

Weather and Climate Service with Cutting-Edge Technologies for Climate Change and Disaster Risk Reduction



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- WNI in Brief and Background
- Climate Change Mitigation
- Climate Change Adaptation
- Conclusion for Today

The Origin of WNI

The Origin of Weathernews!

*"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.



WNI in Figures



Founded	11 June 1986
Stock Listing	Tokyo Stock Exchange 1st (4825)
Headquarters	Chiba, Japan (Global Center)
Consolidated Sales	approx. 170 million USD (May 2021)
Number of Employees	1101 (May 2021)
Number of Offices	32 offices in 21 countries (7 Operation Centers)

Approx. 200 Forecasters & 250 IT Experts
2,500 BtoB customers in 50 countries
20 Million Downloads of Smartphone App
180,000 Weather Reports from users / Day

Global Markets

Sea Planning



Shipping



Oil & Gas



Offshore &
Near Sea



Fishery



Logistics

Wonderland Planning



Road
Management



Railway



Transportation



Facility
Management



Local
Government



Construction



Event
Management



River
Administration



Telecom
Carriers



Manufacturing
Management



Insurance



Dynamic
Climate
Change



Terrestrial
Phenomena



Air Quality
Analysis

Environment Planning



Energy



Retailer



Agriculture



Dam
Operation
Management

Global Markets

Sky Planning



Aviation

Mobile / Internet Planning



Mobile



Internet



Travel



Wellness

Broadcast Planning



Broadcasting



Flower



Weather Literacy



Farm



Disaster Reduction



Star



Photo



Space Weather

Sports Planning



Sports



Football



Motor Sports



Boat



Sports Festival



Baseball



Sky Sports



Mountain

PPE in Japan



Japan Meteorological Agency



**Public
Weather Service
(Official Announcement)**

**Private
Weather Information Exchange
Platform
(interactive communication)**

**Weather Forecast
& Warning**

**Weather Forecast
Warning Dissemination
Solutions for Risks**

Basic Observation

**Original Observation
& Data from Customers**

Background

Major natural disaster were caused by meteorological phenomena

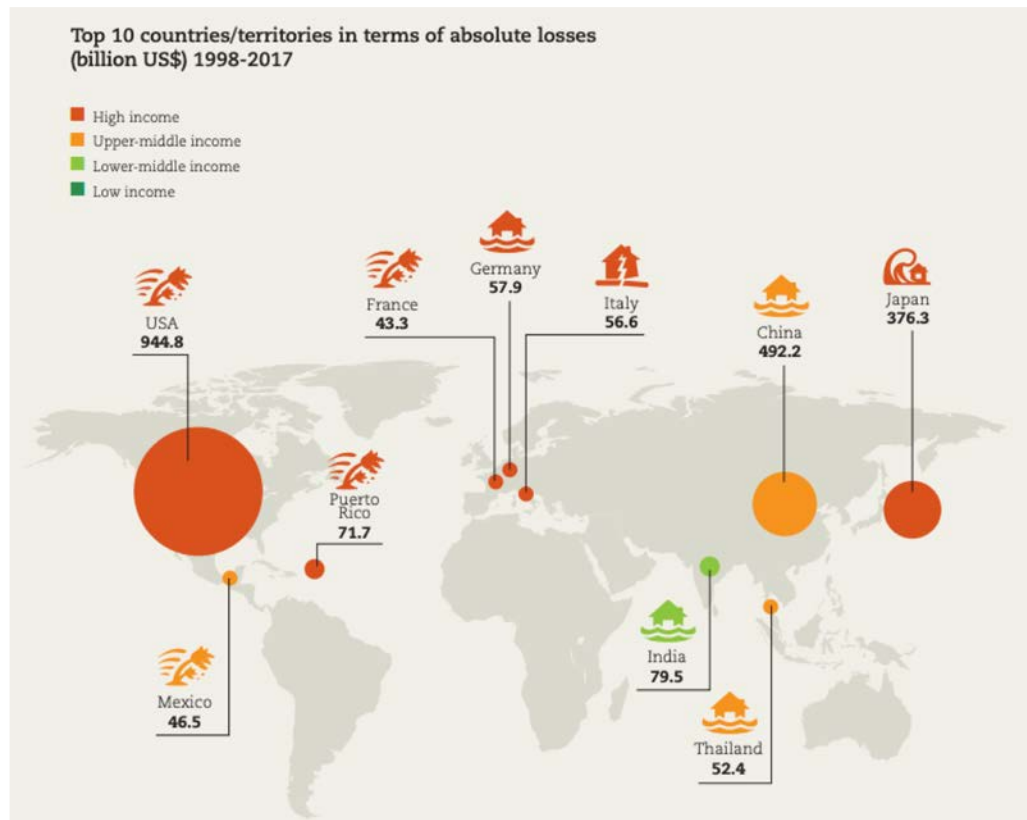
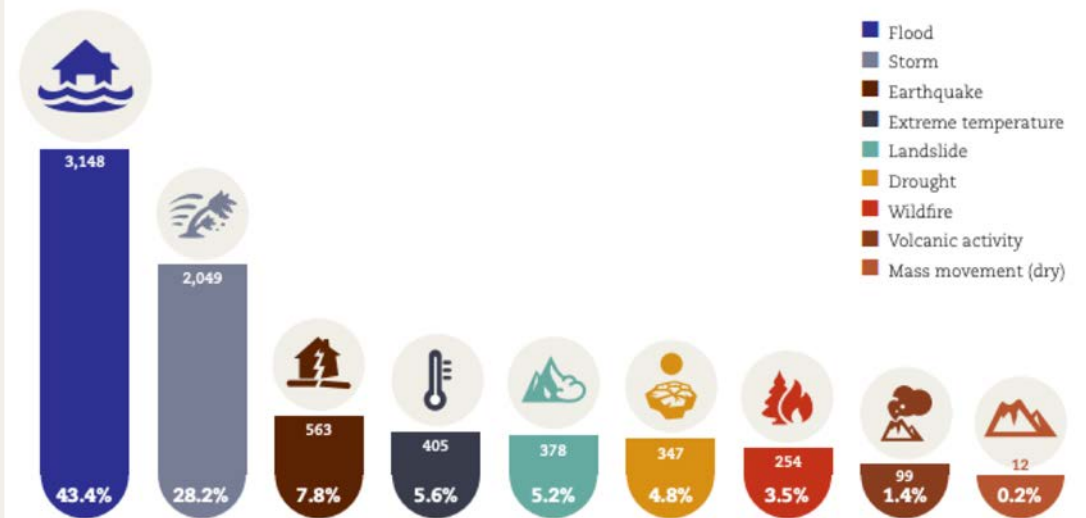


Figure 3

Numbers of disasters per type 1998-2017

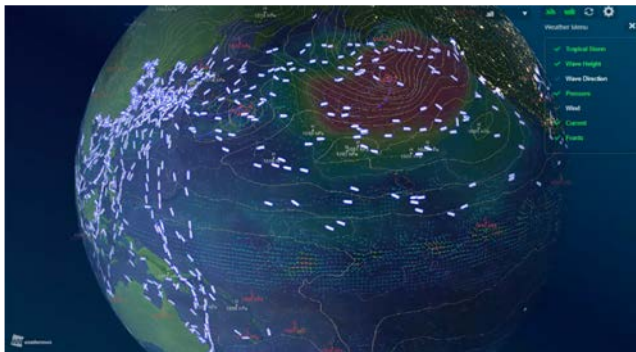


References: "Economic Losses, Poverty & DISASTERS 1998-2017" by CRED & UNISDR

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Climate Change Mitigation

WNI provides solutions that leverage the weather and climate to help companies both maximize their business profits and reduce their environmental impact through innovative technologies for forecasting and big data analysis.



| CO₂ Reduction by Optimum Ship Routing (OSR)

WNI provides global ship routing services which optimize both engine speed and fuel consumption. Along with safety support services, WNI is challenging in monitoring and visualizing CO₂ reduction, and in fact, the Optimum Ship Routing service has contributed to the reduction of 2.8 million MT of CO₂ from June 2018 to May 2019.



A new service called “Carbon Intensity Monitoring” converts the amount of fuel consumption reduced through OSR into CO₂ reduction. Accurately understanding “how much environmental impact reduction was achieved” through these weather and climate services will lead to the promotion of CO₂ emission reduction by industries.

Climate Change Mitigation



| Power Supply and Demand Planning Support

In the field of energy, WNI has developed an electricity demand forecast using proprietary AI technology and sensory observed data. This system can accurately forecast region-specific power demand and support the efficient operation and energy conservation of companies.



| Reduce Food Waste with Supply/Demand Forecast

Demand and supply planning support service is also utilized in the distribution and retail markets closely related to weather and climate information. Especially for an issue of food waste, predicting future demand with weather/climate risk analysis can avoid excess production waste in the supply chain. WNI provides a proprietary and innovative optimization engine that predicts consumer behavior based on the weather condition.

Climate Change Adaptation



| Services for Transportation Infrastructure

In order to prevent and avoid traffic disruption by disaster as much as possible with limited resources, it is important to take efficient measures and methods. WNI has helped companies manage public transportation infrastructure, such as shipping, airways, road, and railways, by providing them solutions to weather related risks for a long time. The services includes high resolution weather forecast and prediction of weather risks, and they minimize the damages on transportation from natural disasters.



| Weather Forecast with User Communities

In recent years, there have been more cases of severe phenomena such as torrential rain, typhoons, heat wave and heavy snow caused by climate change, and demand for more localized weather forecast is increasing. Building up the resilient communities to mitigate disasters, the power of citizens is indispensable. WNI is making weather forecast in communication with mobile app users called “Weather Reporters” since 2005, and the accuracy of forecast achieves over 90%.

AI Chatbot for DRR

AI Chatbot for disaster prevention is programmed and developed on the communication platform of “LINE” Smartphone App. The project is under the Cross-ministerial Strategic Innovation Promotion Program (SIP) of Japanese government.

Customized information
from AI Chatbot/Government



AI
Chatbot



Collecting and organizing information
from citizens (victims)



- **Optimize the communication** between government and citizen
- **Share the information** on warning and evacuation immediately
- **Grasp the situation** of damage/recovery accurately for both sides

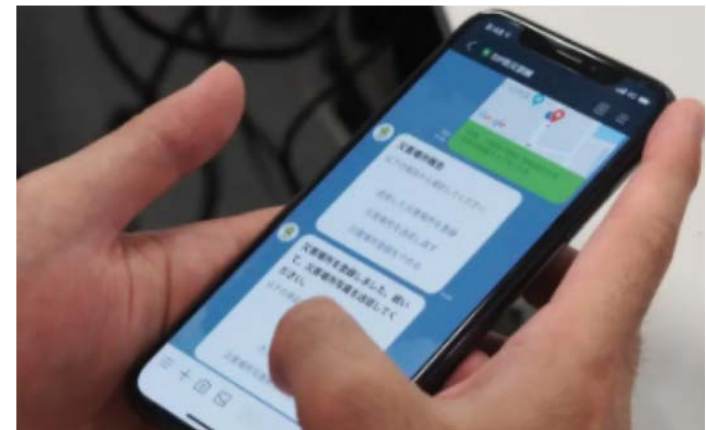
Collaboration with UNESCO in DRR



In collaboration with UNESCO, Weathernews attempts to contribute to disaster prevention in East African nations by collecting and providing information related to disasters through mutual communication with users by utilizing the LINE messaging app platform, which is most used in Japan as well as other countries.



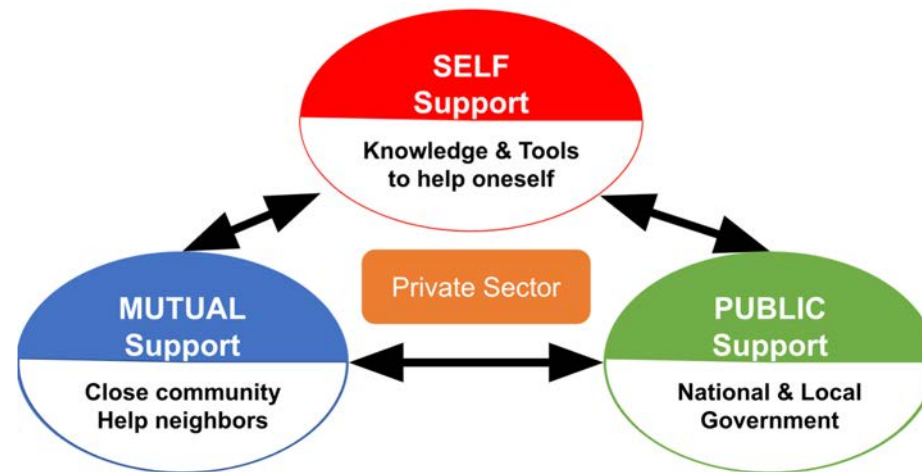
Effective PPP framework with local governments is also required to manage the project sustainable.




<https://en.unesco.org/news/project-launch-strengthening-disaster-prevention-approaches-eastern-africa>

Conclusion for Today

1. There is a hint of light that weather and climate services by the private sector can contribute to reduce CO₂ and social waste.
2. Effective user communication using the cutting-edge technologies leads to developing and strengthening the social resilience for natural disasters caused by climate change.
3. Sustainable observation and effective data utilization based on the efficient PPP framework are required for enhancement of new value creation in weather and climate services for DRR.



A dramatic sunset scene over a body of water. The sky is filled with dark, heavy clouds, with a bright orange and yellow glow from the setting sun breaking through near the horizon. In the distance, a city skyline is visible across the water. The foreground shows a dark, silhouetted beach with a few small figures of people sitting. The overall mood is somber yet hopeful.

We hope, in the future,
our challenge and unity will contribute to saving
many lives and properties of people living in the world,
under the same sky

Thank you

<https://global.weathernews.com/>

Special thanks to MOE and IGES