



**BMKG**  
Corporate  
University



WORLD  
METEOROLOGICAL  
ORGANIZATION

Regional Training Centre - Indonesia



United Nations  
Educational, Scientific and  
Cultural Organization



Intergovernmental  
Oceanographic  
Commission



**OceanTeacher**  
GLOBAL ACADEMY

Specialized Training Centre - Indonesia

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 12th Asia Oceania Meteorological Satellite  
Users' Conference (AOMSUC-12)





# TABLE OF CONTENTS

- **Profile**
- **Facilities**
- **Programs and Activities**
- **Summary**





# PROFILE



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



## 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
- Demograpgraphical Bonus

## 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)

S

W

## 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

## THREATS

- VUCA
- Rapid development of satellite related Science and Techology (i.e. data, methodology, processing and analysis)
- Increasing number of geohydrometeorological natural disasters

O

T





# 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 )



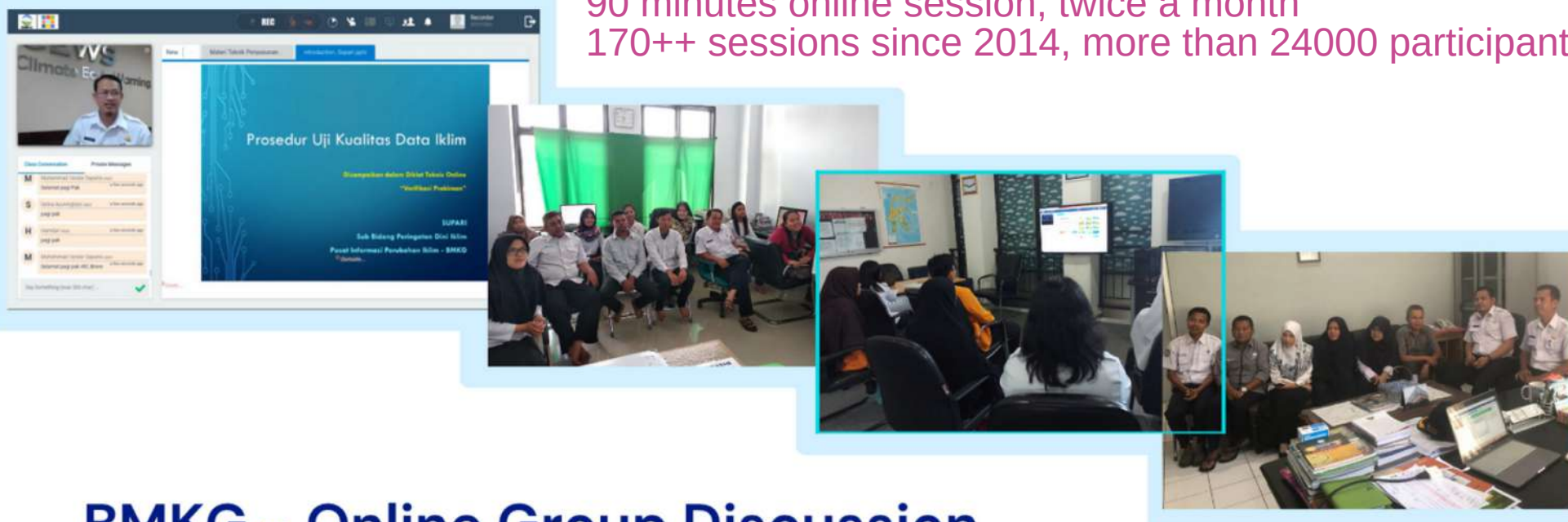


# Face to Face Activities






90 minutes online session, twice a month  
170++ sessions since 2014, more than 24000 participants




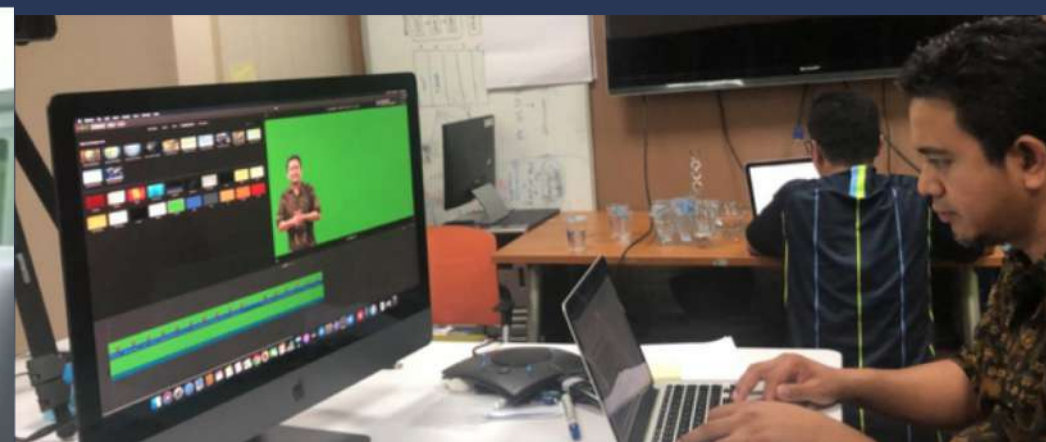
**BMKG – Online Group Discussion**

**Asynchronous Sessions**  
**LMSBMKG** [pusdiklat.bmkg.go.id](http://pusdiklat.bmkg.go.id)



**Synchronous Sessions**  
**zoom**

The Audiences





- **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 Juni 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 Eumetrain, 2013
- **Radar and Satellite Interpretation Training**, in collaboration with Eumetsat, 2012
- **WMO Symposium on Education and Training**, October 2010



# International Involvement



- 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
- Indonesia Delegations (i.e. CALMet Conference 2011/2013/2015/2017/2019/2021, WMO Global Campus 2020, EC CDP 2020 - 2022, SYMet 2010/2013/2017/2021, VLMG VII-2014/ X-2022)
- International Collaboration (RFG BoM, Trainings, Online Resources, CM4SH project, UNEP Project)

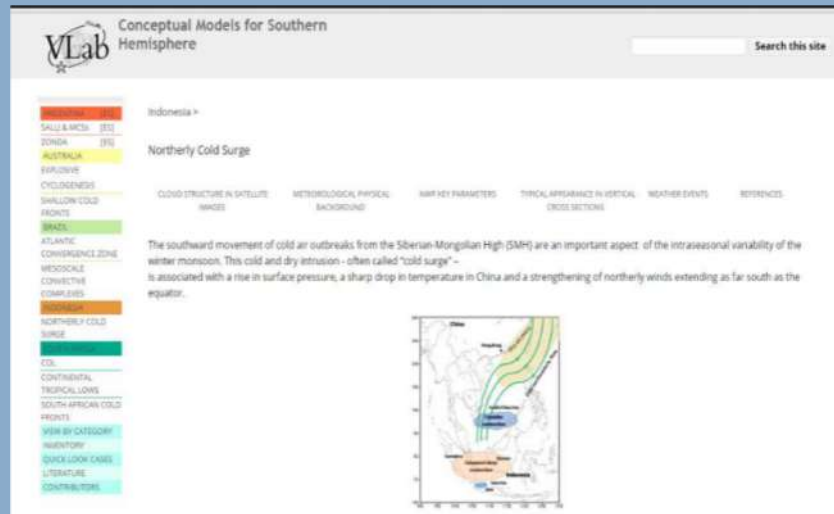
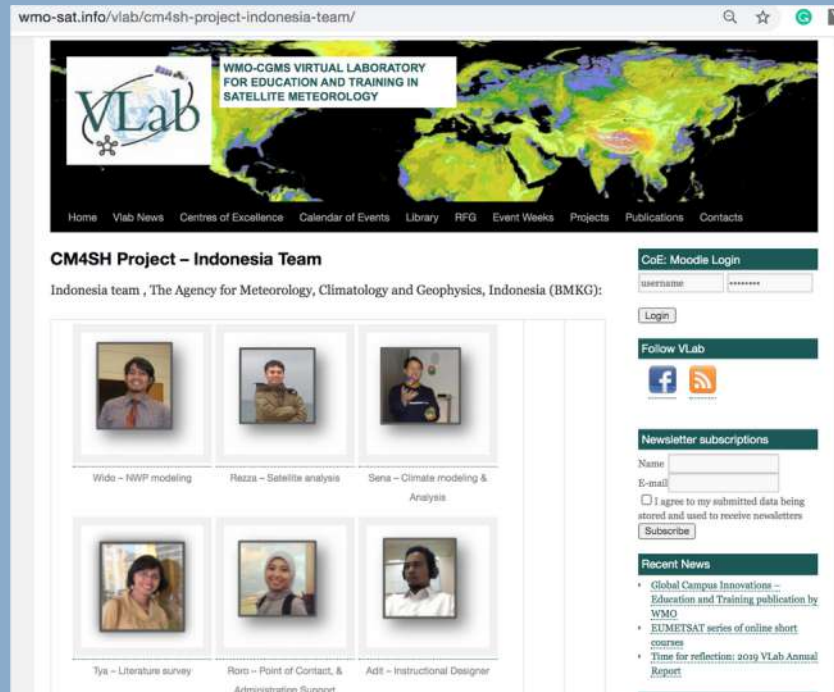
## OUR INTERNATIONAL PARTNERS

- Resources Sharing
- Lecturers/Trainers
- Issues Updates
- Events
- Community of Practice
- etc.





## CM4SH Project Phase II



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

## Participation in Australian Vlab CoE RFG

Since 2013



Pictures: Bodo Zeschke, Roro Yuliana

## Participation in Vlab Management Meetings



St. Petersburg, Rusia, 2014



Darmstadt, Germany, 2022



# WMO Regional Centers and VLab CoE in RA-V





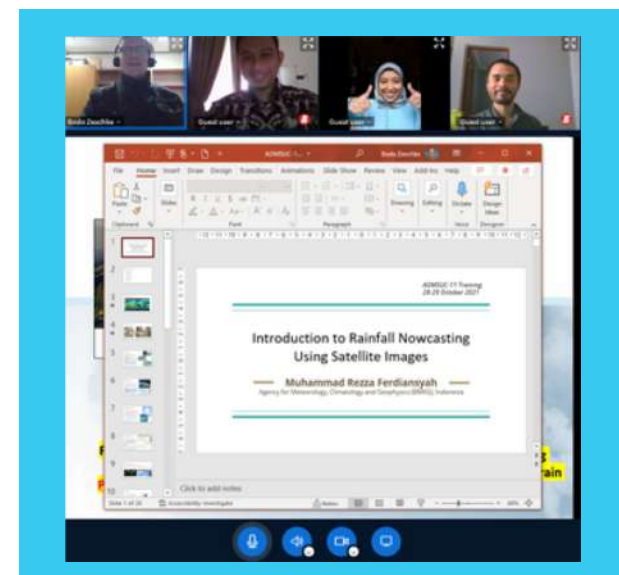


# BMKG PARTICIPATION IN WMO VLAB RELATED MEETINGS

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



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



**10th VLMG Meeting**  
Darmstadt, 26 - 30 September 2022



1

2

3

4

5

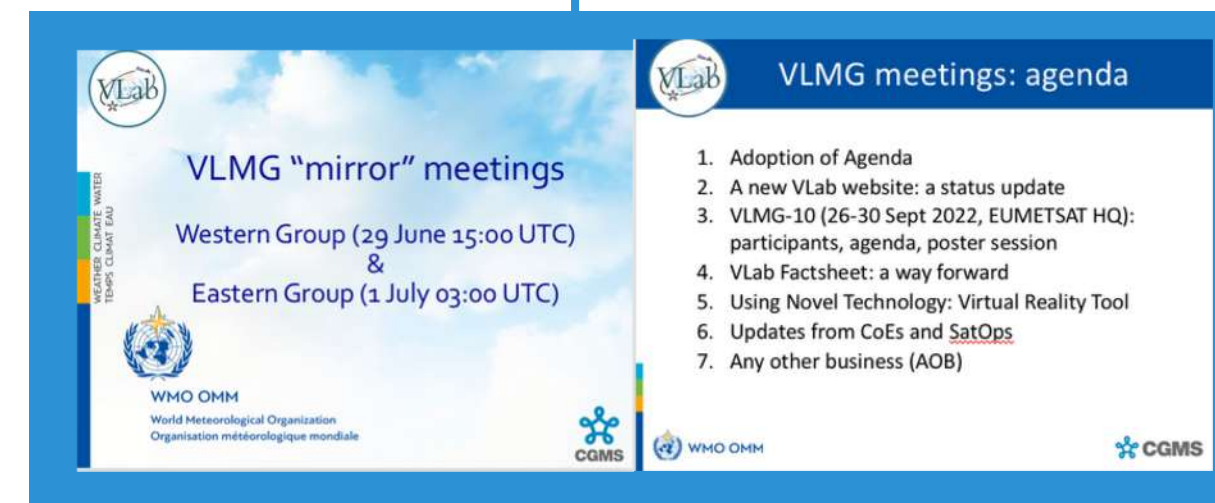
6



**Online VLab Focal Point Meeting**  
12 May & 13 May 2022



Meeting with **WMO Space Program**  
Geneva, 23 June 2022



**VLMG Online "Mirror" Meetings**  
29 June & 1 July 2022



## China Meteorological Administration (CMA) supports for G20

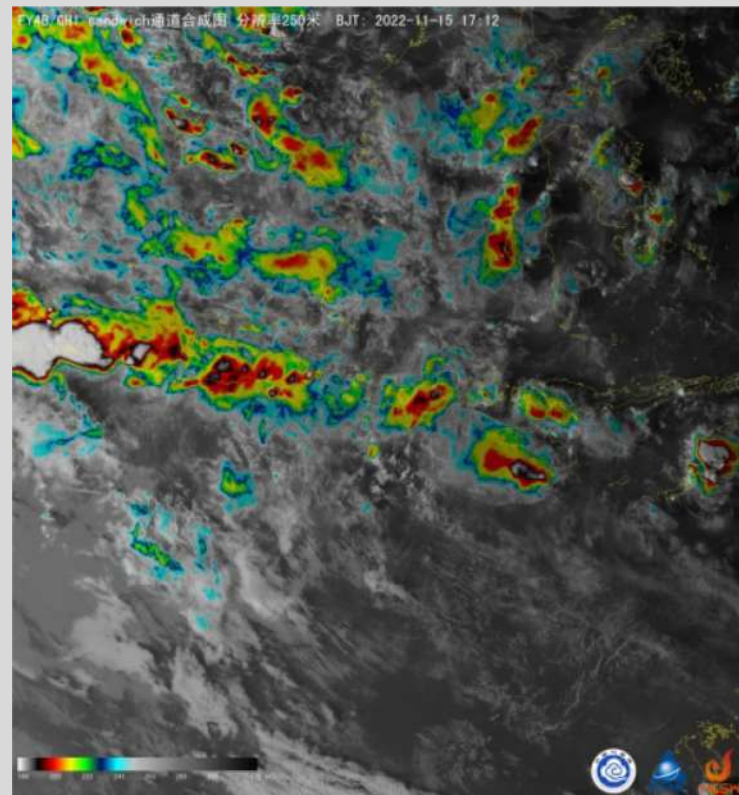
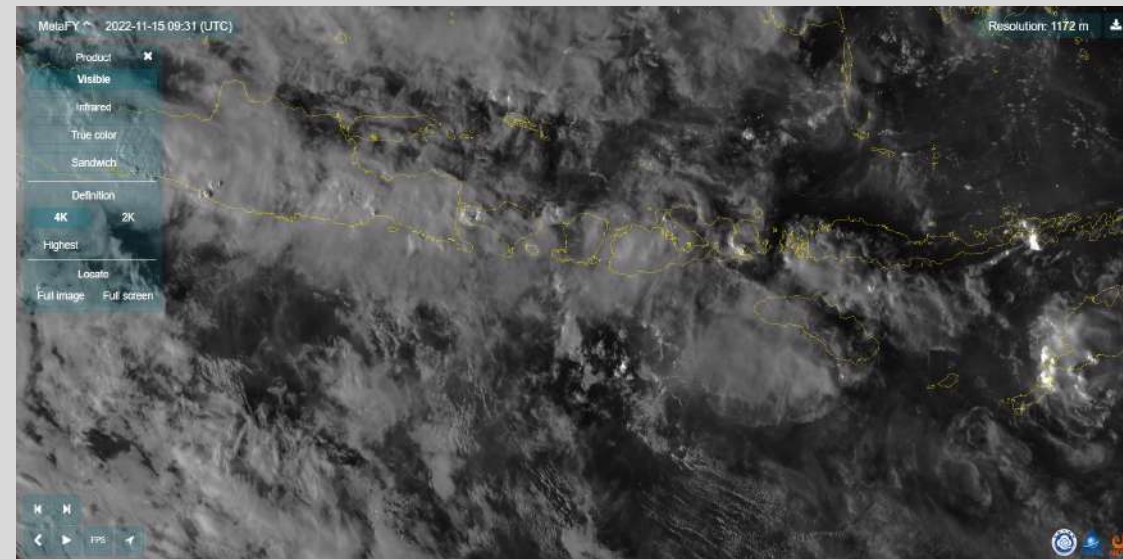
- Providing one-minute satellite data
- Based on area of interest
- Assisted BMKG to provide nowcasting in Bali Island, especially for cloud seeding.

The link of metaFY:

<http://data.nsmc.org.cn/metafy/en/>

Special thanks:  
for Mr. XIAN Di and CMA Team

Products: Visible | Infrared | True Color | Sandwich



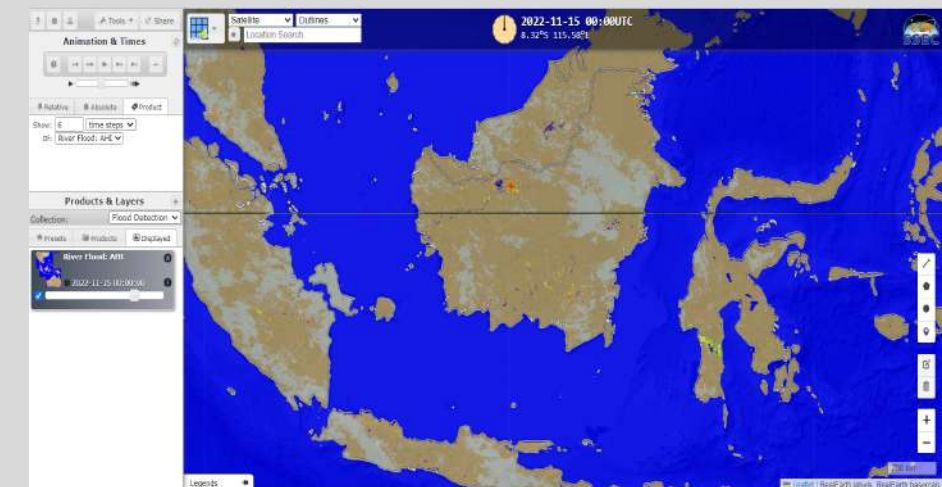
## Ground Global Flood Website by NOAA Satellite

### NOAA Global Flood Product Quick Guide



#### Quick Guide Overview

- The intention of this quick guide is to give a brief overview of the VIIRS, ABI and AHI Flood Mapping products for emergency response stakeholders and how to access and use them.
- This is **not** a technical document. Users who wish to have the specific scientific information, such as which bands are used, can refer to the last slide at the end of this presentation or contact the developers (information listed on slide 13).



- 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





**BMKG**  
Corporate  
University



WORLD  
METEOROLOGICAL  
ORGANIZATION

Regional Training Centre - Indonesia



United Nations  
Educational, Scientific and  
Cultural Organization



Intergovernmental  
Oceanographic  
Commission



**OceanTeacher**  
GLOBAL ACADEMY

Specialized Training Centre - Indonesia

*Thank You*