



Country Report

Weather Radar in Cambodia

WMO/ASEAN Training Workshop on Weather Radar

Quality Control and Radar Data Exchange

29 JANUARY - 02 FEBRUARY 2024, BANGKOK, THAILAND

Mr. OY THAILY

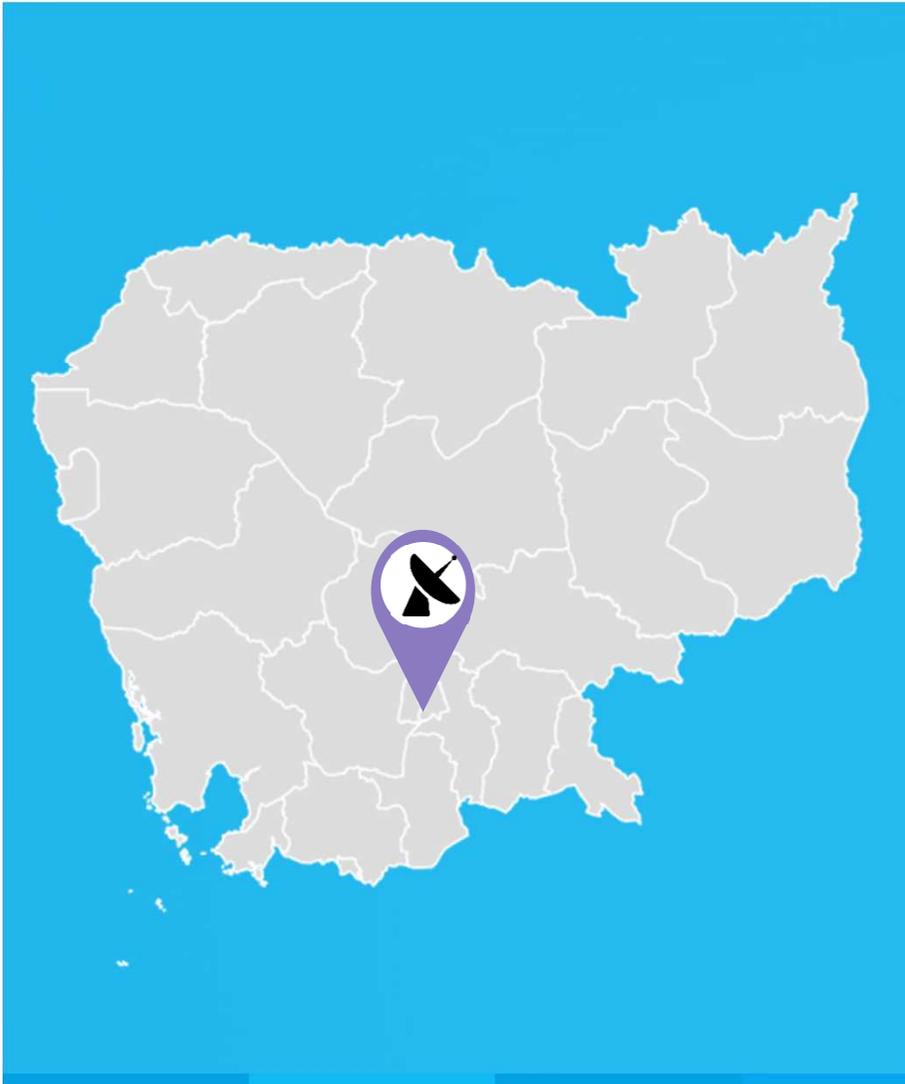
DEPARTMENT OF METEOROLOGY

MINISTRY OF WATER RESOURCES AND METEOROLOGY



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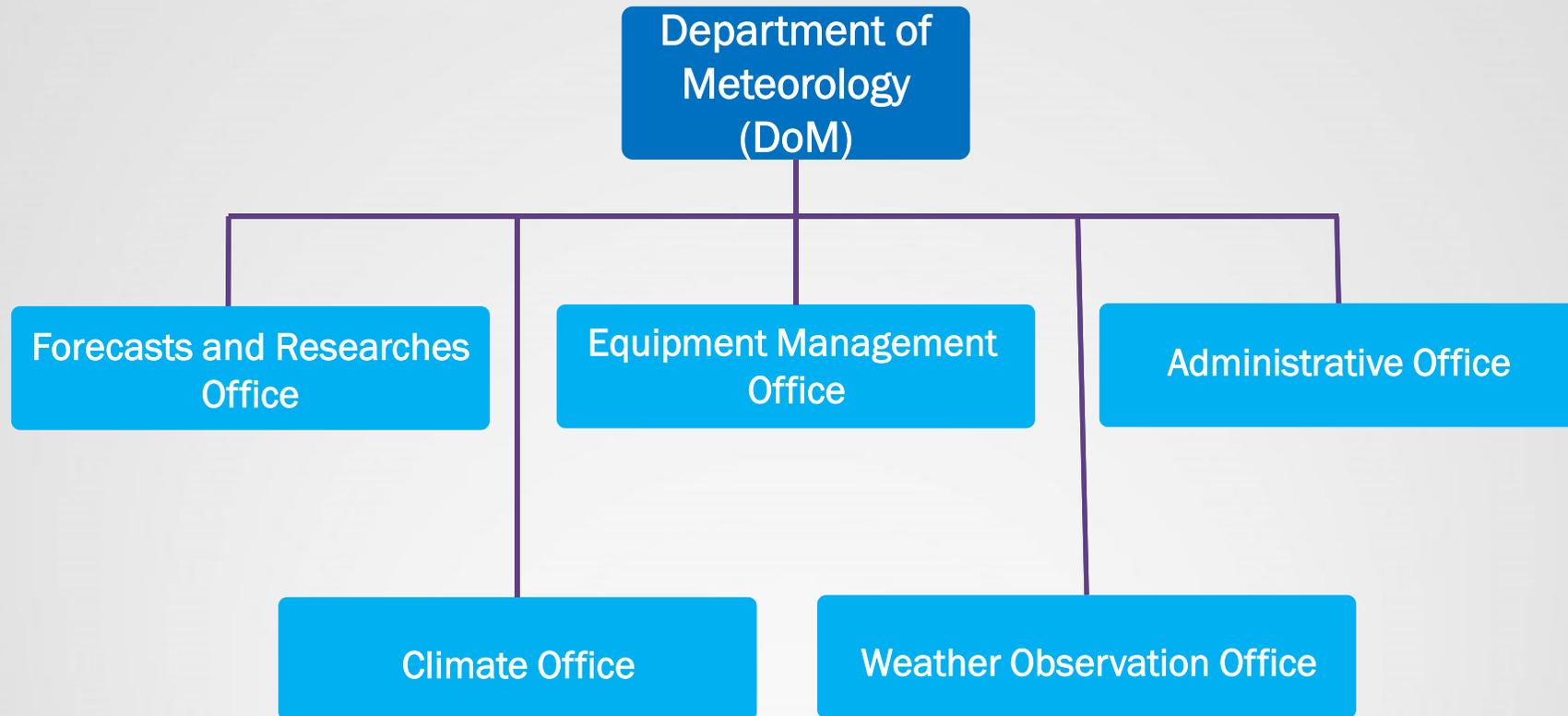




1. OVERVIEW

- Location : Phnom Penh
- Operation : 4th April 2012
- Height : 70 m (13rd Floor)
- Scanning : 15 minutes
- Range : 480Km/240Km/80Km
- Data : The processed data is disseminated via intranet to the Department of Meteorology in the third floor in the same building.

2. ORGANIZATION

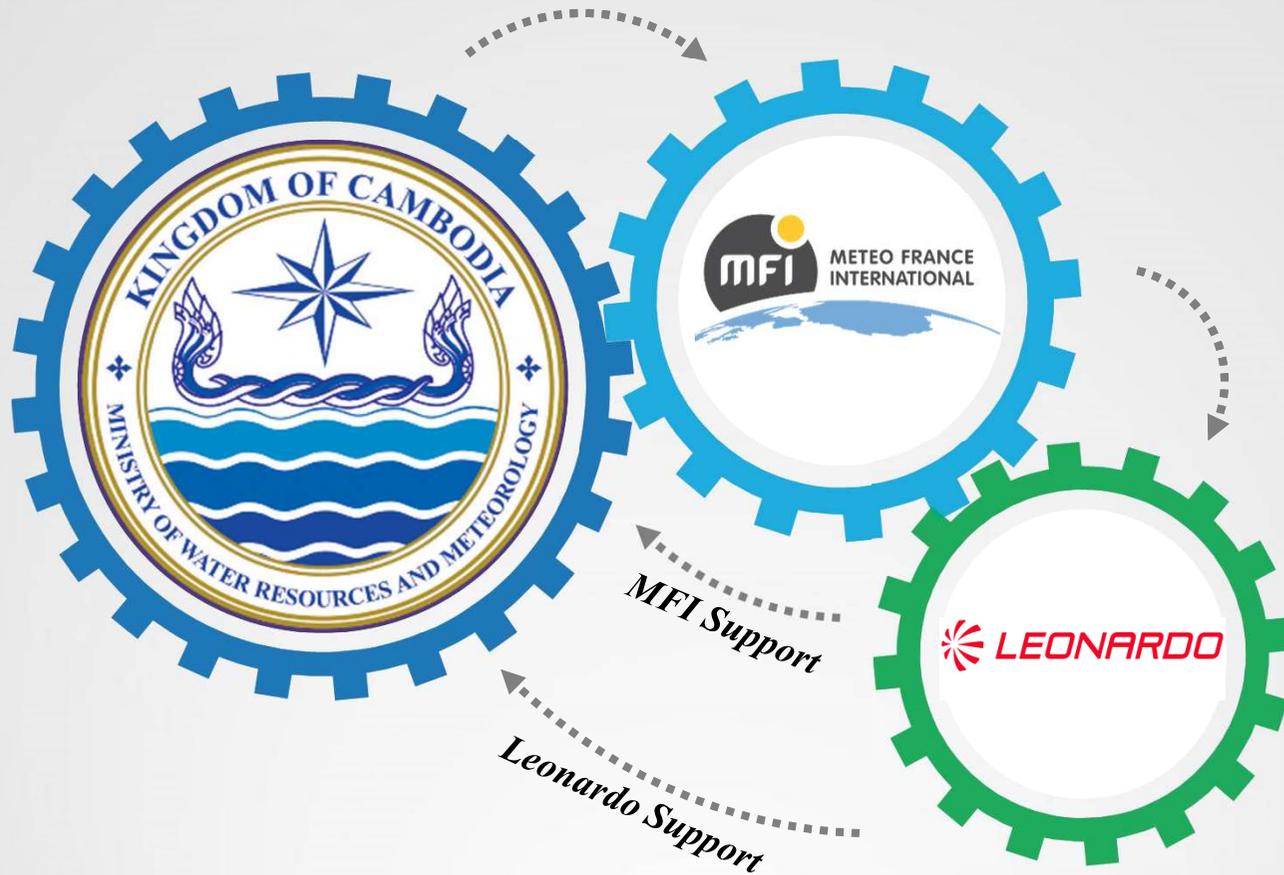




3. SPECIFICATION OF RADAR SYSTEM

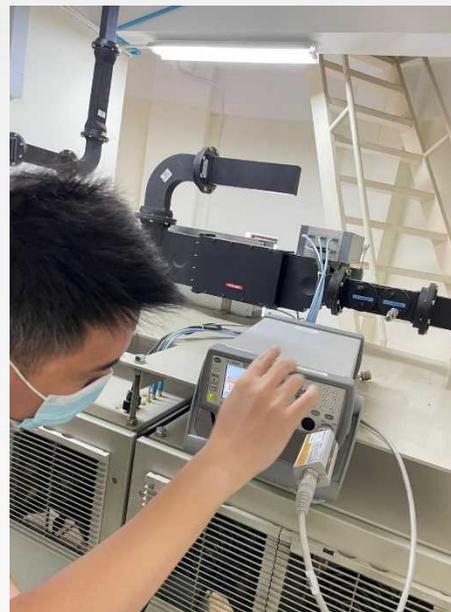
- ✓ Manufacturer : Selex ES (Leonardo)
- ✓ System : Meteor 600S
- ✓ Frequency : 2880 MHz (S-band)
- ✓ Pulse length : 0.83 μ s/1.67 μ s/3.3 μ s
- ✓ Polarization : Horizontal
- ✓ Reflector Diameter : 6.4 m
- ✓ Gain : 42.3 dB
- ✓ Transmitter : Magnetron
- ✓ Peak Power : >850 KW
- ✓ Radar Control : Ravis
- ✓ Processing software : Rainbow

4. OPERATION AND MAINTENANCE



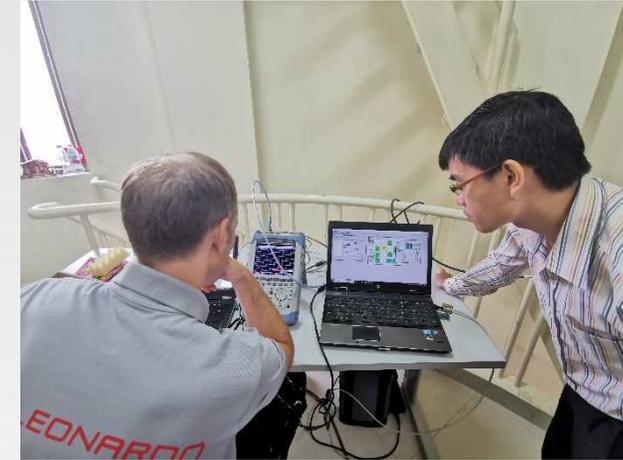
4. OPERATION AND MAINTENANCE (CONTINUE)

- ✓ The preventive maintenance is routinely performed annually.
- Yearly on-site maintenance is performed by radar engineer from radar supplier with DoM.



4. OPERATION AND MAINTENANCE (CONTINUE)

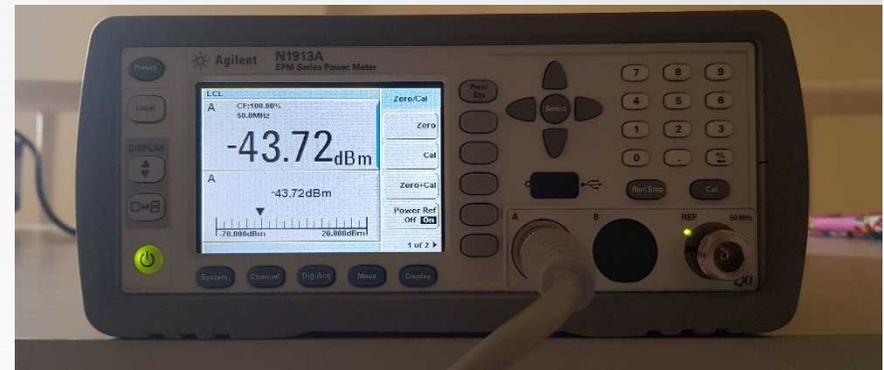
- ✓ The radar in-charge would carry out the corrective maintenance in case the radar is breakdown.
- The radar contractor would be informed if all the efforts have been done and still the system failed.
- Then remote support will be given by the radar engineer from the contractor



4. OPERATION AND MAINTENANCE (CONTINUE)



- ✓ The electronic testing equipment used for radar system calibration is calibrated annually at a standard calibration laboratory at overseas.



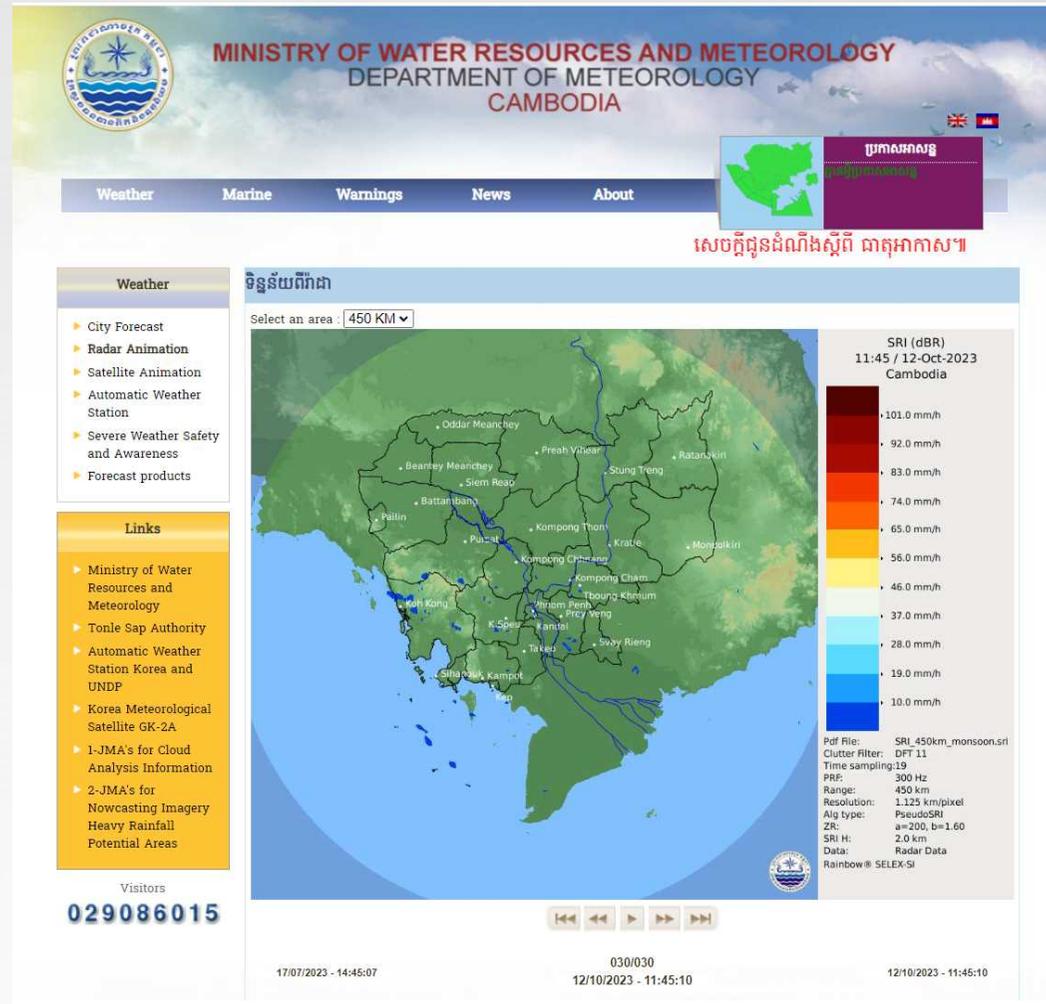
6. UTILIZATION

- ✓ Now forecasting
- ✓ Supply to the researchers in the department.
- ✓ Higher educational institution
- ✓ Relevant agencies and government institute:
 - Department of Hydrology and River Work (DHRW)
 - National Committee for Disaster Management (NCDM).



6. UTILIZATION (CONTINUE)

- ✓ Publish on public website of Department of Meteorology as Radar animation.



7. GAPS AND CHALLENGES

- ✓ At present time, our local radar engineers are incapable to handle the first line maintenance and servicing the radar system as expected even the transfer technology has been carried out.
- ✓ The validation of radar data against the rainfall data has not been done.
- ✓ The maintenance cost of the radar is increasing every year. This include the cost of purchasing and replacement of radar component.
 - These budget constraint factors will the affect of the radar operation.
- ✓ The professional officers of Department of Meteorology are constraints in the field of radar data analysis, interpretation, incapable to fully utilize the radar data available to assist them for their daily work.

7. GAPS AND CHALLENGES (CONTINUE)

✓ Beam Blocking



7. GAPS AND CHALLENGES (CONTINUE)

- ✓ Spare Parts Shortage



Main Power Supply (MPS)



Switchboard

8. FUTURE PLANS

- ✓ Relocate the radar station to a better site due to beam blocking from nearby high building.
- ✓ Upgrade the existing system to dual polarization radar to enhance accuracy.
- ✓ Seeking for more fund for supporting the radar maintenance and spare-parts.
- ✓ Collaboration: for capacity building and human resource development.
 - Radar Operation and Maintenance training
 - Radar Data Analysis Training
- ✓ Increase the number of radar stations to cover some areas that are not well covered by the existing radar.



**SPECIAL THANK FOR
YOUR ATTENTION**
