

# Nine essentials of Chaps. 4 – 6 and observation campaigns

## Zonal and meridional circulations

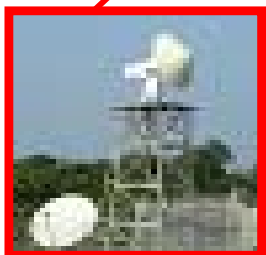
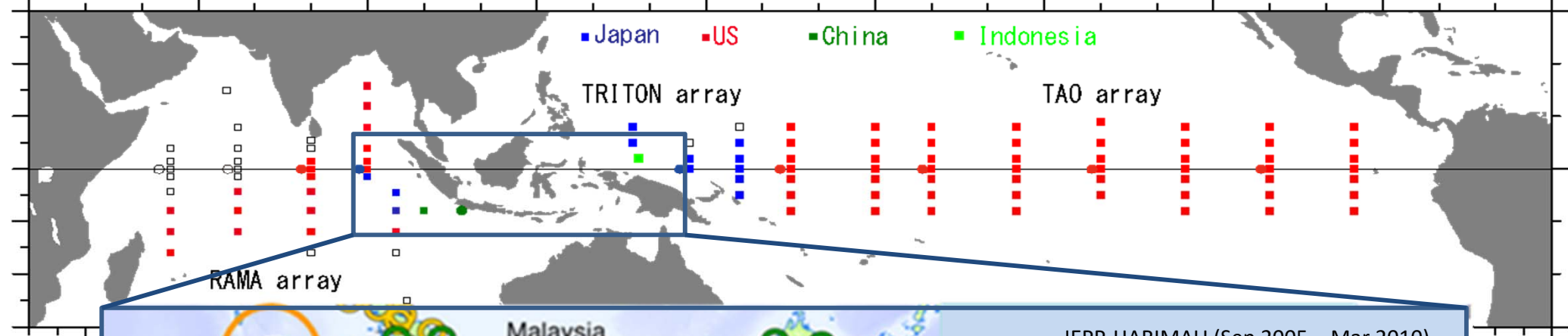
- Annual-mean equatorial insolation maximum + friction + subtropical Coriolis → **Hadley circulation**, easterly "trade wind", highest coldest tropopause
- Annual-meridional insolation cycle → **monsoon**, rainy/dry seasons

## Equatorial waves

- Gravity, planetary (Rossby) and equatorial (Kelvin and Rossby-gravity) waves
- Equatorial thermal forcing → **Matsuno-Gill pattern** (Kelvin and Rossby waves)
- Ocean-atmosphere interaction → **El Nino-southern oscillation (ENSO)**, etc.
- Wave-mean flow interaction → stratospheric quasi-biennial oscillation (QBO), ...

## Cloud convections

- “Conditional” instability → convection-cloud coupling, any triggers
- Diurnal insolation cycle → sea-land breeze circulation, **coastal rainfall peak**
- Conditional instability of the second kind (CISK) interacting equatorial waves → equatorial **Madden-Julian oscillation (MJO)**, subtropical typhoons etc.



XDR & CDR



Transportable X-MPR



Research institute (MCCOE)



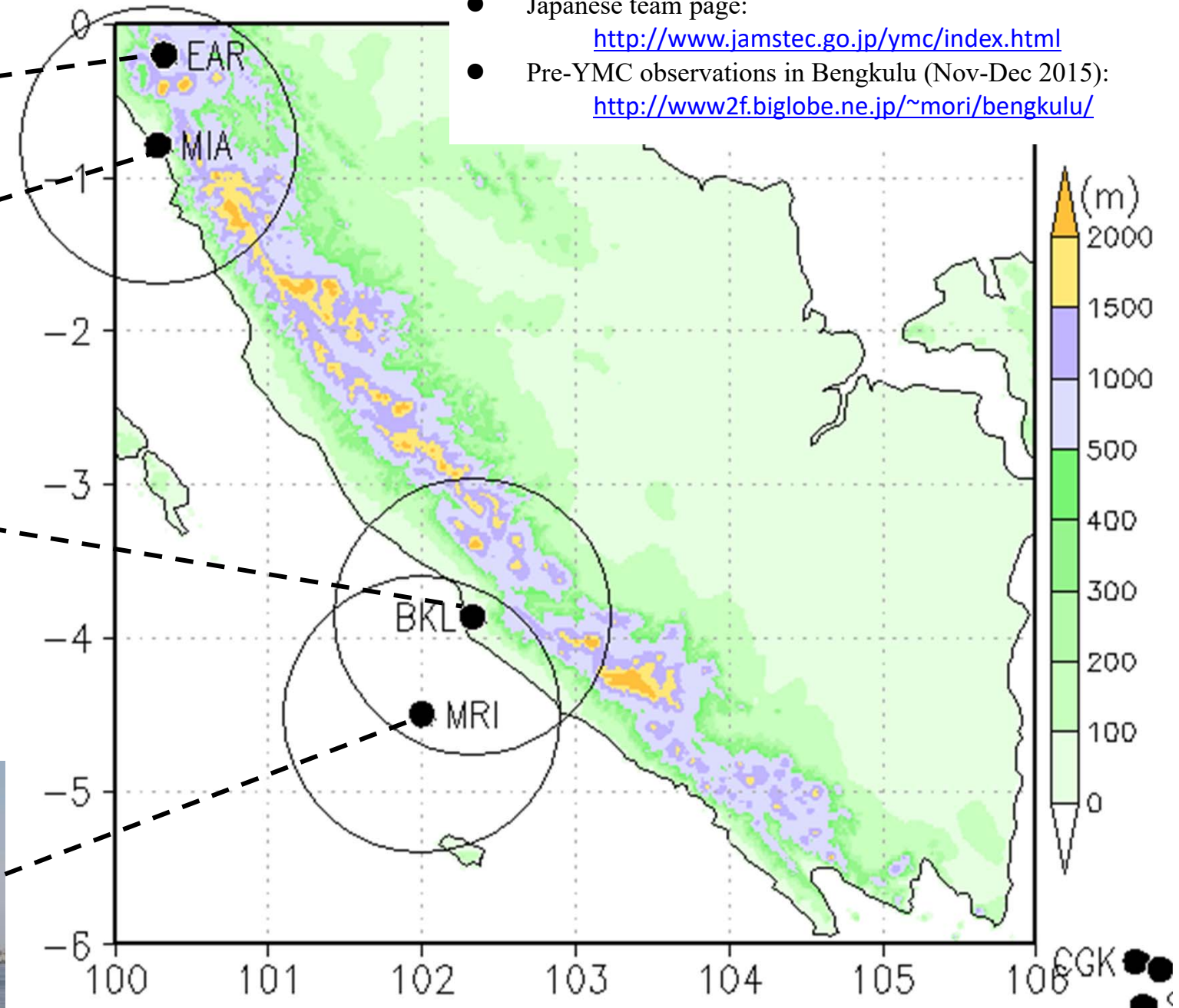
UHF-WPRs



InaTRITON buoy

# Pre-YMC (Nov-Dec 2015) / YMC (Nov 2017-Jan 2018) Campaign Obs

- Official homepage of YMC (July 2017 – July 2019)  
<http://www.bmkg.go.id/ymc/>
- Japanese team page:  
<http://www.jamstec.go.jp/ymc/index.html>
- Pre-YMC observations in Bengkulu (Nov-Dec 2015):  
<http://www2f.biglobe.ne.jp/~mori/bengkulu/>



# Years of the Maritime Continent (YMC)

<http://www.bmkg.go.id/YMC/>

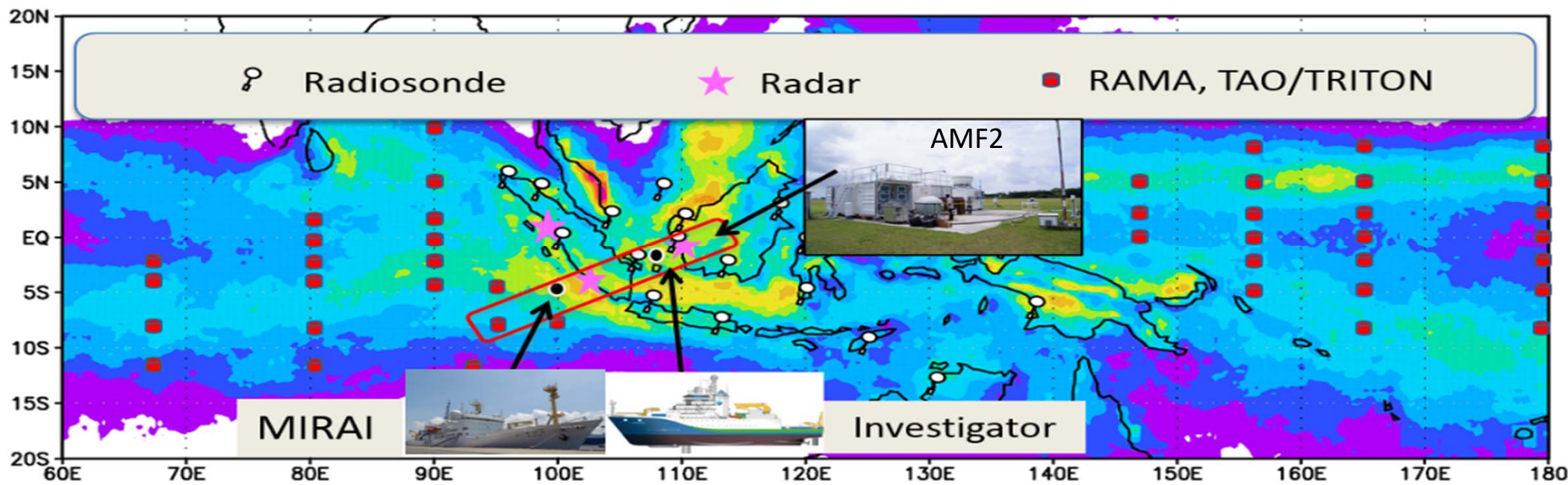
## [ Observations ]

- 1) Ships:
  - R/V Mirai (JAMSTEC, Japan),
  - R/V Investigator (CSIRO, Australia)
- 2) Land sites
  - Bengkulu
  - Kalimantan, etc. (not fixed)
- 3) Enhanced Radiosonde sounding
  - BMKG, Indonesia
  - Malaysia, Philippines, etc.

## [ Period ]

July 2017 – July 2019

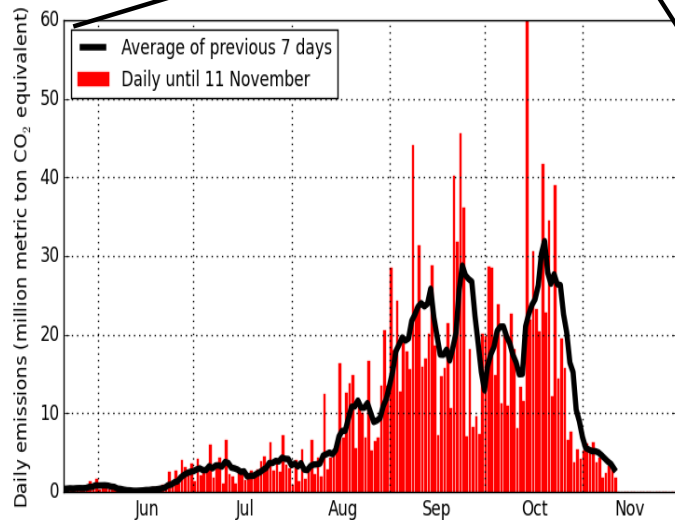
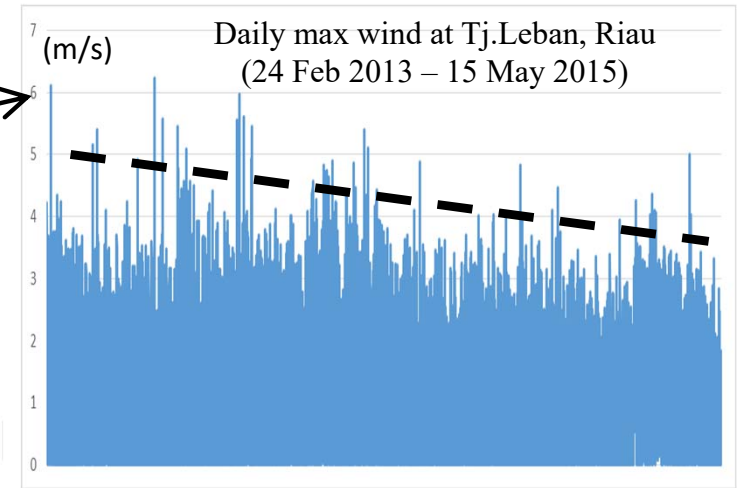
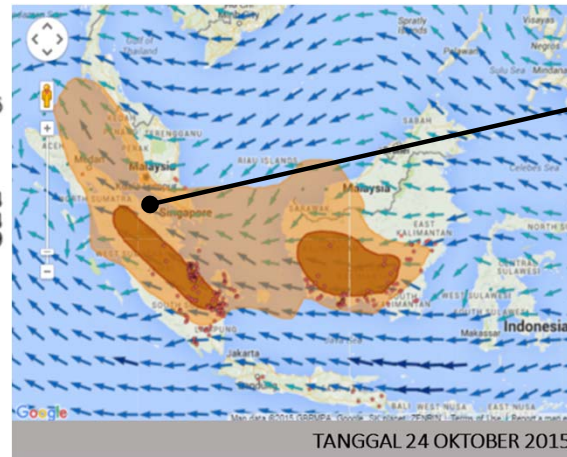
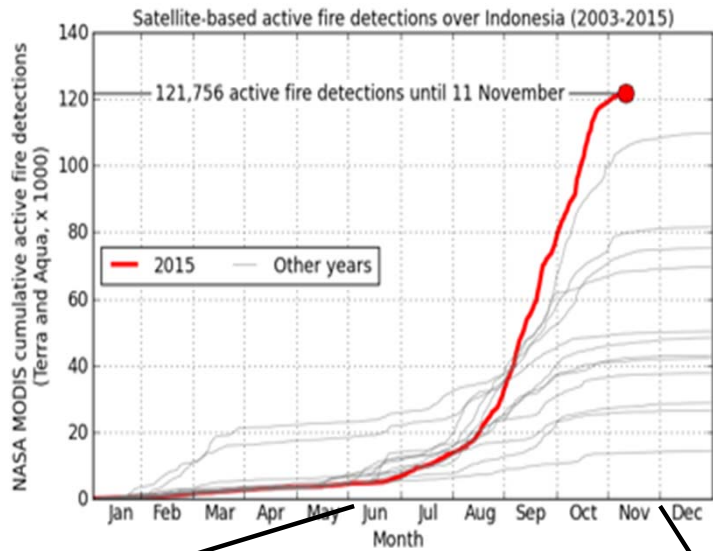
Australia :	CAWCR, Monash U., U. Melbourne, UNSW, etc.
Canada :	McGill U.
China :	FIO, SCSIO, etc.
France :	LMD, LEGOS, CNES, etc.
Germany :	KIT, AWI, Max-Planck Gesellschaft
India :	NIO
Indonesia :	BMKG, BPPT, LAPAN, etc.
Italy :	ISAC/CNR
Japan :	JAMSTEC, Kyoto U., Hokkaido U., U. Tokyo, U. Toyama, etc.
Malaysia :	National U. of Malaysia
Philippines :	PAGASA
Singapore :	NEA
Switzerland :	ETH Zurich
Taiwan :	NTU, NCU, Academia Sinica
UK :	UK Met Office, U. East Anglia, U. Reading
USA :	U-Miami, PNNL, ANL, LLNL, NRL, NASA, NOAA/GFDL, SIO, UH/IPRC, UW, CSU, TAMU, SUNY, CU, U. Notre Dame, etc.
Vietnam :	NHMS
Others:	ECMWF





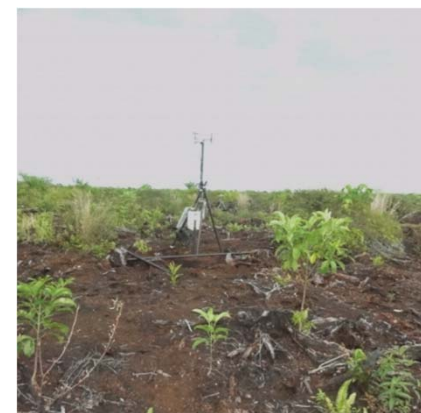
# Toward the Regeneration of Tropical Peatland Societies: Building International Research Network on Paludiculture and Sustainable Peatland Management

Leader: Prof. Mizuno (RIHN), Subleader Prof. Kozan (CSEAS-KU), Counterparts: BRG / BIG / BPPT / UR ...

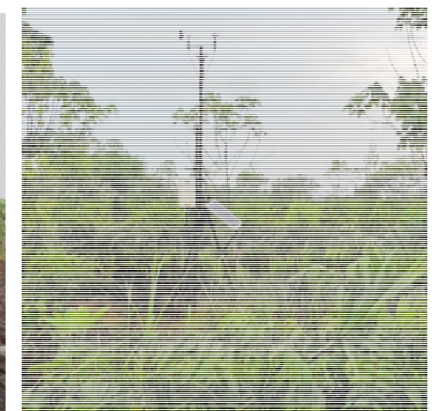


(GFED, 2015)

- ENSO (& IOD)
- (Monsoon &) ISV
- Diurnal wind/rain
- Vegetation
- Burning
- Society
- Economy
- Politics



24 Feb 2013



7 Aug 2015