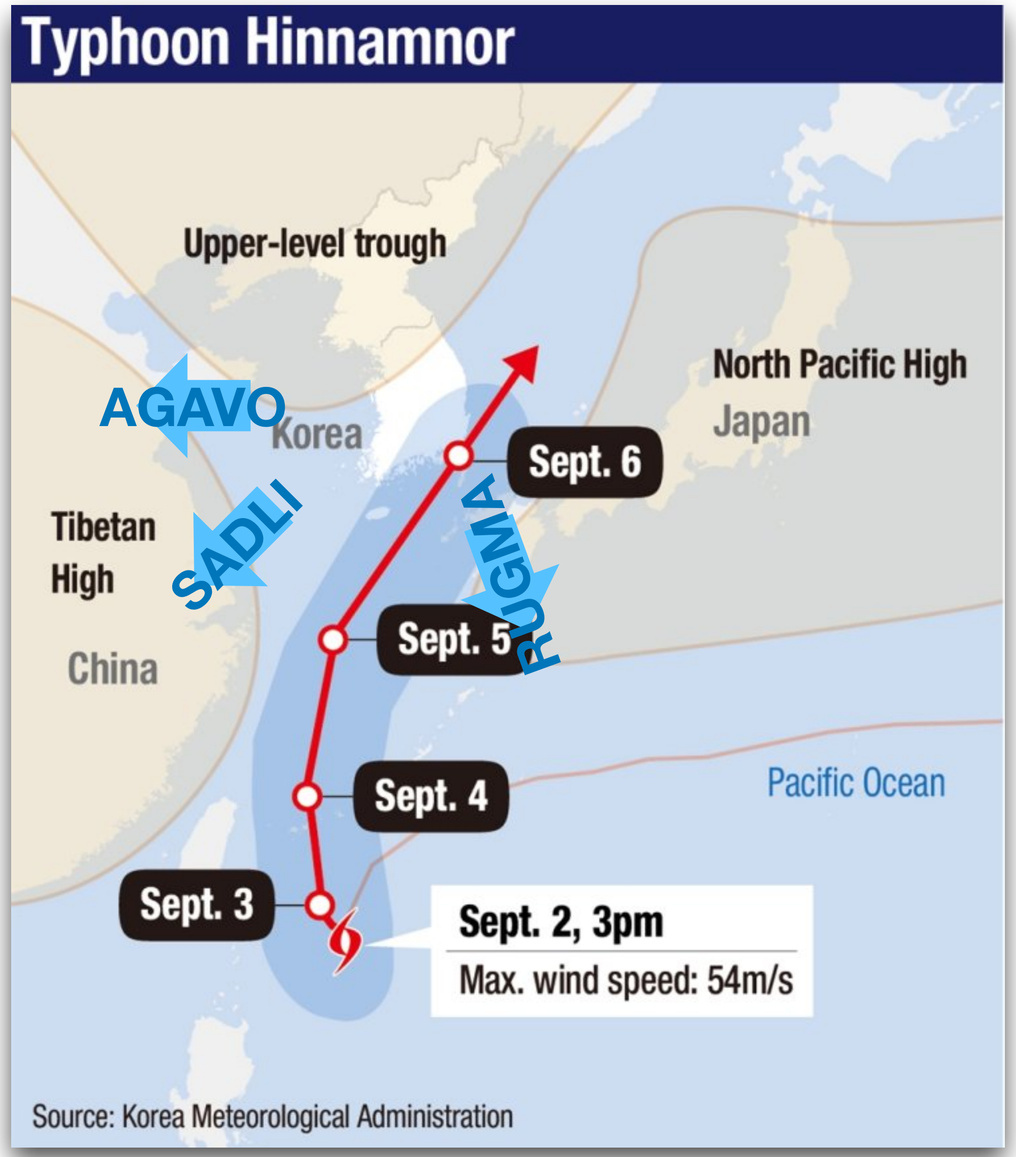


❑ The basic principle of the procedure is that the downstream ATFM unit gives the acceptable detour flights capacity according to the number of regular flights 2 days in advance.

TDP restriction Plan at AGAVO and SADLI for ROK				
Date	Time period	Waypoint	Direction	MinIT
3th Sepetember	0000-2359	AGAVO	W4	15
3th Sepetember	0000-2359	AGAVO	A326	30
3th Sepetember	0000-2359	SADLI		10
4th Sepetember	0000-2359	AGAVO	W4	15
4th Sepetember	0000-2359	AGAVO	A326	30
4th Sepetember	0000-2359	SADLI		10
5th Sepetember	0000-2359	AGAVO	W4	15
5th Sepetember	0000-2359	AGAVO	A326	10
5th Sepetember	0000-2359	SADLI		30
6th Sepetember	0000-2359	AGAVO	W4	15
6th Sepetember	0000-2359	AGAVO	A326	30
6th Sepetember	0000-2359	SADLI		10

Issue restriction → Issue GDP for detour flights

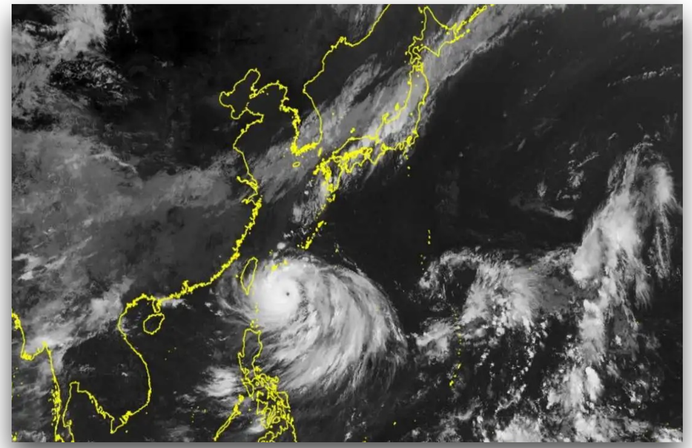
❑ On the operating day, the downstream issues the restriction only for detour flights, and the upstream issues GDP(Ground Delay Program) for detour flights according to this restriction.

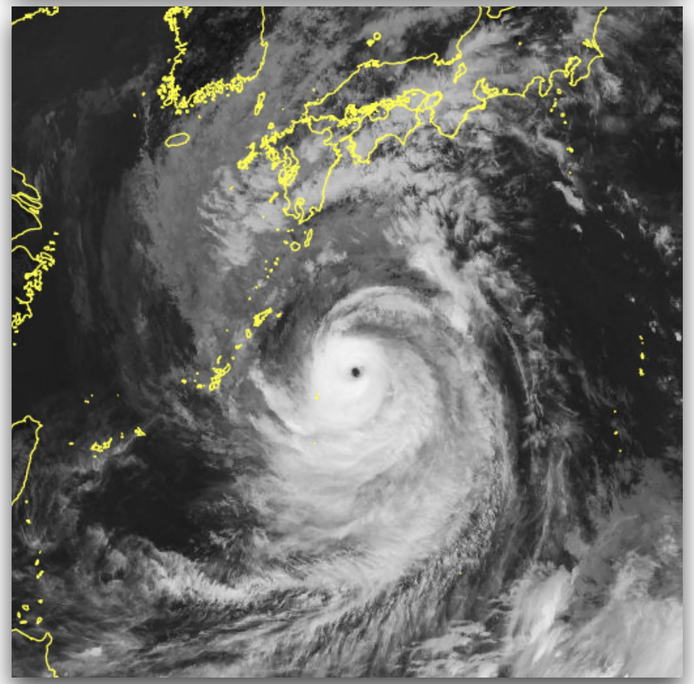


- In Sep 1st 2022, Shanghai ATCC issued a restriction plan to the ROK ATMO (Air Traffic Management Office) 2 days in advance. ROK ATM shared this plan with Aircraft Operators and organized them to choose routes and schedule according to the restriction plan.

- the procedure for typhoon detour flights was applied to 172 flights bound for Southeast-Asia departing from ROK during the Hinnamnor. 77 flights to AGAVO, 43 flights to SADLI, and 52 flights to RUGMA detoured.

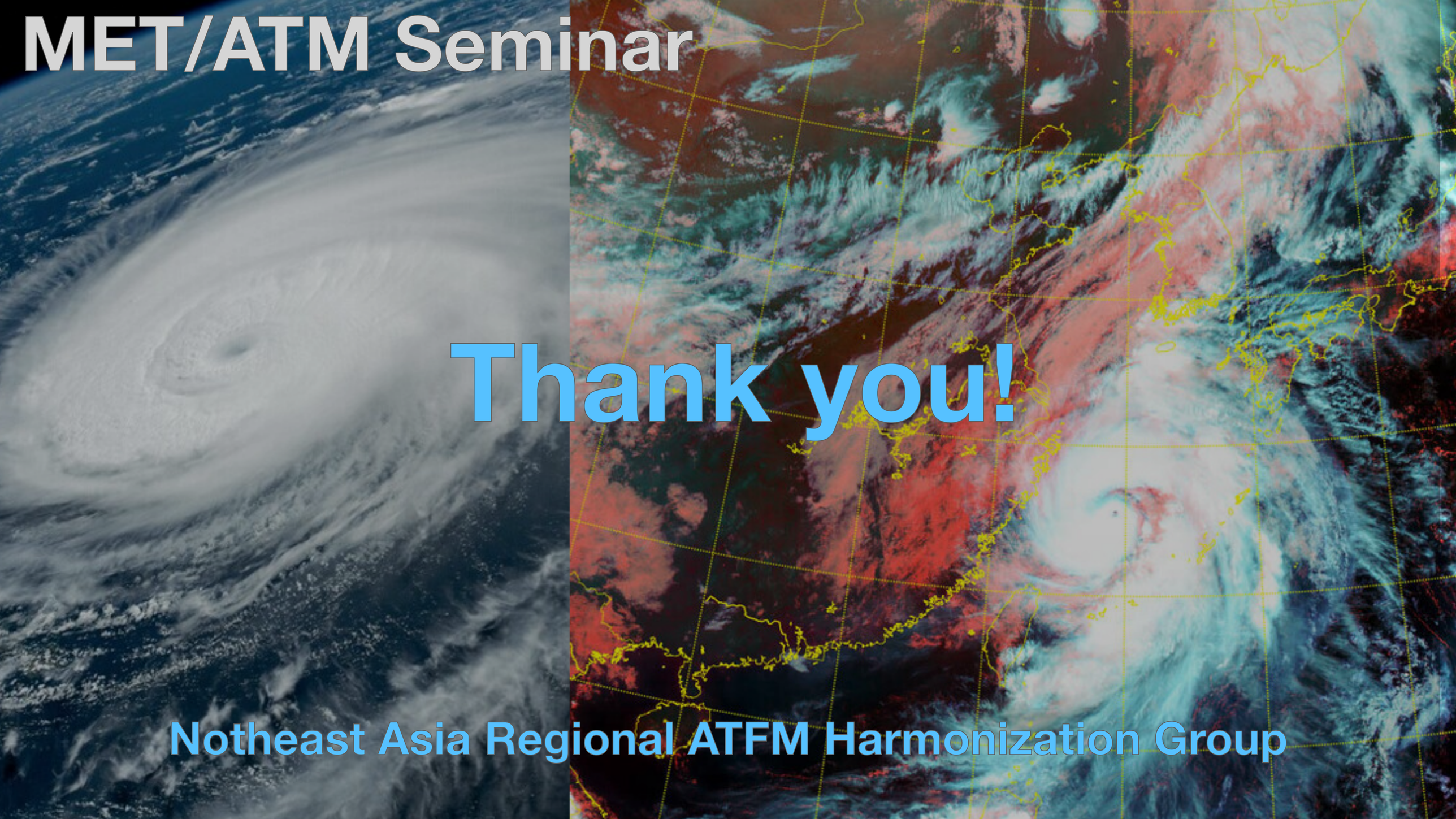
- For AGAVO detouring flights, the average departure delay was 22 minutes, and max departure delay was 113 minutes.
  For SADLI detouring flights, the average departure delay was 14 minutes, and max departure delay was 89 minutes.z
  For RUGMA detouring flights, the average departure delay was 4 minutes, and max departure delay was 37 minutes.





- Airspace Capacity is often reduced due to hazardous weather conditions. Airspace Demand varies with the use of detour routes.

- The accuracy of weather forecasts is key to balancing demand and capacity. Accurate and timely MET information supports optimum ATFM.


MET/ATM Seminar
Thank you!
Notheast Asia Regional ATFM Harmonization Group