Training Activities of Indonesia RTC

A Way Forward

for Establishing

Indonesia VLab Center of Excellence

DR. Nelly Florida Riama
Director of Indonesia RTC/ BMKG Education and Training Center
The BMKG Education and Training Center was recognized as WMO RTC for RA-V in 2012. In 2020, the center also hosted the Ocean Teacher Global Academy (OTGA) as the Specialized Training Center.

Around 40 courses is conducted per year. E-learning had been implemented since 2014 and became more intensive after pandemic in early 2020.

Actively participating in global capacity development programs and initiatives (i.e. WMO - CDP, CALMet, WMO Training the Trainers, WMO VLab), BMKG has close cooperation with other institutions such as BoM-Australia, CMA-China, JMA-Japan, KMA-Korea, NOAA both in multilateral and Bilateral mechanism also as member of global communities.
# Capacity Development on Satellite in Indonesia

## Strengths
- Hosting WMO RTC & OTGA-STC
- Supporting training & learning facilities
- Experiences in conducting F2F & Online Learning, Module Development, Online Group Discussion, Project Based Learning, Case-Based Learning,
- Experiences in conducting international events ie AOMSUC event
- High Level management Support
- Demographic bonus

## Weaknesses
- Insufficient observation network
- Limited budget
- Lack of satellite experts
- Limited number of satellite trainers
- Insufficient opportunity of training for the trainers
- Limited access of satellite data
- Less variety of satellite products
- Language barrier

## Opportunities
- Large area of Indonesia, with complexity and the dynamic of the Atmospheric-Oceanic and Geological Conditions
- Growing demands of customer based satellite product
- Partnerships with satellite operators (ie CMA, JMA, KMA, NOAA) and CoE (BoM)
- Involvement in international network and communities (i.e AOMSUC, WMO, CALMet, ASCMG)

## Threats
- VUCA
- Rapid development of satellite related Science and Technology (i.e. data, methodology, processing and analysis)
- Increasing number of geohydrometeorological natural disasters
BMKG Training Center Facilities

- Accommodation for 250 to 300 trainees
- Smart Classrooms
- Computer Lab
- Meteorological Station
- Auditorium for 400 persons
- Theatre
- Sport Facilities (Swimming pool, Jogging track, Gym)
Face to Face Activities
Online Activities

BMKG - Online Group Discussion

90 minutes online session, twice a month
170++ sessions since 2014, more than 24000 participants
International Training on NWP WMO - BMKG 2nd Phase, Citeko, Jakarta, Sept - Oct 2022

International Training on NWP WMO - BMKG 1st Phase, 20 May - 2 July 2021, Online

IBF for ASEAN Countries, 5 - 17 April 2021, online

IBF for RA-V Member Countries, 7 - 9 December 2020, online

AOMSUC 2018: Training for Trainer on RGB Technique for Meteorological application, Citeko. Indonesia RTC presented the instructional training design titled "Challenges of Meteorological Satellite Utilization in Determining Indonesia Local Weather Characteristic."

AOMSUC 2018: The Joint Meeting of RA II WIGOS Project and RA V Task Team on Satellite Utilisation (TT-SU) for RA II and RA V NMHSs, Jakarta, 11 October 2018

Satellite Interpretation Training, in collaboration with BoM Australia, Citeko, 12 - 17 June 2013

WMO Regional Training Seminar for National Instructors of RA II and RA V, 26 February - 07 March 2013

Online Marine Forecasting Course, in Collaboration with Eumettrain, 2013

Radar and Satellite Interpretation Training, in collaboration with Eumetsat, 2012

WMO Symposium on Education and Training, October 2010
• Member of EC Capacity Development Panel
• Member of National Committee for IOPAC
• National Focal Point for GOOS
• Co-Chair CALMet Conference Working Group
• Member of Technical Support Officer CALMet Working Group
• Member WMO Expert Team on Education, Training, and Competency on Met Aviation (ET-ETC)
• WMO Reviewer Team on BIP-MT
• International Collaboration (RFG BoM, Trainings, Online Resources, CM4SH project, UNEP Project)
CM4SH Project Phase II

- Conceptual Model For Southern Hemisphere (BMKG – BoM – WMO VLab – Eumetsat)
- Developing online module on Northerly Cold Surge (2014 – 2015)

Participation in Australian Vlab CoE RFG
Since 2013

Participation in Vlab Management Meetings

St. Petersburg, Rusia, 2014
Darmstadt, Germany, 2022

Pictures: Bodo Zeschke, Roro Yuliana
WMO Regional Centers and VLab CoE in RA-V
BMKG PARTICIPATION IN WMO VLAB RELATED MEETINGS

1. Online VLab Focal Point Meeting
   12 May & 13 May 2022

2. Meeting with WMO Education and Training Office
   Geneva, 22 June 2022

3. Benchmarking to BoM - Australia VLab CoE
   online, 24 June 2022

4. Meeting with WMO Space Program
   Geneva, 23 June 2022

5. 10th VLMG Meeting
   Darmstadt, 26 - 30 September 2022

6. VLMG Online "Mirror" Meetings
   29 June & 1 July 2022
China Meteorological Administration (CMA) supports for G20

- Providing one-minute satellite data
- Based on area of interest
- Assisted BMKG to provide nowcasting in Bali Island, especially for cloud seeding.

The link of metaFY:

Special thanks:
for Mr. XIAN Di and CMA Team

Ground Global Flood Website by NOAA Satellite

- Training initiative on Ground Global Flood (PIC Mr. William Straka)
- The product will support Impact-based Forecasting (IBF) and Impact-based Warning Forecasting (IBWF)
- Collaboration to translate the quick guide to Bahasa Indonesia.
Summary

- Having facilities and experiences in training, BMKG as Indonesia WMO RTC commits to contribute for global capacity development programs and activities, especially for RA-V and RA-II Member Countries.
- Appreciation addressed to JMA, BoM, CMA, KMA, NOAA, Eumetsat, WMO, and other partners for assistance and continuous support.
- Becoming a new WMO-CGMS VLab Centre of Excellence will help BMKG to extend contribution to satellite capacity development in the region, with support from Satellite Operators and Australian VLab Centre of Excellence.
- Partnerships, collaboration and cooperation with Satellite Operators, Vlab Centres of Excellence and other satellite-related organizations and communities are welcome.
Thank You