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# Roles of Private Sectors in Climate Change Adaptation & Disaster Risk Reduction

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*Managing Executive  
Officer*

*Service Operation and  
Development*

*Weathernews Inc. (WNI)*

**ADB Pavilion**

**Promoting Climate Change Adaptation Business in Asia and the Pacific  
Dubai, 8th November 2023**



# The Origin of WNI

*“I want to protect the lives of mariners.”*  
*“I want to help in time of crisis.”*

January 1970, an explosive low-pressure system hit the port of Onahama, Japan, and lives of 15 crew on the vessel has lost.

“If there had been really useful weather information, maybe this accident could have been prevented.”

Weathernews Inc. was established with a sense of responsibility and will of company founder Hiro Ishibashi in 1986.

Since then, our “Risk Communication service” have expanded to cover all types of business and our daily lives.



*We need both*  
*Early Warning for ALL & Early Warning for YOU*




# Public Private Engagement (PPE) in Japan

## Legal Framework for Meteorological Services in Japan - Meteorological Service Act - (enact 1952)

1993: *Enhancement of Public-Private Partnership*

- Establishment of an authorized organization for dissemination of meteorological data to the private sector
- Establishment of "certified meteorological forecasters" system
- Authorization of Public Weather Forecast by the Private Sector

 <b>Japan Meteorological Agency</b>	 <i>Always WITH you!</i>
<b>Public Weather Service</b>	<b>Your Weather Platform</b> (Info. Exchange Platform)
<b>Weather Forecast Warning</b>	<b>Weather Forecast Solutions for Risks</b> <b>Warning Dissem. to End-users</b>
<b>Basic Observation</b>	<b>User-oriented Obs. for Specific Services</b>



# Weathernews Inc. (WNI) in Brief



## Global Service Operation Network Supporting 24 x 7, from 32 offices in 21 countries

**Oklahoma  
Operations Center**

**Copenhagen  
Operations Center**

**Amsterdam  
Operations Center**

**Athens  
Operations Sub-Center**

**Yangon  
Operations Center**

**Manila  
Operations Center**

**Tokyo Global  
Operations Center**

Established in 1986  
 Sales in 44 areas of global market  
 1,100+ employees  
 (including 200 Certified Forecasters,  
 300 Risk Communicators & 250 IT Experts)  
 2,500+ BtoB customers in 50 countries  
 2,000,000+ BtoS "Supporters"  
 180,000 Weather Reports / Day

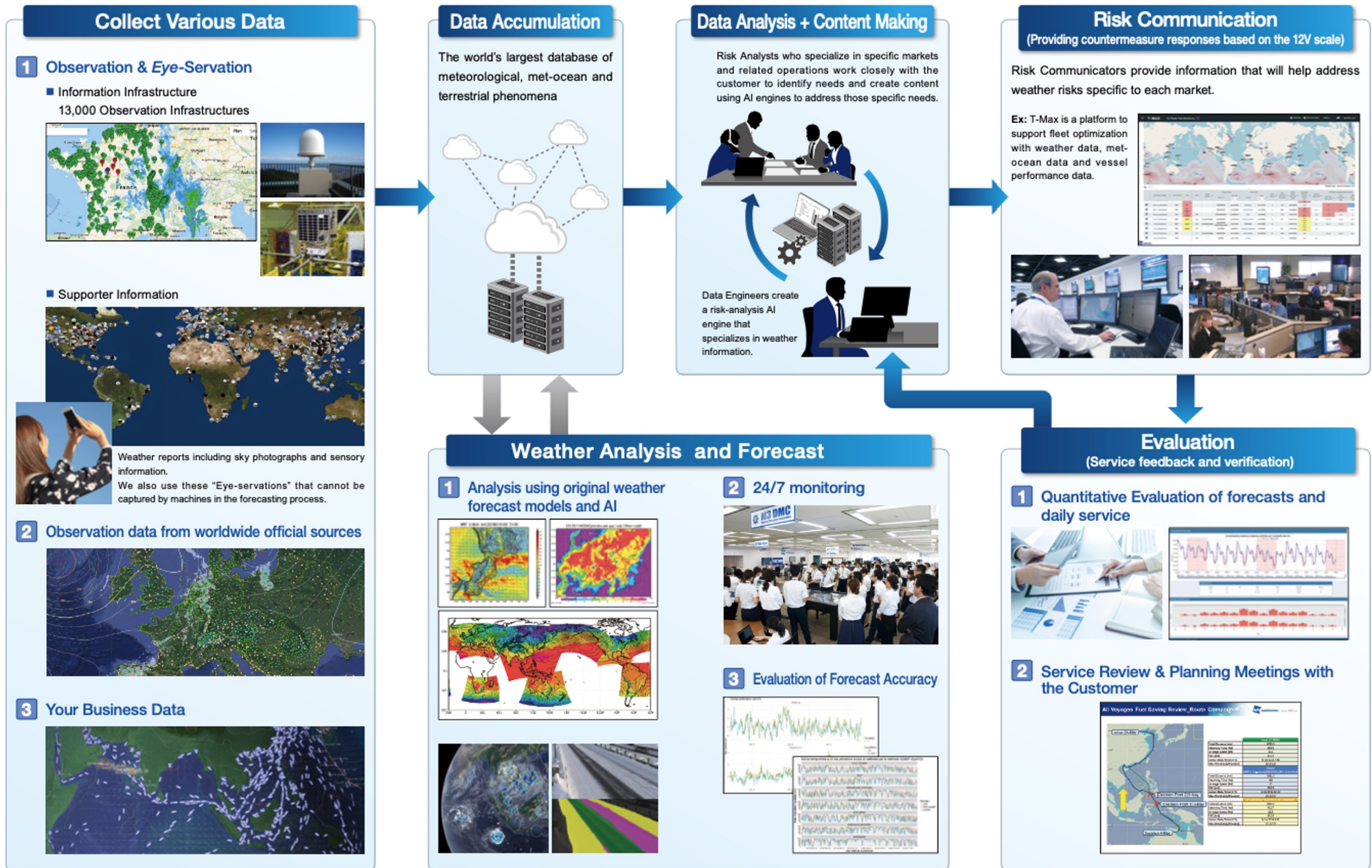
SEA Planning				SKY Planning	
Shipping	Oil & Gas	Offshore & Near Sea	Fishery	Aviation	
LAND Planning					
Road Management	Railway	Transportation	Logistics	Local Government	
Retailer	Event Management	Agriculture	Telecom Carriers	Facility Management	
Energy	Construction	River Administration	Dam Operation Management	Manufacturing Management	
Your Weather Station	Dynamic Climate Change	Terrestrial Phenomena	Air Quality Analysis	Insurance	

**LIVING Planning**

Mobile	Internet	Broadcasting	Travel	Wellness
Flower	Weather Literacy	Farm	Disaster Reduction	Star
Photo	Space Weather	Natural Energy		



# For Global Service and Development





# PPP in APAC



## Thailand

The Bangkok Metropolitan Administration agreed to cooperate with WNI in enhancing natural disaster risk reduction and management in Bangkok.

We are working with local institutions to deploy observation sensors in the Bangkok area.

The first "Rainfall Nowcast" for Thailand is provided to local factories to notify about possible flooding and lightning.



Early Warning Alert  
Notification of Flooding and  
Lightning Strikes via LINE  
and Email



## Vietnam

In November 2022, a state-of-the-art X-band meteorological radar-EAGLE Radar-was provided to the Viet Nam Meteorological and Hydrological Administration (VNMHA), within the framework of the Voluntary Cooperation Programme (VCP) of WMO and installed in Hanoi.

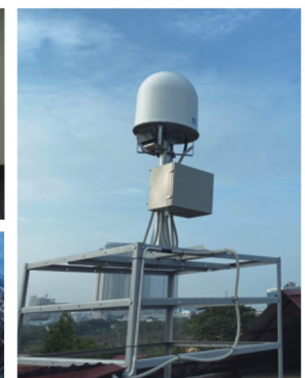
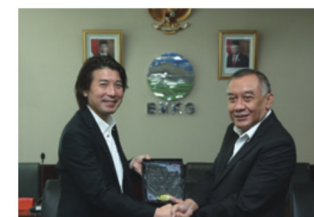
In addition to realizing early disaster detection through the public-private partnership, Weathernews will provide meteorological services to address the needs for individuals and businesses against weather-related risks.



## Indonesia

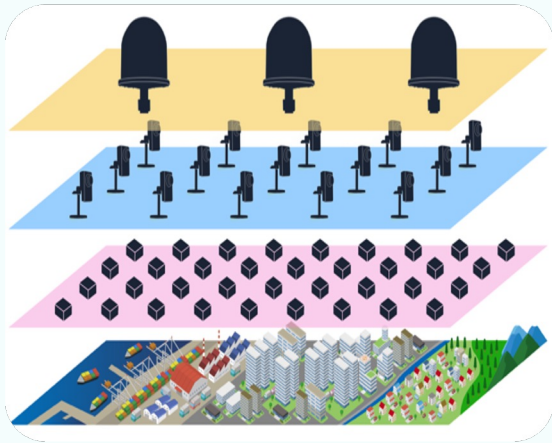
To help mitigate damage from natural disasters and loss, an MoU was bound with the Indonesian Agency for Meteorology, Climatology and Geophysics (BMKG).

Under the MoU, BMKG and Weathernews will collaborate to automate rain cloud observation using image data based on Weathernews' proprietary AI-driven analytics technologies, as well as enhance forecasting accuracy.

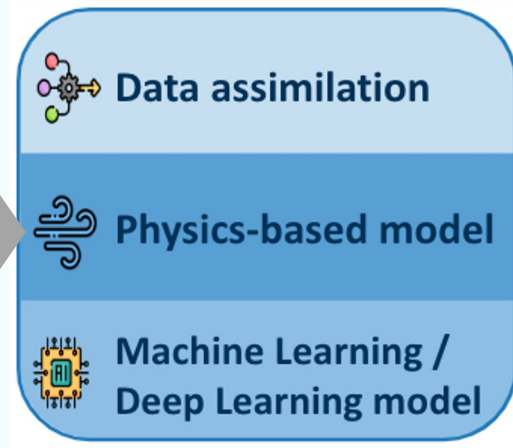




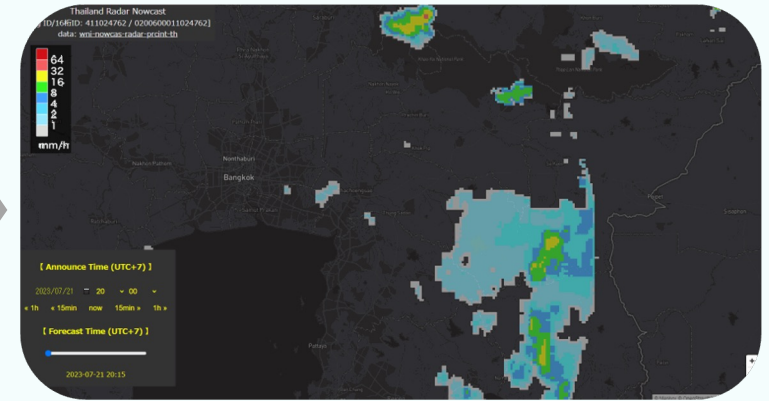
# Weathernews Alerting Service



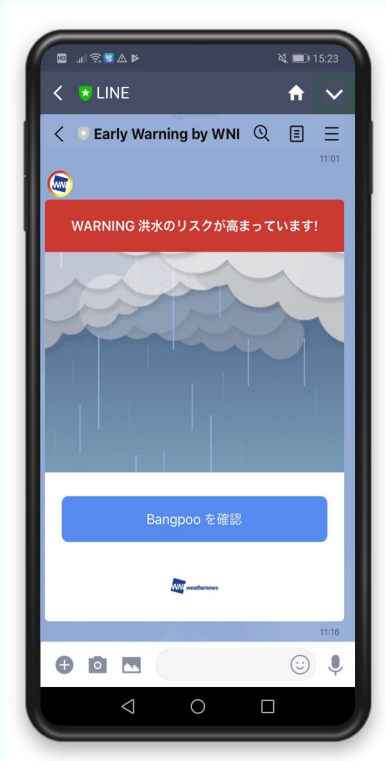
Hybrid Obs. Network



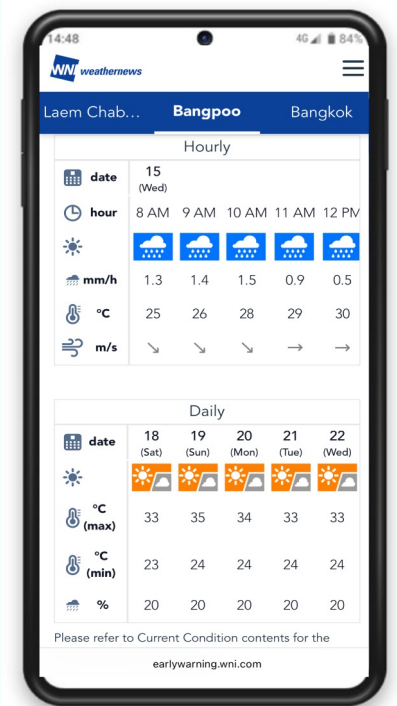
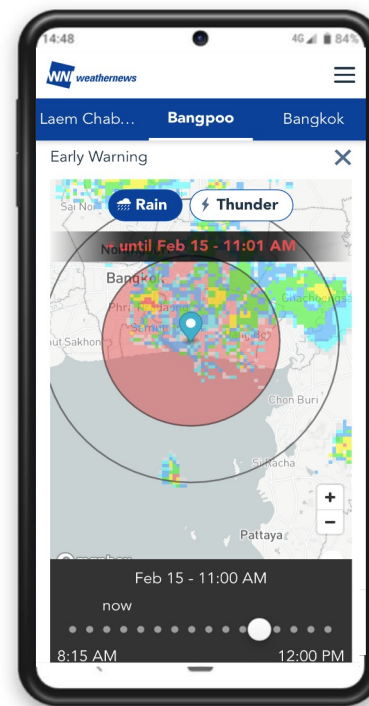
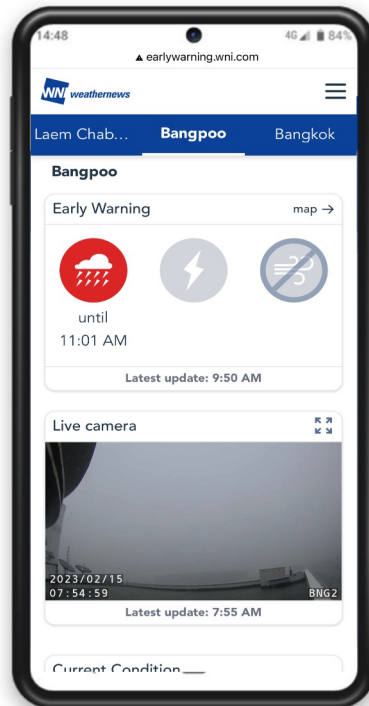
WNI Original Forecast Model



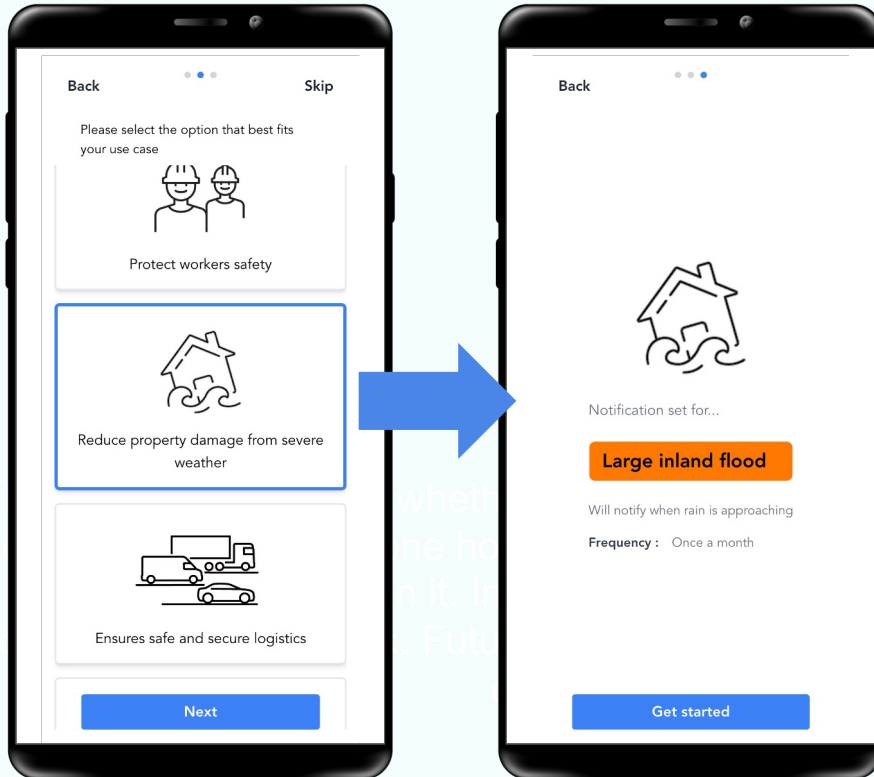
WNI Radar Nowcast



Risk Alert



# Customer's Needs and Voices



Customer needs to

- 1. Protect the safety of workers**  
→ Alert the risk of heavy rain when going / leaving work
- 2. Reduce the damages on facilities**  
→ Alert the risk of flooding around the facilities
- 3. Ensure the products delivered**  
→ Alert the risk of traffic jam due to rain
- 4. Work effectively outdoors**  
→ Alert the risk of working outside



“We are concerned about whether it will rain when we work outdoors or move to other facilities. I feel the Rain Alert Service usually come exactly one hour in advance. We were skeptical at first, but managers in Thailand are using it and we now have a lot of trust in it. In particular, the rain “stop” forecast released in October 2023 was very useful in determining the timing of movement and work. “



# Weathernews Climate Risk Analysis Service

A service that analyzes the financial impact of the physical risk to the Asset that a company will be exposed to in the event of climate change / global warming in different Representative Concentration Pathways (RCP) scenarios.

It enables not only managements of the company, but also institutional investors and banks to understand and grasp the company's business risk from the perspective of climate change. Of course, these data will be utilized for the TCFD disclosure.

In addition to this analysis, the service can also lead to specific adaptation measures.

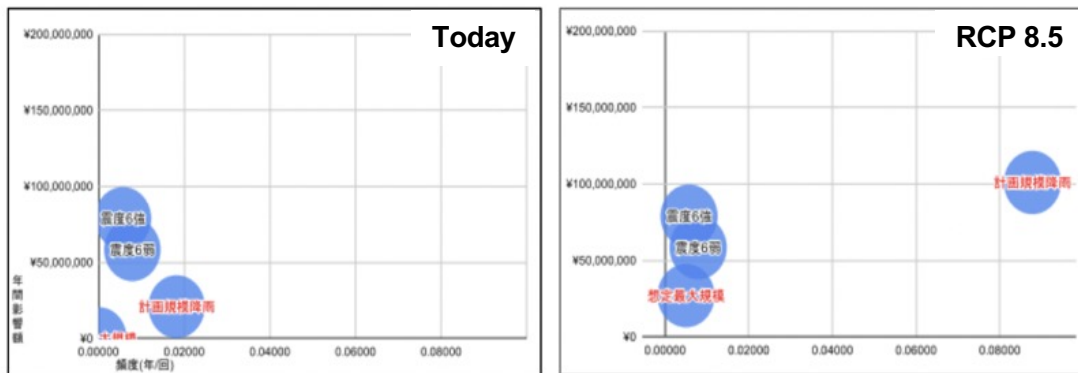


Figure 1: Physical Risk Analysis of Climate Change

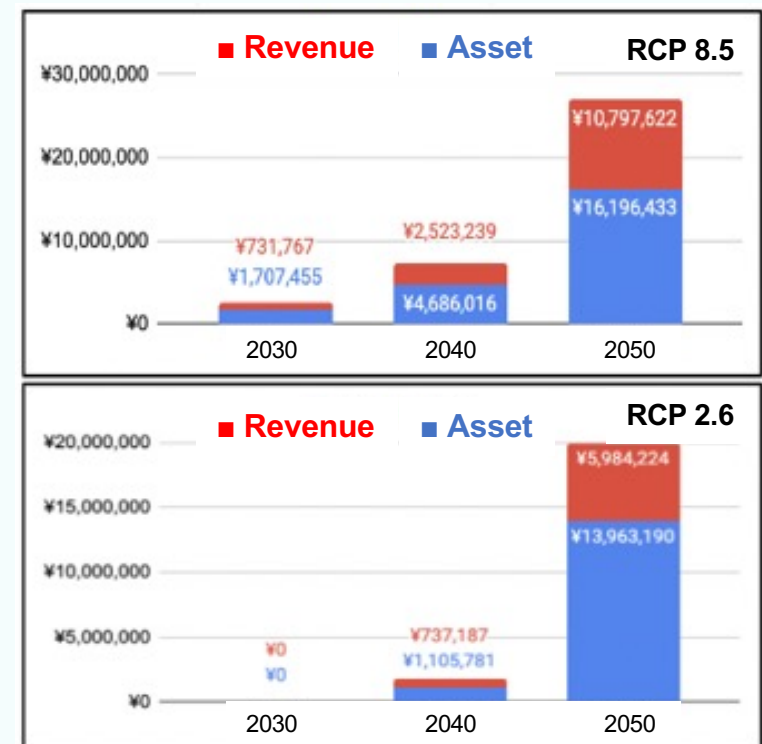


Figure 2: Annual Impact Analysis of Climate Change

# Challenges & Opportunities: Private Sector's View

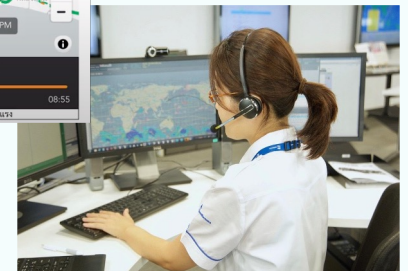
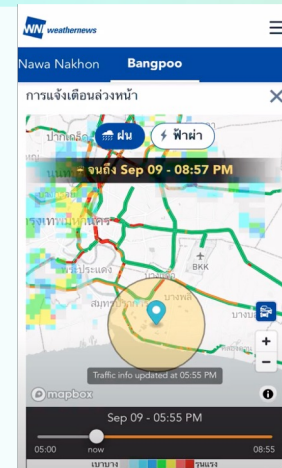
## Challenges in Countries:

- ◆ No legal framework of PPE/PPP to clarify the role of private sectors
- ◆ Few communications between public and private sectors to understand and establish the mutual trust.
- ◆ Data and information not available; No (open) data policy, No system/mechanism for data distribution, or Data ownership is not belonged to NMHS



## Opportunities with efficient PPE/PPP

- Disseminating timely and reliable information to end-users, as a key component of People-centered Early Warning System
- Increasing accuracy of data and information with cutting-edge technologies and credible feedback from customers and users in the society
- Maximizing the value and socioeconomic benefits of meteorological services with clearly defined roles and responsibilities of public and private sectors based on the mutual trust





# Our Partners in Asia



***“We hope that the cooperation between Vietnam Meteorological and Hydrological Administration and Weathernews Inc. will further develop in order to contribute to the reduction of disaster risk and sustainable economic development.”***

Dr. Hoang Duc Cuong, Former Vice Administrator  
Vietnam Meteorological Hydrological Administration  
At the EAGLE Radar Unveiling Ceremony in Hanoi, 2022



## Conclusion

*Our dream is to be the “Weather Information Platform”  
to reduce the weather/climate risks & damages  
for 8 billion people living in the world.*

*We hope, an appropriate mechanism/system for PPE/PPP  
will enhance and maximize the contribution of  
Weather and Climate Enterprise to the Society.*

*Thank you*