

KMA International Development Cooperation Policy for Climate Crisis Response

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**Korea Meteorological
Administration**



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Challenges



Global Climate Crisis and Necessity of Global Cooperation

Rising Global Risks of Climate Change

World Economic Forum (DAVOS Forum)

50th WEF in 2020

- “Climate change” was top agenda.

McKinsey Report

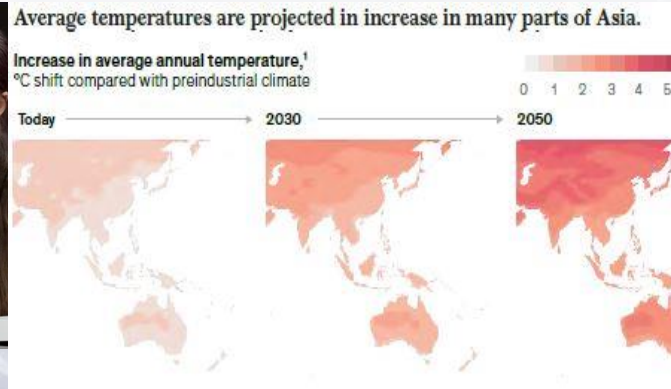
Report on Climate Risk and
Response in Asia (2020)

- The report has warned of various risks of climate change facing different areas in Asia.

P4G Summit

2021 P4G Seoul Summit

- The Summit emphasized the importance of global cooperation to respond to global climate crisis.



Asia at High Climate Risk

● The 2021 Global Climate Risk Index

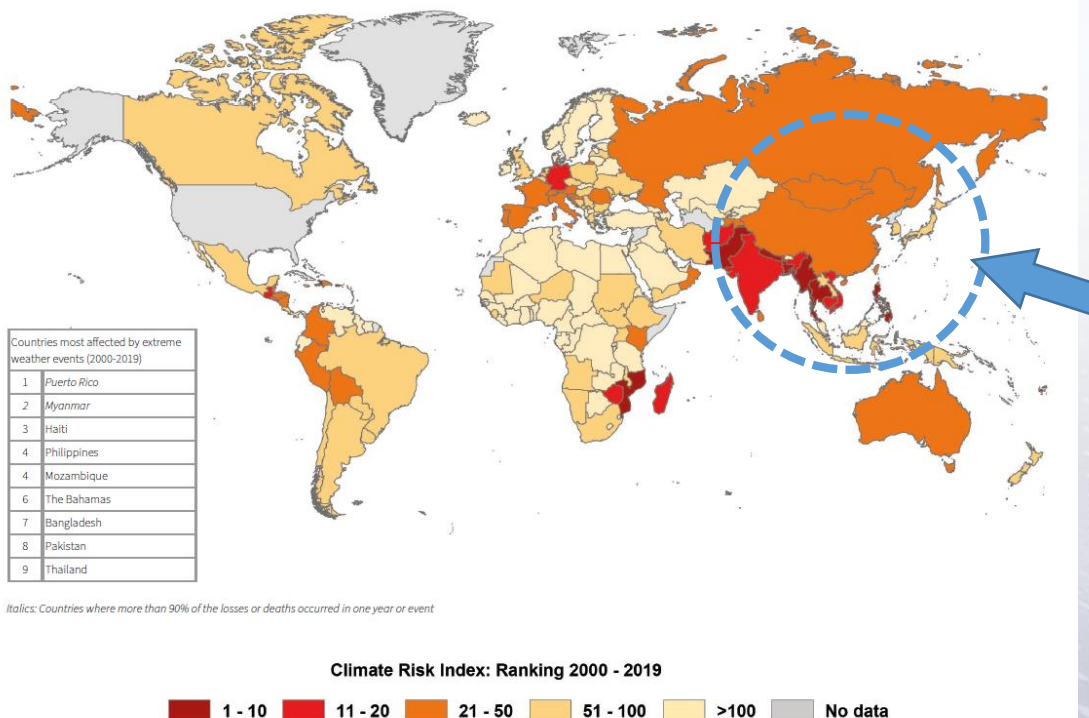
- Climate change increases sea surface temperatures and affects global warming, increasing the frequency of extreme weather events.

➡ Major Risks: Torrential rain, Flooding, Landslide, Tropical cyclone, etc.

Countries Most Affected by Climate Risk from 2000 to 2019

Figure 1: World Map of the Global Climate Risk Index 2000 – 2019

Source: Germanwatch and Munich Re NatCatSERVICE



6 out of 10 countries most affected are Asian countries.

In particular, Myanmar and the Philippines are exposed to high climate risk.

Global Cooperation to Address Climate Change



It is urgent to increase global cooperation on weather and climate for climate change response and sustainable development





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Korea's Policy and Plan for International Development Cooperation

Current Status of Korea's International Development Cooperation

Budget

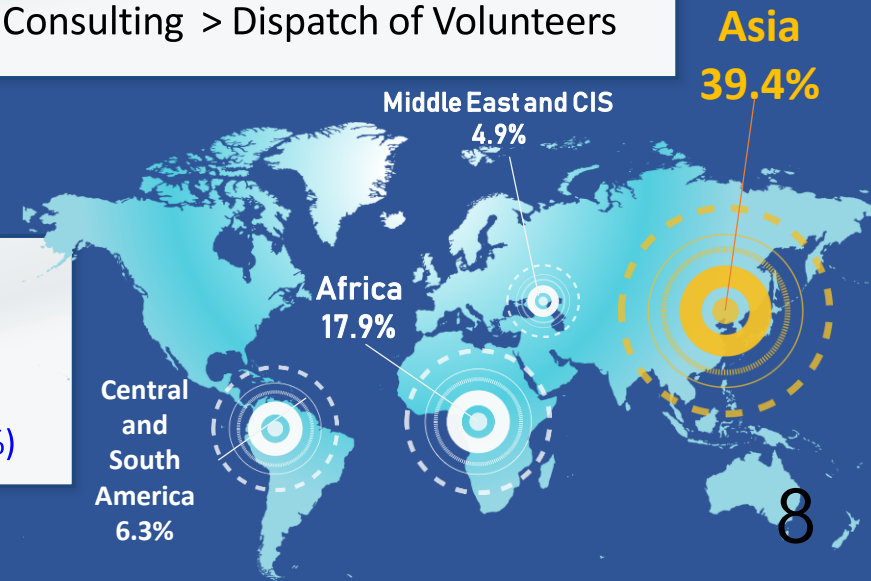
- Korea has continued increasing ODA funds (3,300 M USD in 2021, up by 8.3% from 2020)
 - Ranked the 15th out of 29 OECD DAC members and the first in terms of annual average growth (11.9 %) in recent years

Areas of Support

- (ODA Cooperation) Ratio of bilateral and multilateral cooperation is about 8:2.
- (Sector) Transportation > Health > Education > Agriculture, Forestry and Fishery
- (Type) Projects (70%) > Training > Development Consulting > Dispatch of Volunteers

Targets

- Mainly for Asia and African countries
 - Asia (39%), Africa (18%),
 - Central and South America (6%), Middle East and CIS (5%)



Mid- and Long-Term Strategies

Vision

**Realizing global value and shared-prosperity
through cooperation and solidarity**

Strategic Goals





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KMA's Current Status and Plan for International Development Cooperation

Vision and Strategy for International Development

Vision

Supporting globally shared growth in the field of weather and climate

Goal

Supporting sustainable development and contributing to disaster mitigation in developing countries

01

Customized projects by region and country

27 ODA priority partner countries

Applying the characteristics and development assistance need of target countries

02

Developing models for Korean ODA projects

Focusing on KMA's strengths in meteorological technology
- AWS, TOS, GK2A, NWP, etc.

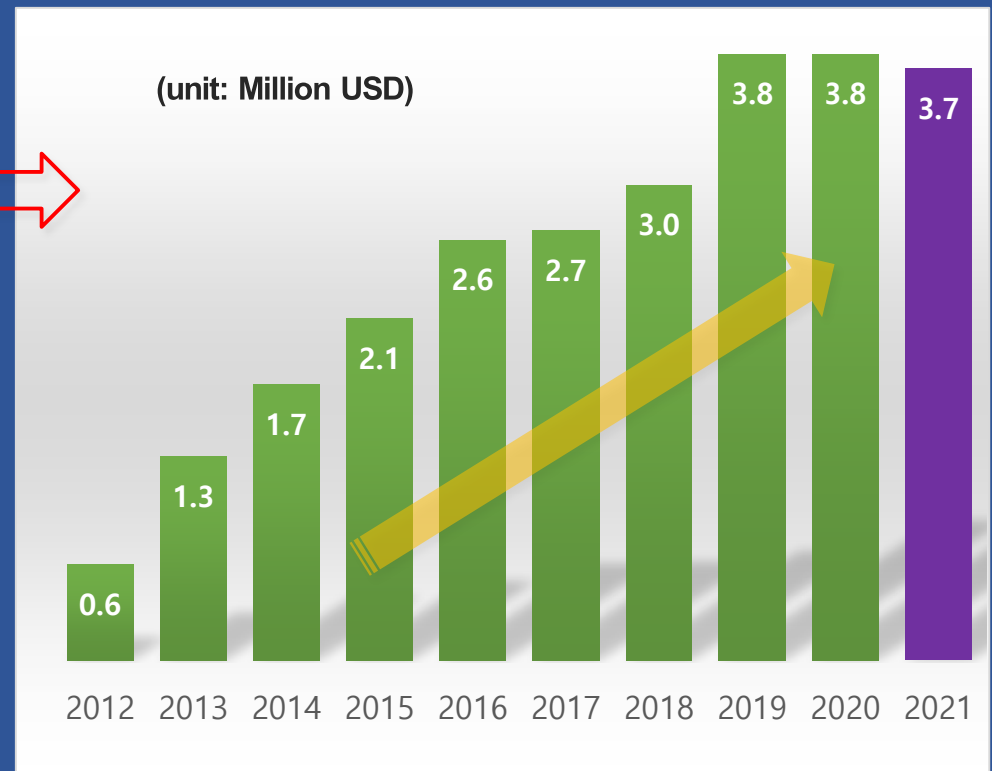
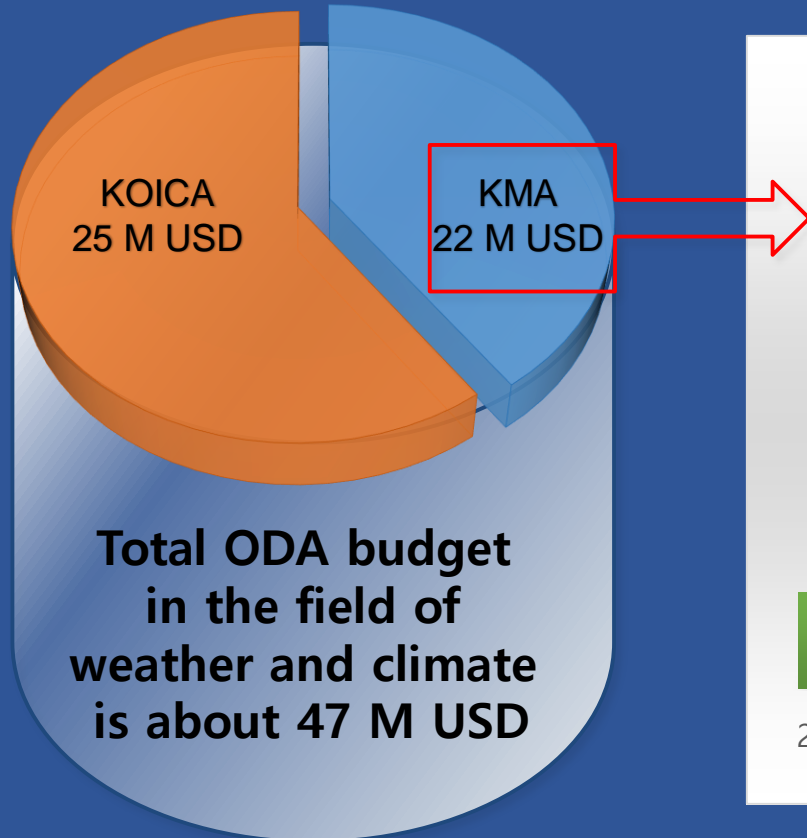
03

Diversifying funding sources and expanding the scope of ODA projects

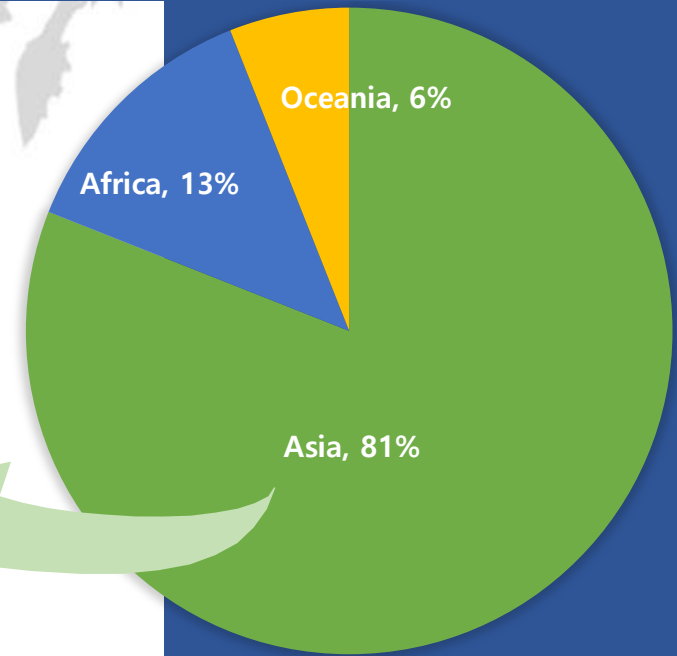
Connecting projects with other areas and developing convergence ODA projects

Cooperation with international development organizations

Budget for KMA ODA (from 1998)



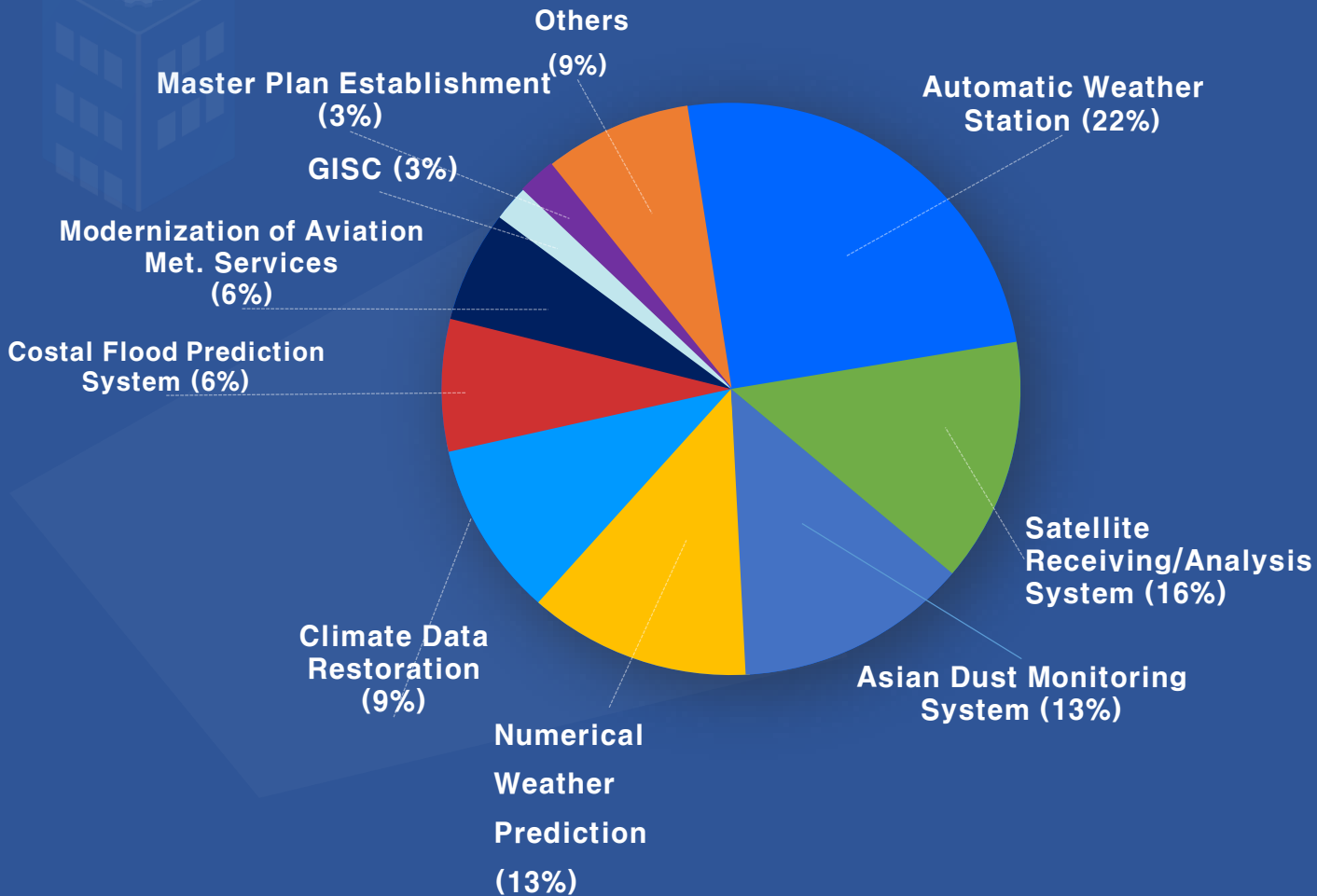
Target Countries for KMA ODA Projects



Over 80% of target countries are in Asia such as Mongolia, Lao PDR, and Cambodia

❖ Implemented 32 projects in 12 countries since 1998

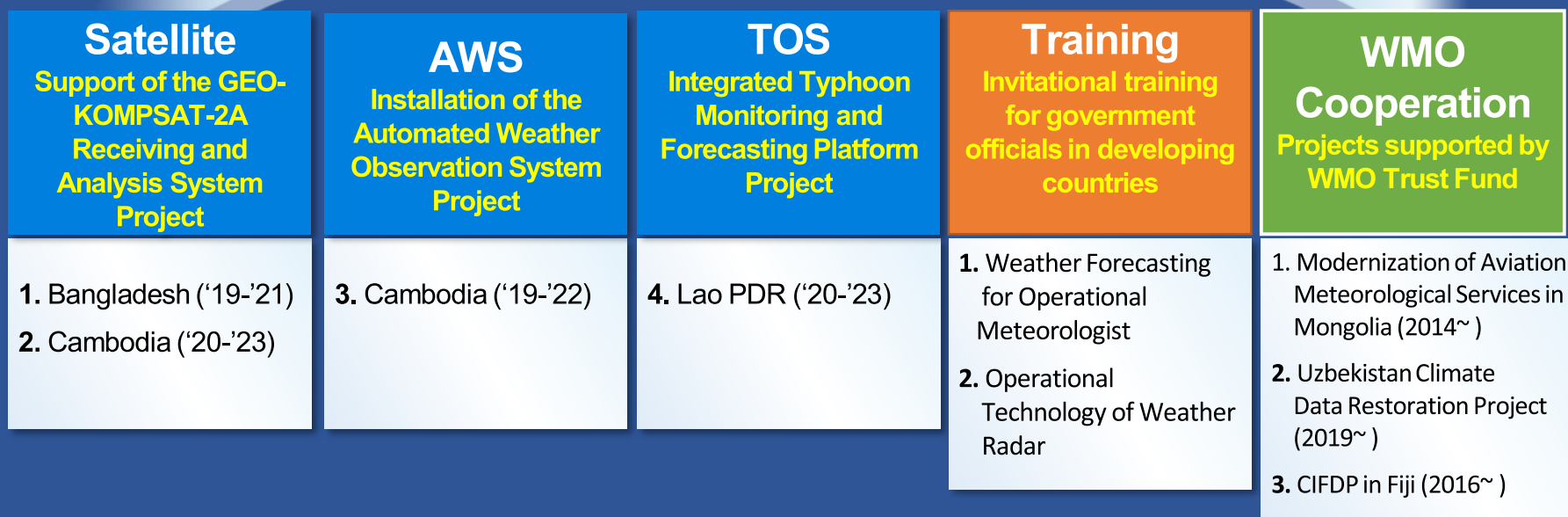
Areas of KMA ODA Projects



Ongoing ODA Projects

KMA ODA Projects for 2021

Four projects, two training courses,
and three WMO cooperation projects



ODA Project Achievement (1)

Contributed to improving weather services by installing automatic weather stations

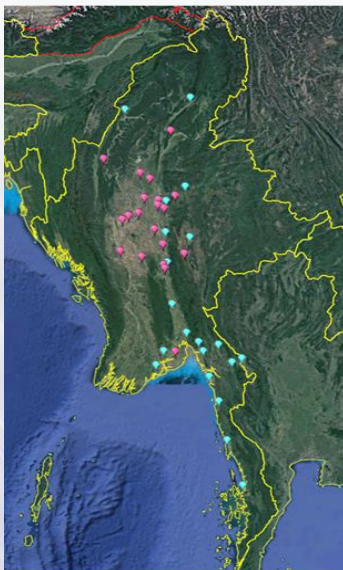


Collecting meteorological observations every minute with AWS sensors (temperature, humidity, pressure, wind direction/speed, precipitation)

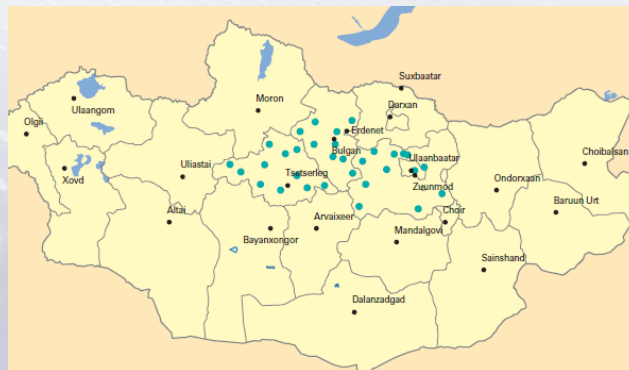


Observation data analysis/display system

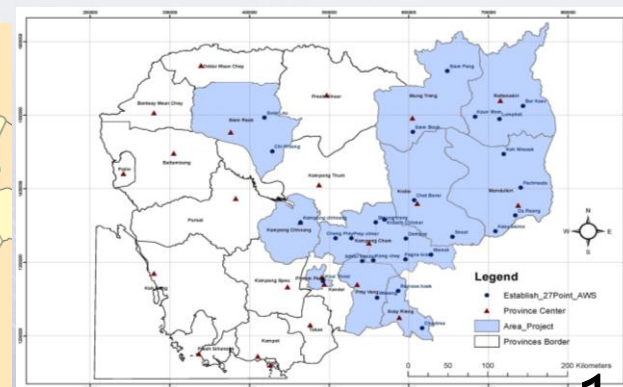
40 weather stations in Myanmar



32 weather stations in Mongolia



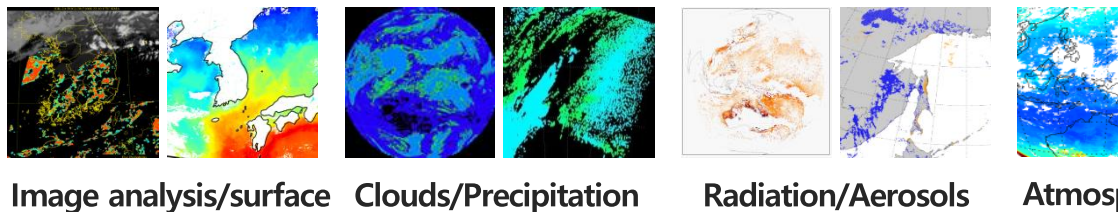
27 weather stations in Cambodia



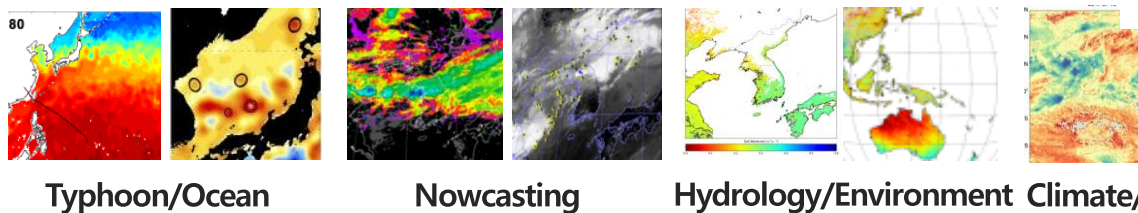
ODA Project Achievement (2)

Contributed to early monitoring and warning of severe weather events

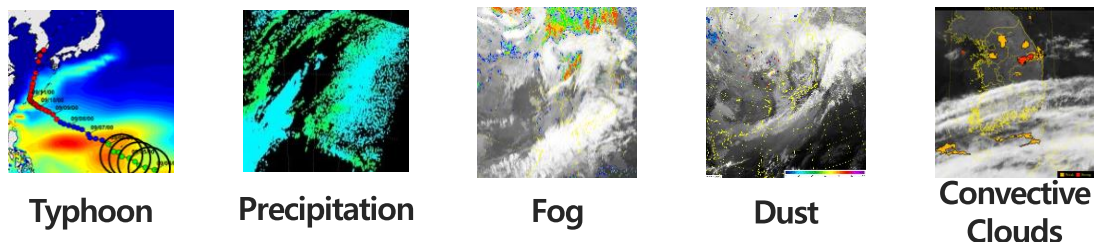
1 Meteorological Products (52 types)



2 Application of Meteorological Parameters



3 Monitoring and Analysis of Meteorological Phenomena



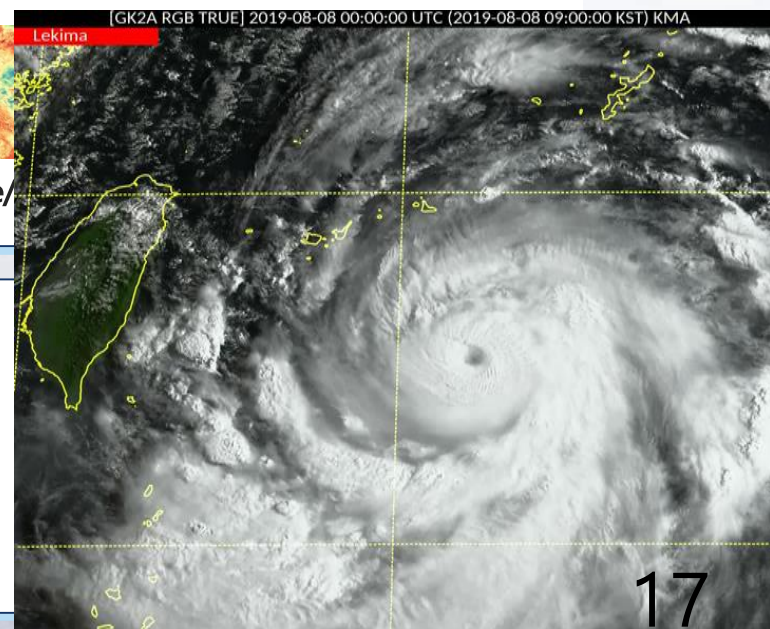
For 30 Countries in the Asia-Pacific Region



GK2A

(Since Dec. 2018)

16 channels,
3 types of space weather channels

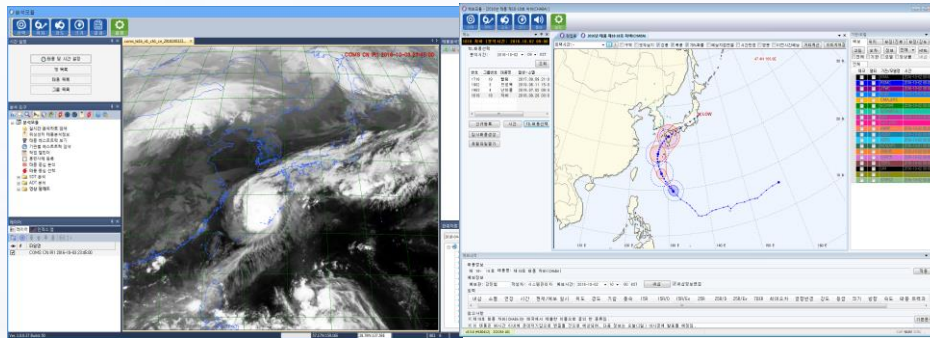


ODA Project Achievement (3)

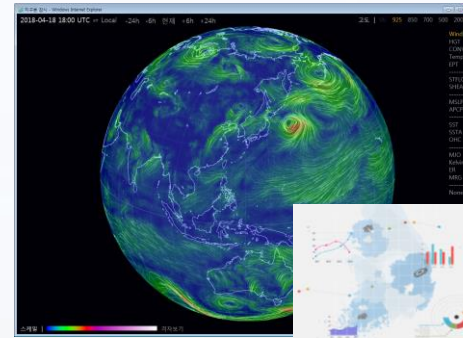
Enhanced capacity for early monitoring and forecasting of typhoons

- ◆ Typhoon Operation System (TOS) is an integrated platform for typhoon operation procedures including analysis, forecast, statistics and training.

Analysis



Forecast

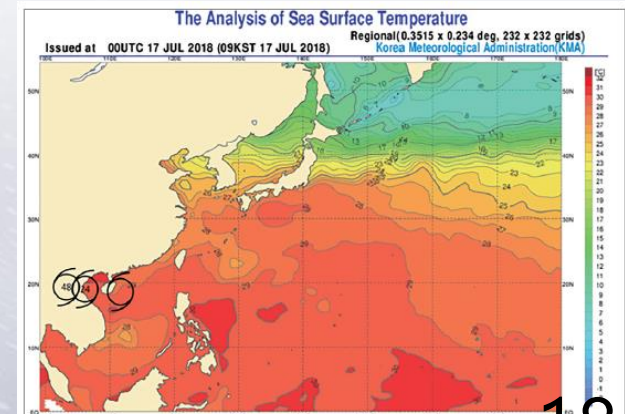
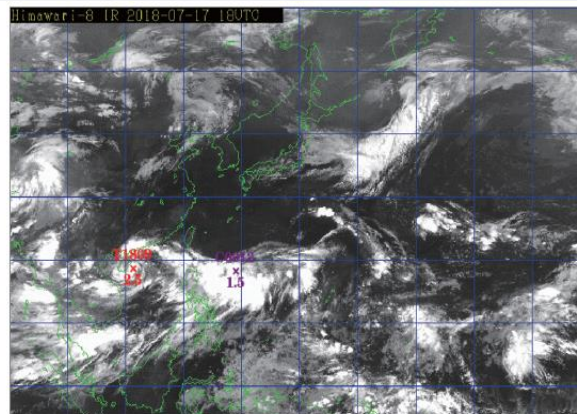
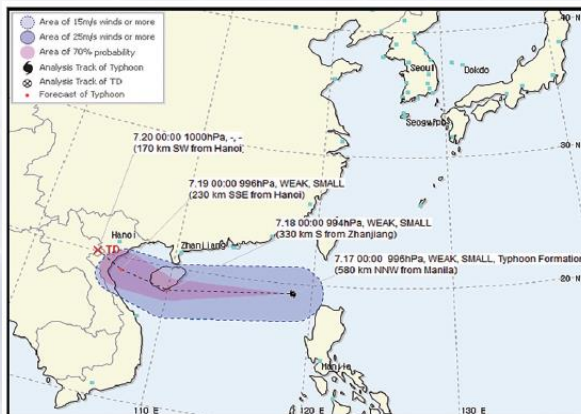


Statistics



Training

◆ Tropical cyclone 'SON-TIHN' analysis by TOS



Education and Training Programs

1,189 participants from over 94 countries since 1998

KMA

Weather Radar Operation and Data Utilization (2012 ~)

Weather Forecast (1998~2005, 2014 ~)

In
cooperation
with
KOICA

ICT for Meteorological Services (2006 ~ 2020)

Improvement of Meteorological Disaster Responsiveness (2009~2012, 2019 ~)

On-site Program on ICT for Meteorological Services in BMKG, Indonesia (2021)

Capacity building for quality assurance and operation of the meteorological system (Mongolia, 2021-2023)



Achievement in Education and Training Programs

Example 1



Bhutan

- Members from Bhutan weather service (DHMS) participated in KMA ICT Course for Weather Services ('19)

- Improved NWP verification system at DHMS
- Developed and planned new projects

Securing funds from **GCF** for projects

Example 2



Indonesia

- ICT Course for Weather Services by KMA
 - Recognized as the best training project in 2020 by KOICA

- Implementing on-site project at BMKG
 - NWP system improvement, expert advice, and on-site training

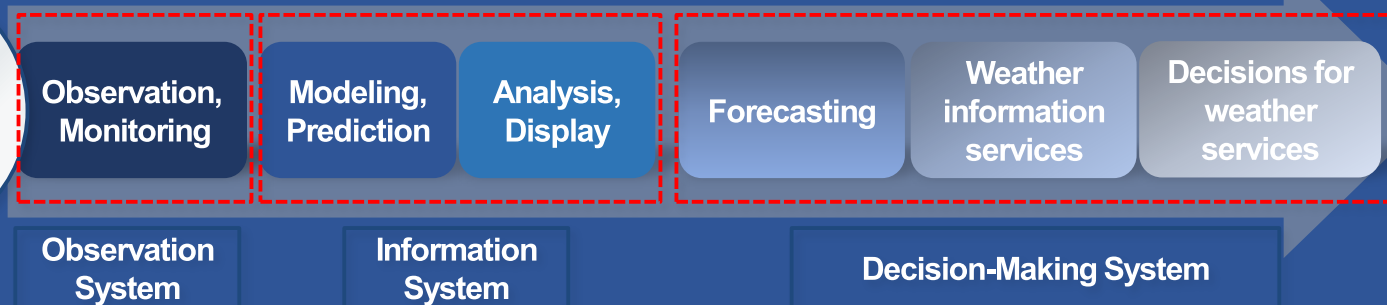
Contributing to NWP technology improvement and capacity development at **BMKG**

Future-Oriented ODA Project Model

Increasing practical assistance to improve weather services, rather than simply supporting infrastructure

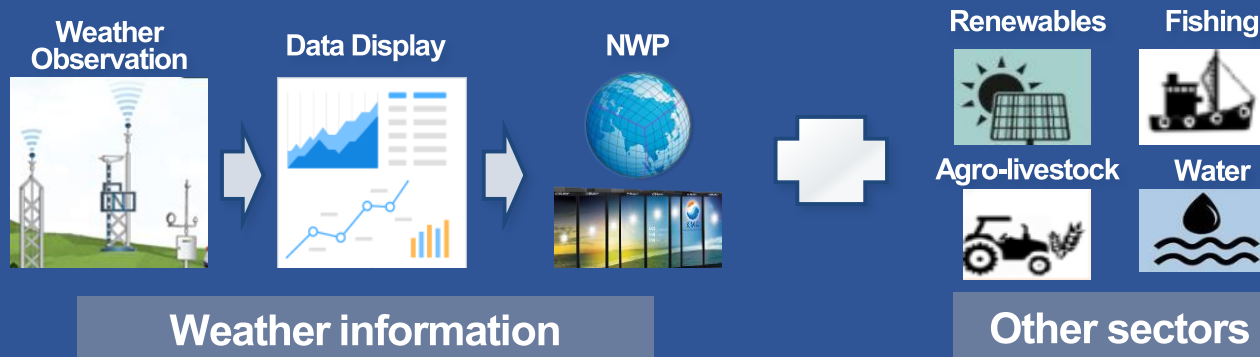
- Supporting the modularization of met. technologies for actual development of weather services in recipient countries
- Supporting weather and climate technologies and systems for the entire process of the value chain, from met. information production to decision-making by users

Weather &
Climate +
Water,
Energy



Create
Value for
Weather &
Climate

- Supporting the development of technological convergence with other industries using weather information





IV

Challenges

Challenges

01



Lack of awareness of weather and climate-related projects

Weather and climate-related projects are not priorities, compared with projects relating to health, water resources, food security, etc.

02



Limitations in securing KMA's own funds for projects to meet increasing demands

Increasing demands for development projects from partner countries

03



Lack of linkages with similar projects in recipient countries

Need to connect between similar projects and expand cooperation to increase the use of projects by recipient countries

Thank you !
감사합니다



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