

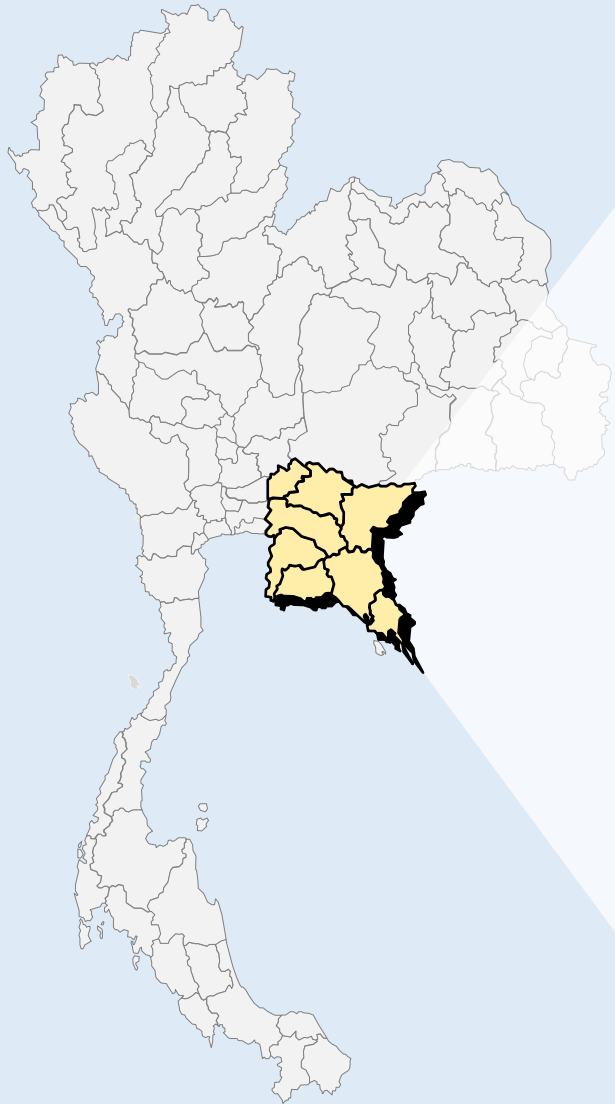


Overview on Eastern Royal Rainmaking Operation Center Missions and Operation for Solving Drought and Natural Disaster



By **Mr. Weeraphol Sudchada**
Director of Eastern Royal Rainmaking
Operation Center

Eastern Royal Rainmaking Operation Center missions



Drought mitigation

1

Agricultural area (rain-fed)
target reservoir

2

Industrial water consumption

3

PM_{2.5} mitigation & forest fire
suppression

Eastern Royal Rainmaking Operation Center missions

❑ **Agricultural area** totaled 20,614 km². Only 1,414 km² had been Irrigated. Rain-fed area about 19,200 km². Main crop are corn, cassava, durian, rambutan, mangoesteen, longan etc.

❑ **Dam and Reservoir**

1. Khun Dan Prakarn Chon
2. Naruebodindrachinta
3. Phra Prong
4. Khlong Si Yat
5. Bang Phra
6. Khlong Luang Rachalothorn
7. Dok Krai
8. Nong Pla Lhai
9. Prasae
10. Khlong Phra Phut

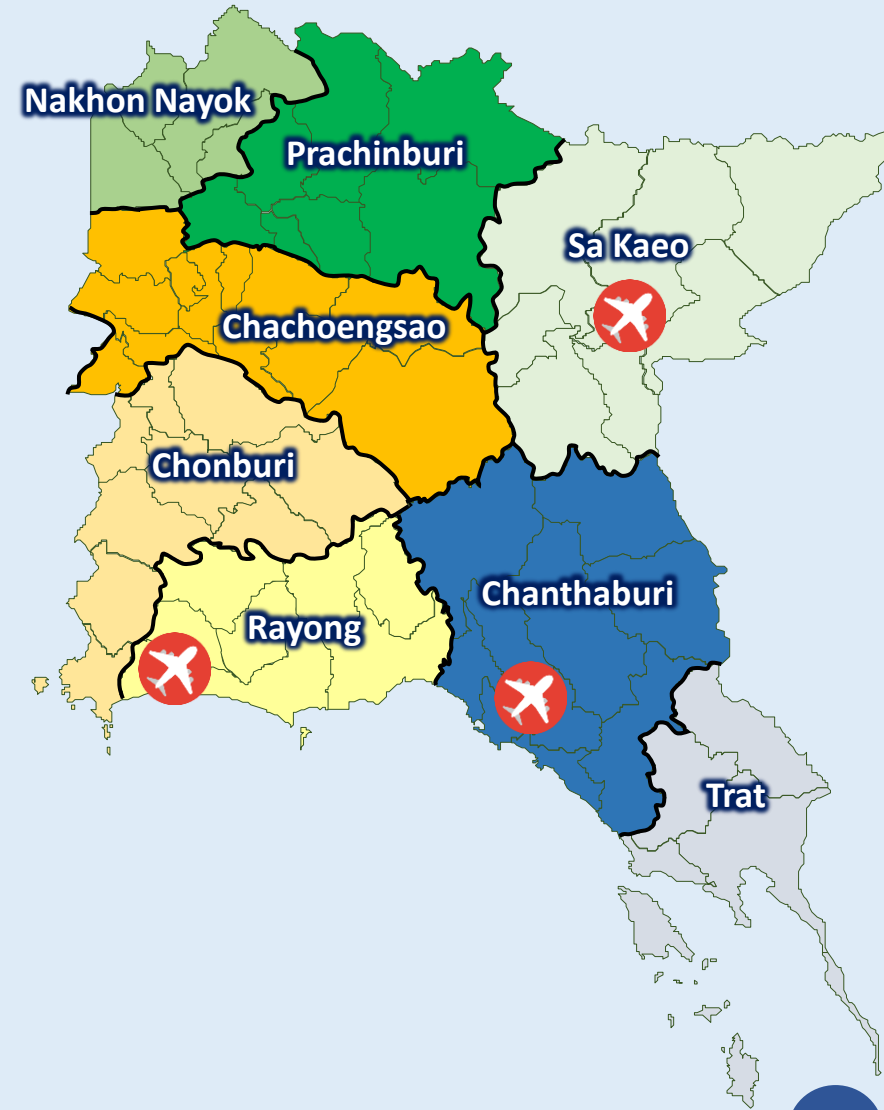
❑ **45 industrial estates covering 5 provinces** : Chonburi, Rayong, Chachoengsao, Sa Kaeo, Prachinburi

❑ **The Eastern Economic Corridor** is a special economic zone of 3 provinces (Chonburi, Rayong, Chachoengsao) in eastern Thailand



Eastern Royal Rainmaking Operation Center missions

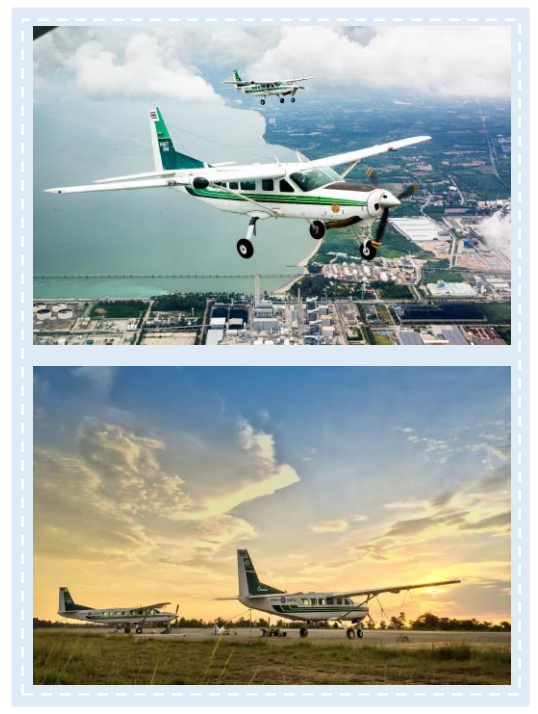
Operation Unit	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Chanthaburi			←→									
Sa Kaeo						←→						
Rayong								←→				



Personnel and Aircraft



- Scientist 9 persons
- Pilot 6 persons
- Mechanic and avionics 13 persons
- Worker 8 persons
- Administrative 6 persons
- Operating 2 aircraft Casa/Nc212i



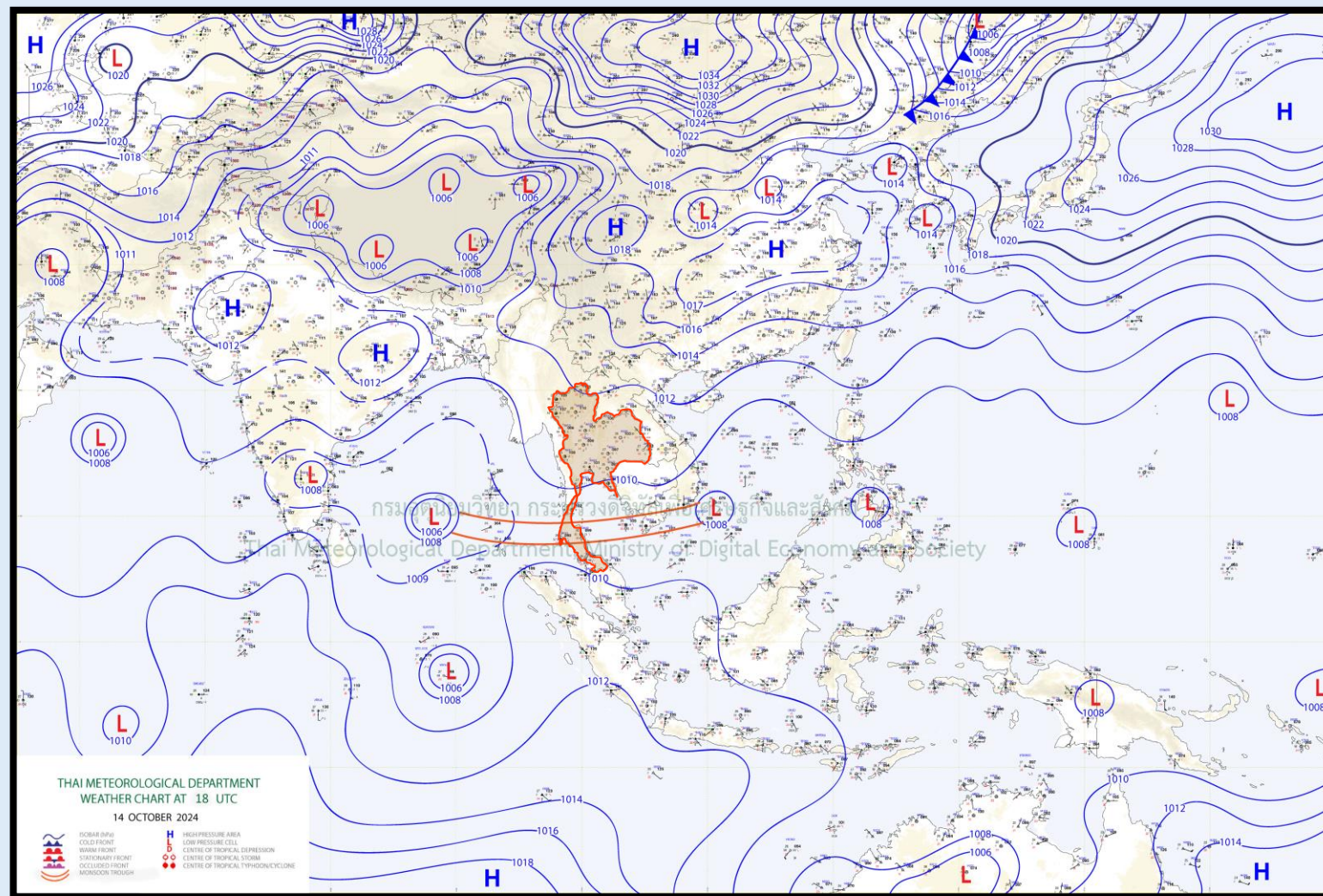
***Maximum Load of Chemical is 1,000 kg each.**



Morning Brief
By **Mr. Patathip Meesangngern**
Scientist of Eastern Royal Rainmaking Operation Center

What's the weather of today?

Synoptic Chart at 18 UTC 21 October 2024



Source : Thai Meteorological Department

What's the weather of today?

Satellite Image at 08:38 UTC 21 October 2024



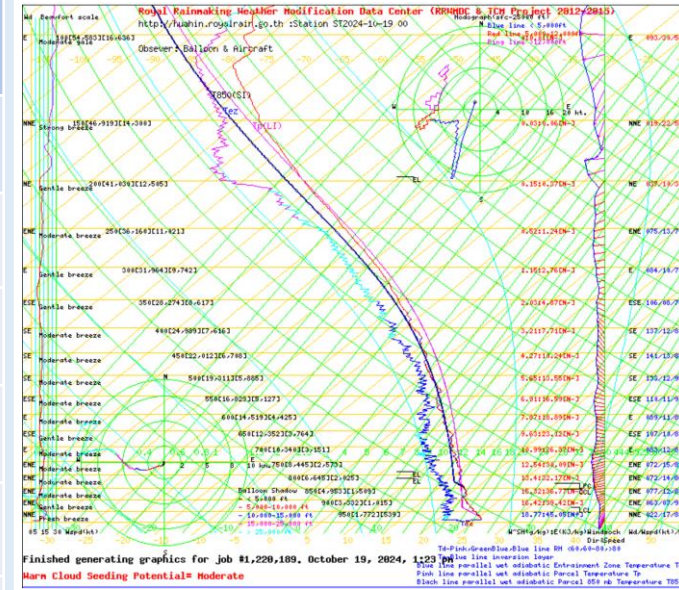
Source : www.windy.com

What's the weather of today?

Upper air Sounding 00 UTC 21 October 2024

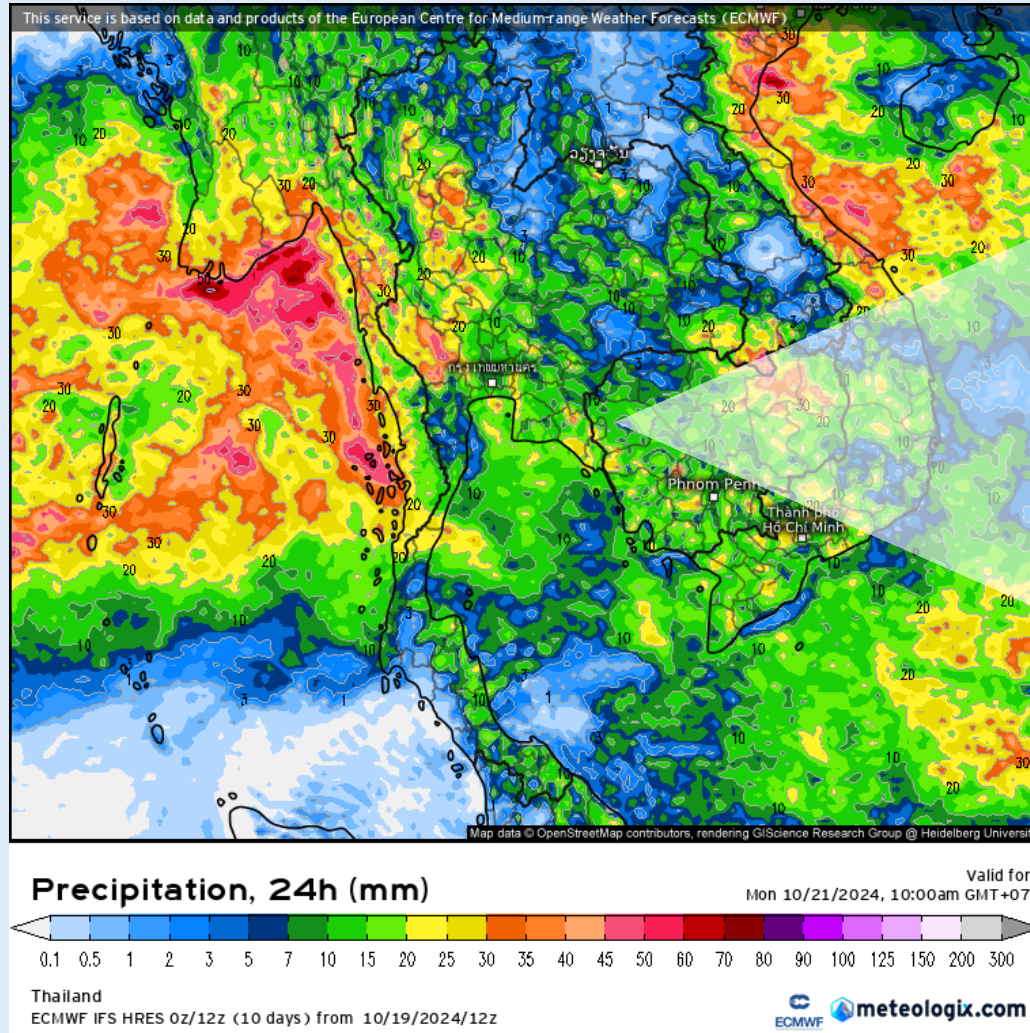
Warm Cloud Seeding Criteria

Variable	Criteria	Today	
1 Mean RH 5 - 10K Feet	$\geq 60\%$	88%	✓
2 Mean RH 10 - 15K Feet	$\geq 45\%$	76%	✓
3 Mean wind direction 5 - 10K Feet	-	090	✓
4 Mean wind direction 10 - 15K Feet	-	095	✓
5 Mean wind speed 5 - 10K Feet	≤ 20 Knots	5 Knots	✓
6 Mean wind speed 10 - 15K Feet	≤ 15 Knots	6 Knots	✓
7 Showalter Index (SI)	≤ 0	-1.2	✓
8 Lifted Index (LI)	≤ -1	-3.1	✓
9 K Index (KI)	≥ 30	38	✓
10 Convective temperature (C°)	-	10:30 a.m.	✓



What's the weather of today?

ECMWF Model Charts at 03 UTC 21 October 2024



Source : <https://meteologix.com>

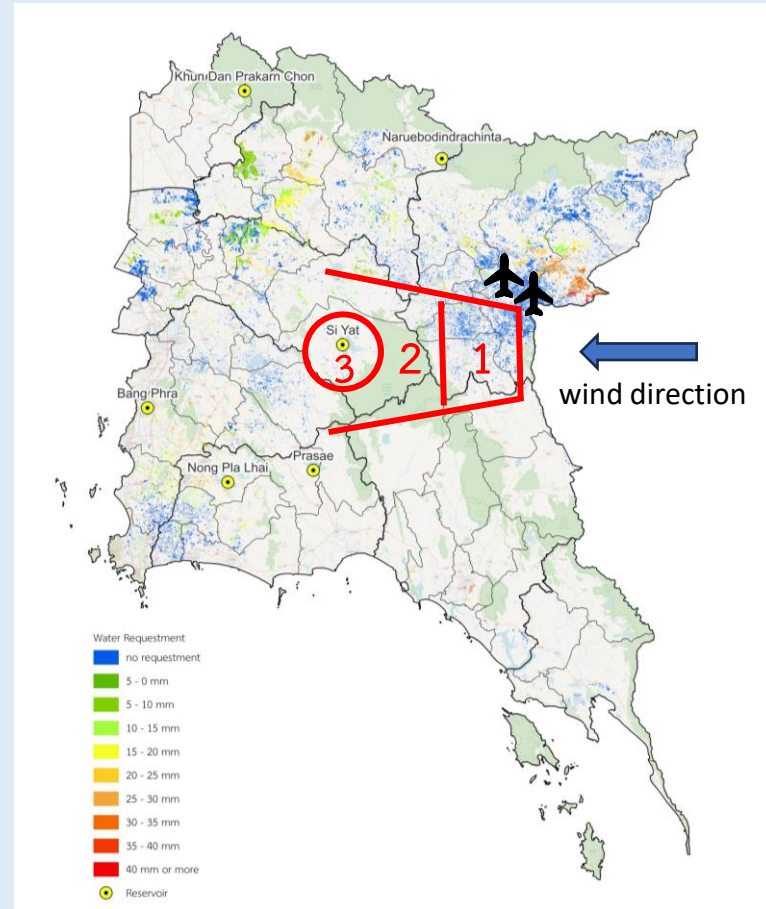
The planning of today

Cloud Seeding flight plan

Rayong Operation Unit

21 October 2024

Flight	Time	Aircraft	Substance/kg	Area	Hight (ft)
1	10:00 a.m.	1543	AR23/1,000	065/45 NM → 360/25 NM	6,000
		1542	AR23/1,000		6,000
2	01:30 p.m.	1543	Calcium Oxide/1,000		8,000
		1542	Calcium Oxide/1,000		7,000
3	03:30 p.m.	1543	Sodium Chloride/1,000		8,000
		1542	Urea/1,000		5,000



An aerial photograph of a lush green landscape with a faint rainbow in the sky. The right side of the image shows the wing and engine of an airplane. A white hand-drawn border frames the central text.

**Let's get ready to U-Tapao
International Airport in Rayong**

THANK YOU