

# Years of the Maritime Continent (YMC)

## < Purpose >

Improving our understanding and prediction skill of local multi-scale variability of the MC weather-climate systems and its global impact.

## < Key >

YMC provides an opportunity for coordination among participants especially with MC countries

## < Period >

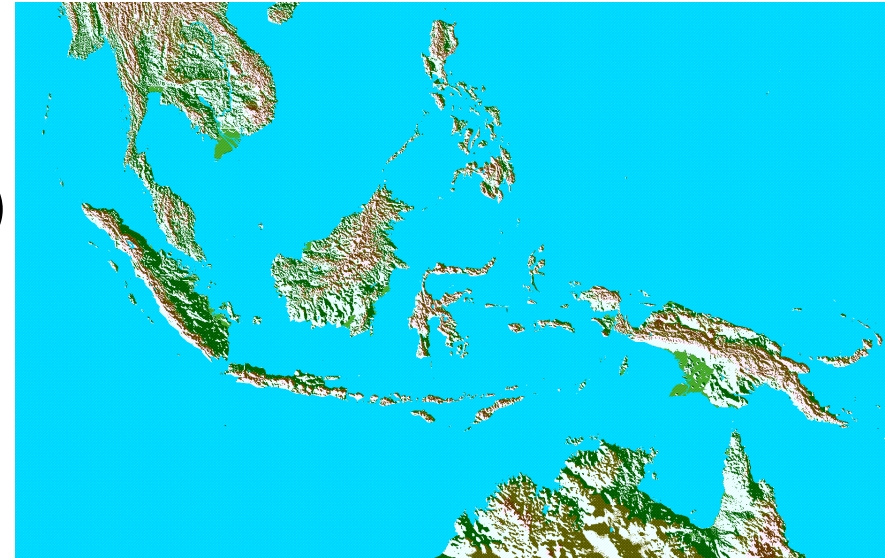
July 2017 ~ July 2019

## < Key Five Science Themes >

- 1) Atmospheric Convection (DC, MJO, etc.)
- 2) Ocean and Air-sea interaction
- 3) Stratosphere-Troposphere Interaction
- 4) Aerosols
- 5) Prediction

## < Five Main Activities >

- 1) Data sharing
- 2) Field Campaign
- 3) Modeling
- 4) Prediction & Applications
- 5) Outreaching & Capacity Building

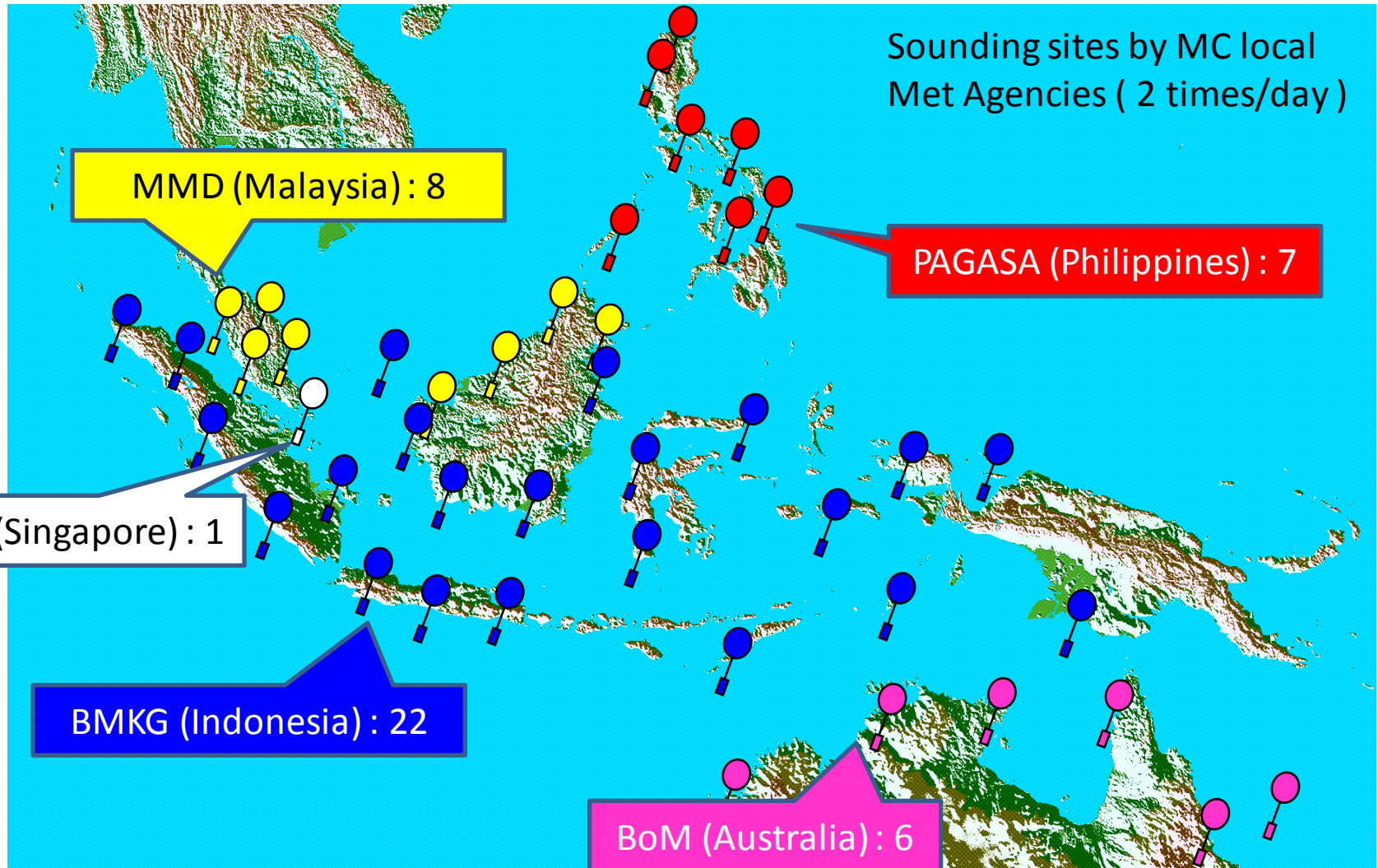


For more information;

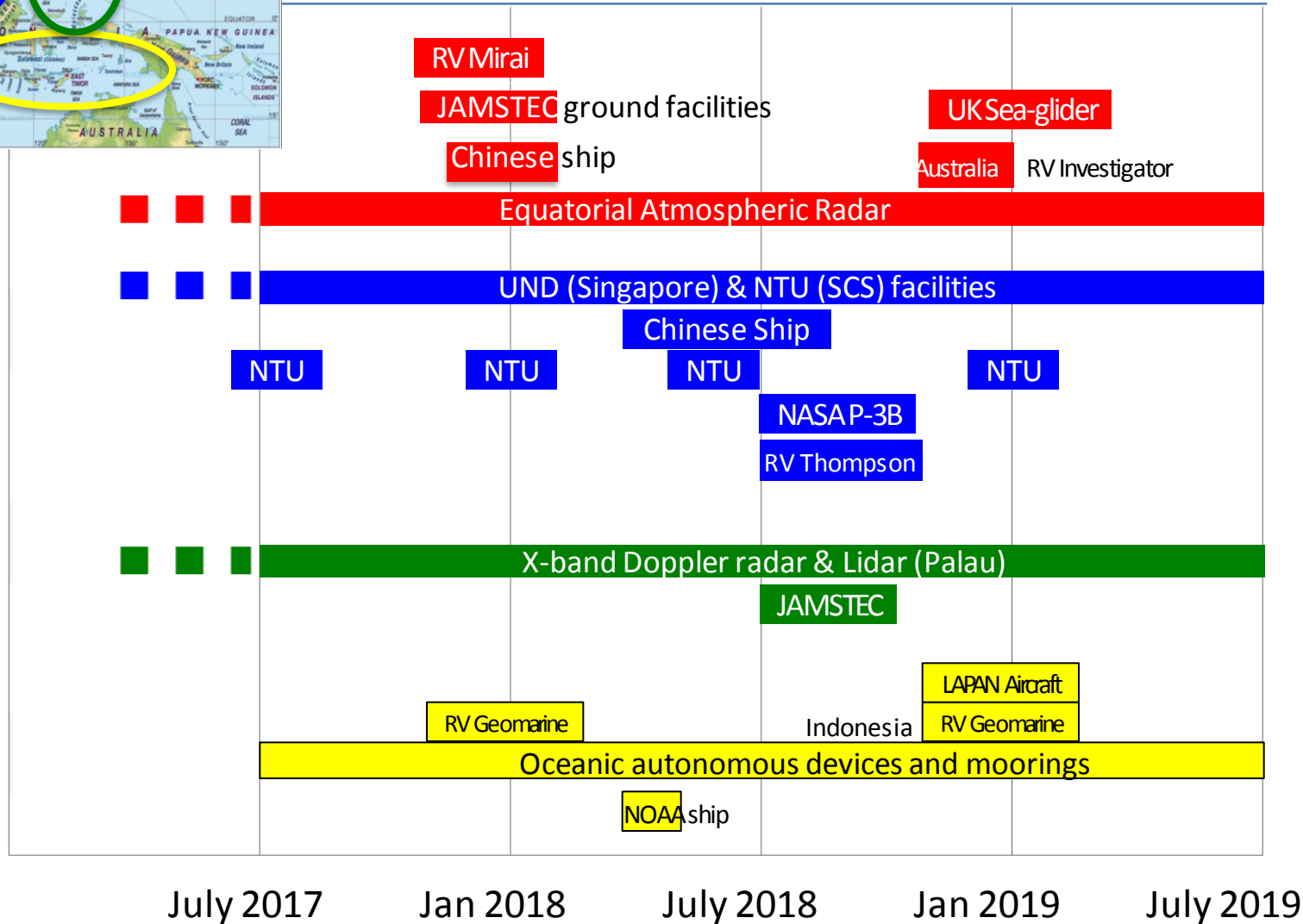
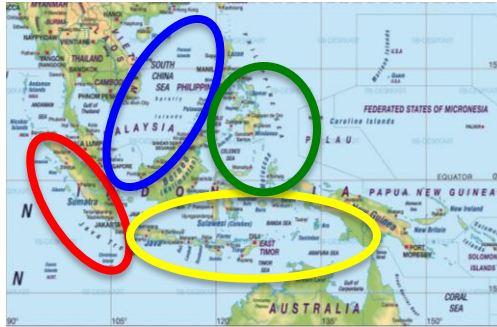
<http://www.jamstec.go.jp/ymc/>

# Synergy among various factors

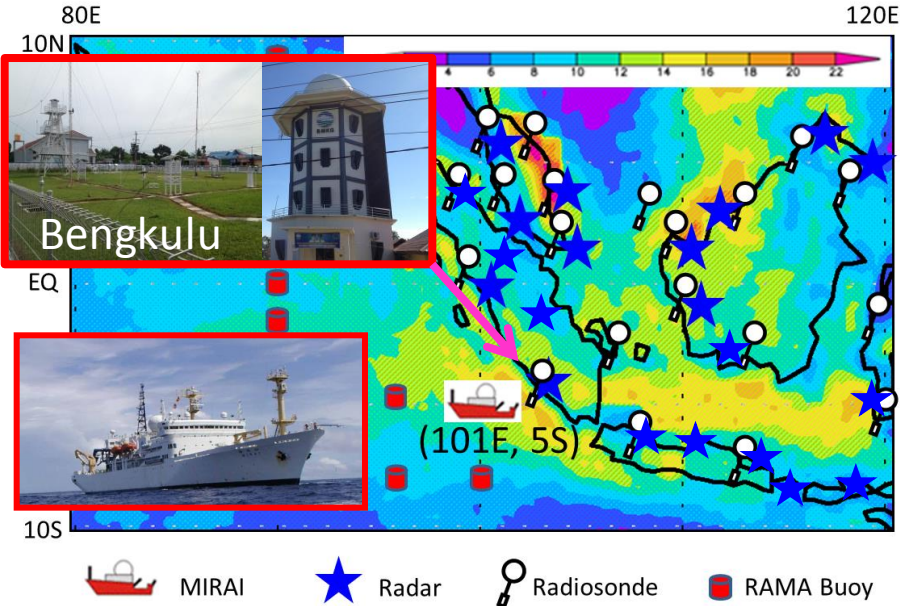
- 1) Long-term wide-areal Observations & Intensive Observations
- 2) MC local agencies & Research Institutes / Universities
- 3) Observations & Models
- 4) Models & Models



# Provisional Deployment Timeline



# <Intensive Observation – Ex. 1> MJO & Diurnal Cycle Rain Study, Nov - Dec 2017



Target: MJO vs. Diurnal cycle rain near the coast line

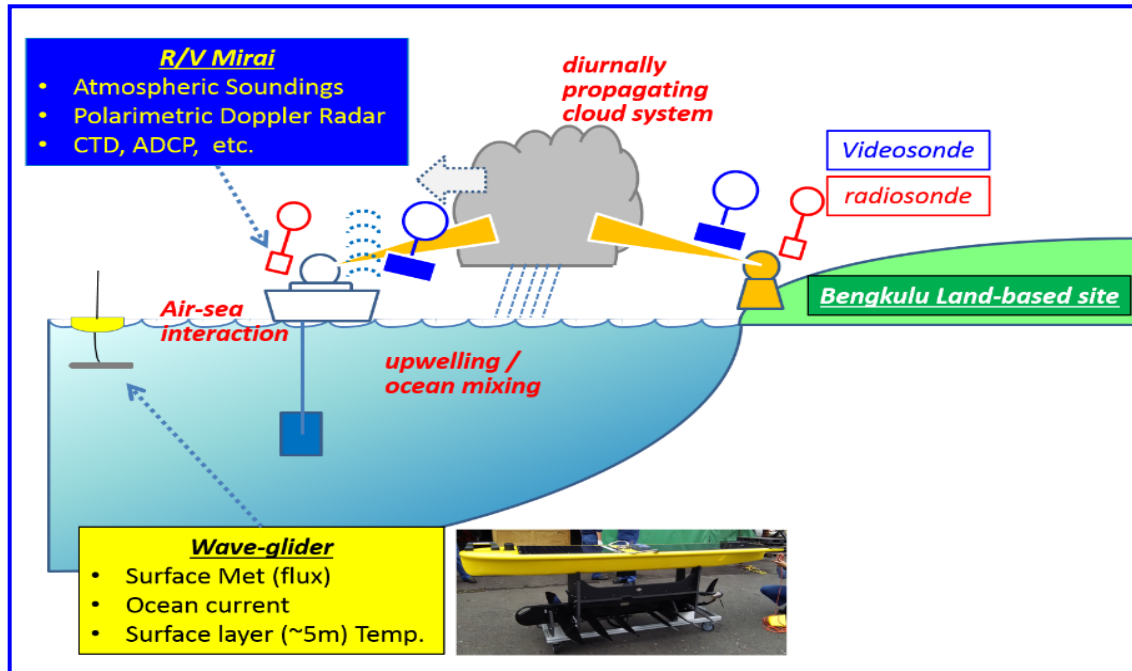
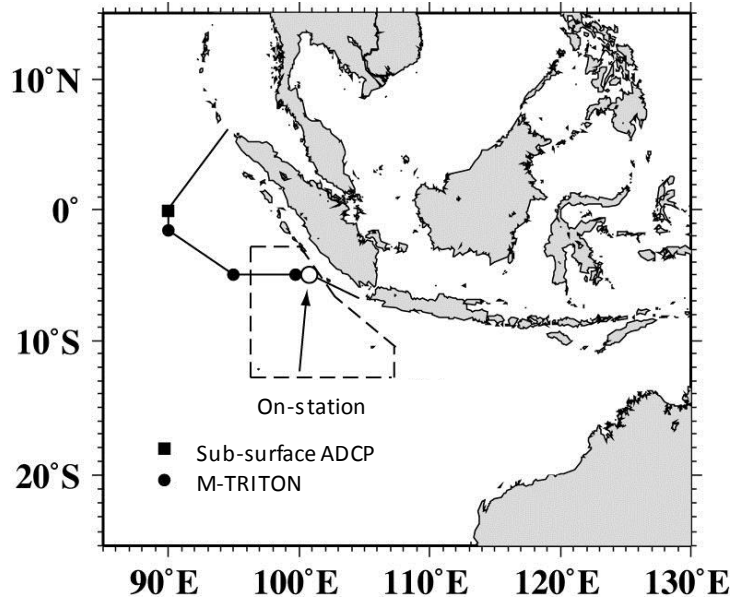
Period: Nov – Dec 2017 (Land-based)  
Dec 2017 (Ship)

Obs: Radars, Radiosonde (8/day), LIDAR, SMet, CTD, ADCP, Wave-glider, etc.

Participants:

Japan (JAMSTEC, Kyoto U, U Tokyo, U Toyama, Yamaguchi U, Kochi U)  
Indonesia (BMKG, BPPT, LAPAN, ITB, IPB, U Bengkulu, etc.)

Remarks: During the IOP, real-time forecasting is performed using NICAM.



# <Intensive Observation – Ex. 2> Boreal Summer Monsoon Study in 2018

Main targets : Monsoon & Northward Propagating ISV  
Periods: May – June 2018 (SCSTIMX)  
July – Aug 2018 (Others)

Taiwanese Project  
“SCSTIMX”  
Aircraft, Ship, &  
Land-based Obs.



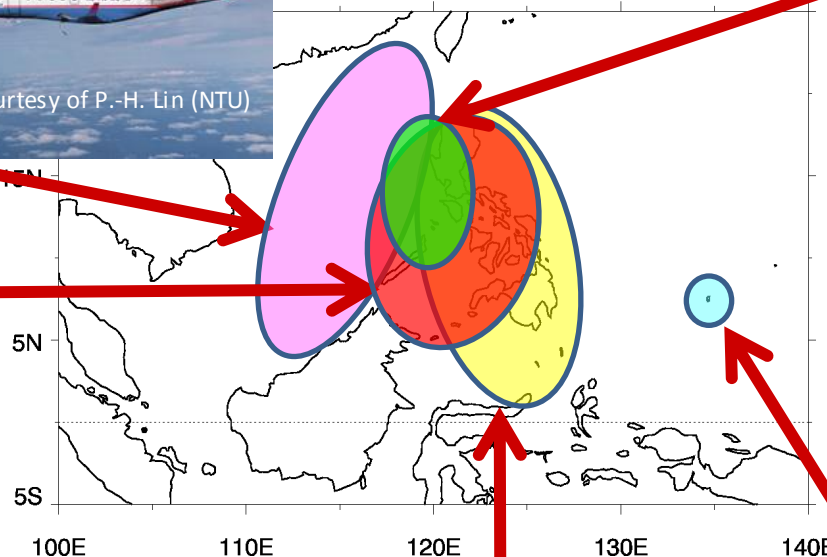
ONR’s Project “PISTON”  
R/V Tommy Thompson



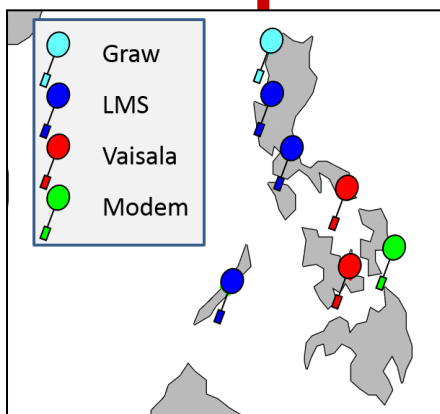
Doppler Radar,  
Radiosonde,  
Surface Met,  
CTD, ADCP,  
Turbulent, etc.

<http://www.ocean.washington.edu/>

NASA’s Project  
“CAMP2Ex”  
Aircraft (P-3) Obs  
for Aerosol study.



Philippines + Japan + France  
Enhanced Radiosonde, AWS,  
Doppler Radar, Aeroclipper, etc.



Palau Site by JAMSTEC  
X-band Doppler radar,  
LIDAR, AWS, etc.

## Summary of Updates (since Feb 2016)

- 1) NOAA has announced their formal participation in the YMC. Now they call for proposals for observations (mainly ship-based) and numerical modeling to US colleagues. R/V Ron Brown cruise is expected to be taken in April 2018 from Darwin to Guam.
- 2) US Office of Naval Research and NASA have started a coordination of collaborative research between their own project PISTON (ONR) and CAMP2Ex (NASA), both study the Philippines Sea region. Universities in the Philippines are involved in those projects. They also coordinate with other project such as SCSTIMX (South China Sea Two-Island Monsoon Experiment) by Taiwanese group as well as the YMC enhanced observations in Philippines.
- 3) Australian colleagues have changed their plan (from off Java to off Sumatra in Nov – Dec 2018) and submitted a new proposal for the R/V Investigator cruise. (Not funded yet)
- 4) MJO Task Force and S2S Joint Initiative for the Maritime Continent have been discussing how they interact with the field campaigns. (Both formally have endorsed the YMC activity.)
- 5) ECMWF has agreed to produce hi-res reanalysis for 2017-2019 (2-yr) period under the collaboration with 2 campaigns; YMC and YOPP (Year of Polar Prediction). Currently, YOPP leads the discussion (they have had a meeting at ECMWF in the week of Sept 5, the current status of the YMC was introduced there using the same slides with this).
- 6) YMC mailing list has been created for general communication among YMC community since this August. For more details, please contact to [ymc-joffice@jamstec.go.jp](mailto:ymc-joffice@jamstec.go.jp)

## Extra Slides

# Structure

## < Science Steering Committee >

Co-chairs: Chidong Zhang (University of Miami)

Kunio Yoneyama (JAMSTEC)

Members: Edvin Aldrian (BPPT, Indonesia)

Olivia Cabrera (University of the

Philippines)

Andreas Fink (KIT, Germany)

Hans Huang (Meteorological Service

Singapore)

Adiran Matthews (University of East

Anglia)

Chung-Hsiung Sui (National Taiwan

University)

Fredolin Tangang (National University of Malaysia)

Matthew Wheeler (BoM, Australia)

Weidong Yu (First Institute

of Oceanography, China)

## < Implementing Advisory Board >

2 persons from each MC Countries

(So far, only Indonesia and Australia have nominated their members)



# Expected Participants as of August 2016

## MC Countries

### Indonesia

- Agency for Meteorology, Climatology & Geophysics (BMKG)
- Agency for Assessment & Application of Technology (BPPT)
- Agency for National Aeronautics and Space (LAPAN)
- Agency for Marine and Fisheries Research (KKP)
- Indonesian Institute of Sciences (LIPI)
- Indonesian Integrated Creative Agency (BIG)
- Institute of Technology, Bandung (ITB)
- Bogor Agricultural University (IPB)

### Malaysia

- MetMalaysia
- National University of Malaysia

### Palau

- Koror Weather Service

### Philippines

- Philippine Atmospheric, Geophysical and Astronomical Administration (PAGASA)
- Manila Observatory / Ateneo de Manila University
- University of the Philippines

### Singapore

- Meteorological Service of Singapore
- SIM University
- National University of Singapore
- Nanyang Technological University

### Vietnam

- National Hydro-Meteorological Service

### Australia

- Bureau of Meteorology
- CSIRO
- Universities (Monash, Melbourne, NSW, etc.)

## Other Asia / Oceania

- China Meteorological Administration
- Chinese Academy of Sciences
- First Institute of Oceanography
- South China Sea Institute of Oceanology
- NARLabs/TORI
- NTU
- JAMSTEC
- Japanese Universities (Fukuoka, Hokkaido, Kobe, Kyoto, Nagoya, Tokyo, Toyama, Yamaguchi)
- Korean Universities (Seoul, Yonsei, Pusan)
- University of Auckland

## North America

- Naval Research Laboratory
- NASA
- NOAA Labs (ESRL, PMEL)
- NCAR
- Scripps Institution of Oceanography
- American Universities (Colorado State, Columbia, Hawaii/IPRC, Miami, Notre Dame, Texas A&M, Washington, etc.)
- University of Victoria

## Europe

- UK Met Office
- UK Universities (East Anglia, Leeds, Reading, etc.)
- Karlsruhe Institute of Technology
- Alfred Wegener Institut
- LMD
- LOCEAN
- LATMOS
- CNES
- Institute of Atmospheric Sciences and Climate
- Swiss Federal Institute of Technology
- ECMWF

**Over 70 institutes/universities  
from 19 countries and regions**