

# Asia Water Cycle Initiative (AWCI) International Task Team (ITT) Workshop,

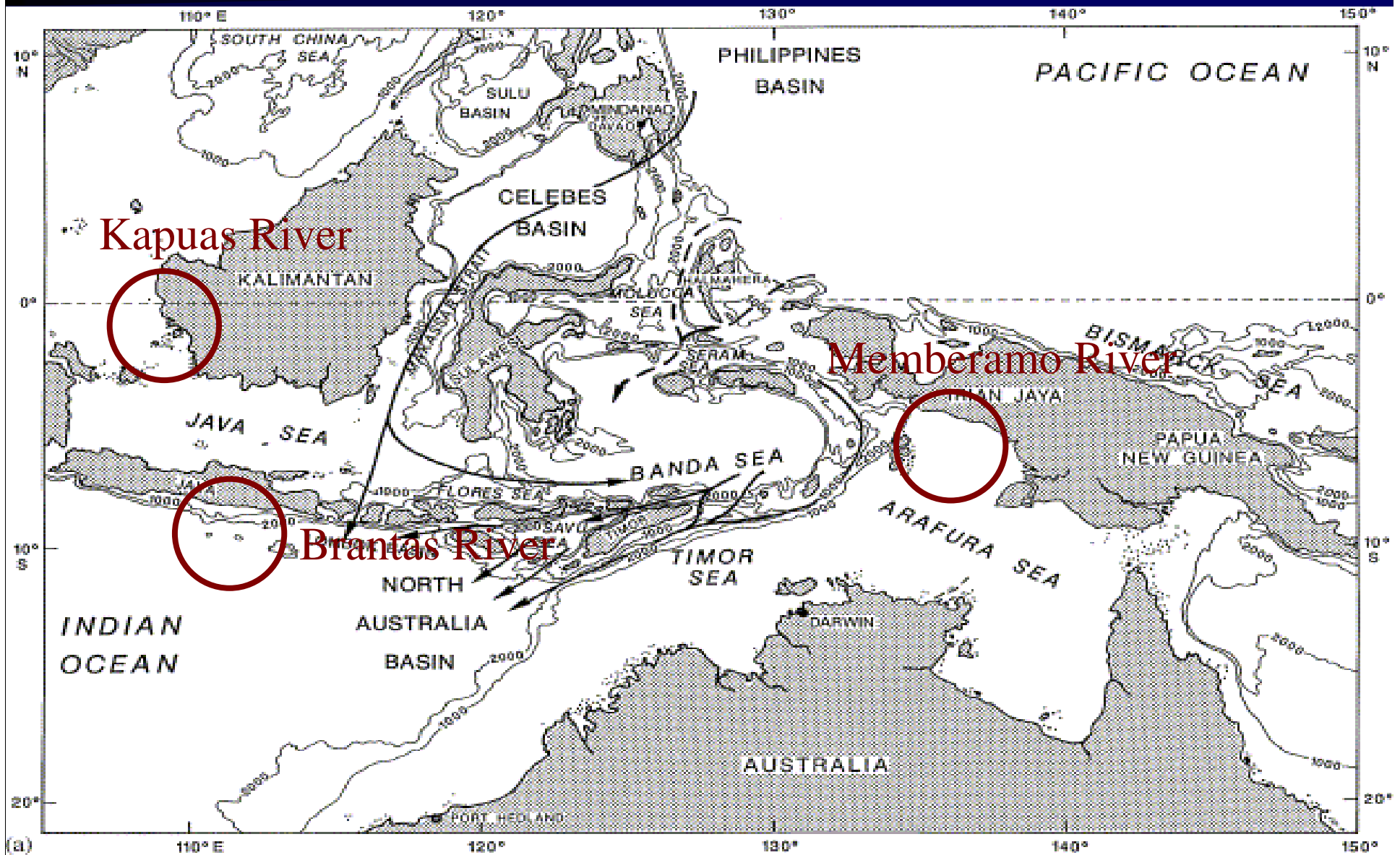
*Rama Garden Hotel, Bangkok, September 25, 2006*



**Dr. Fadli Syamsudin**  
**Agency for the Assessment and Application of Technology (BPPT)**  
**Indonesia**

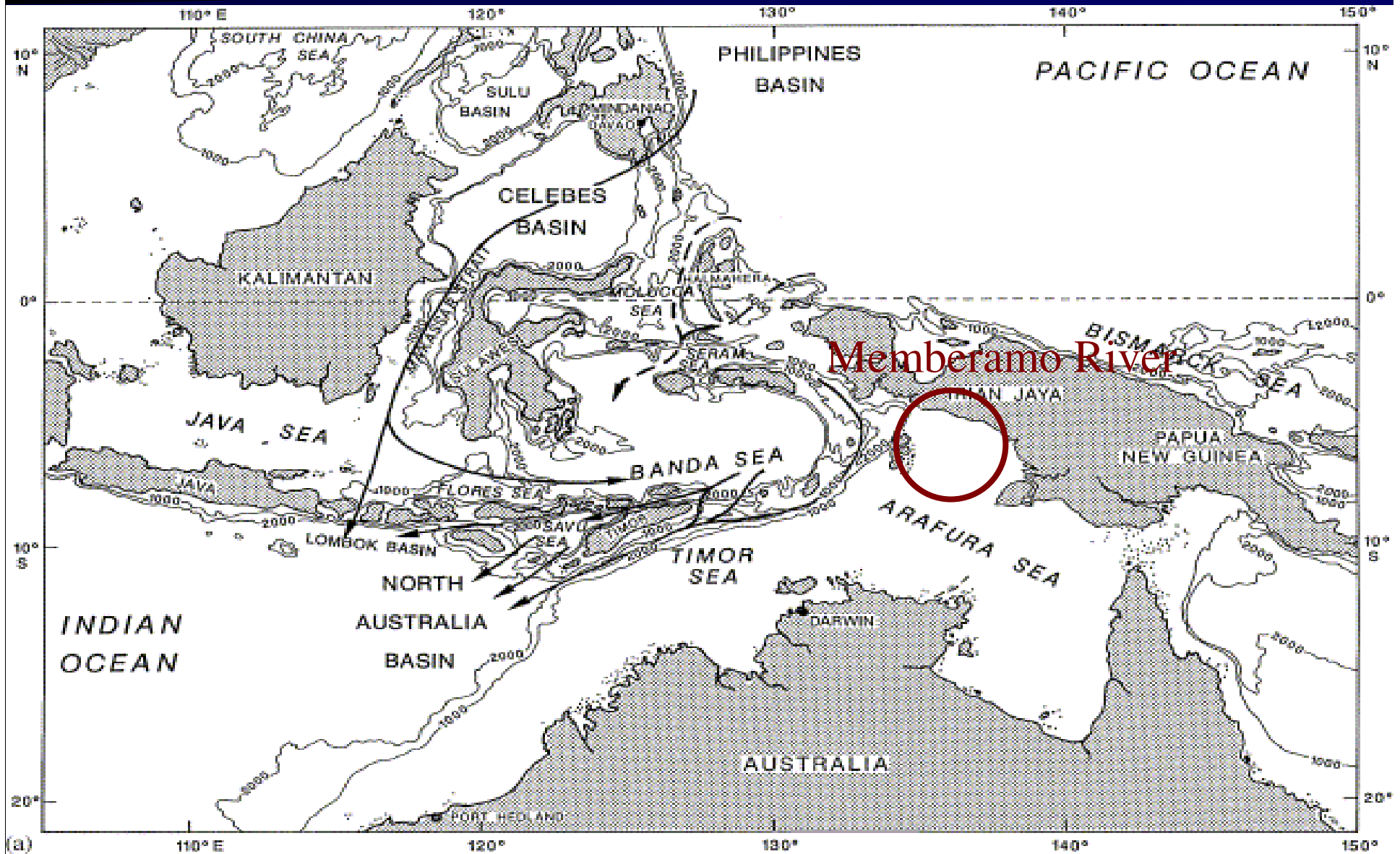
Flood in Trenggalek (East Java), April 20, 2006

# PROPOSED 3 BASIN RIVERS IN INDONESIA





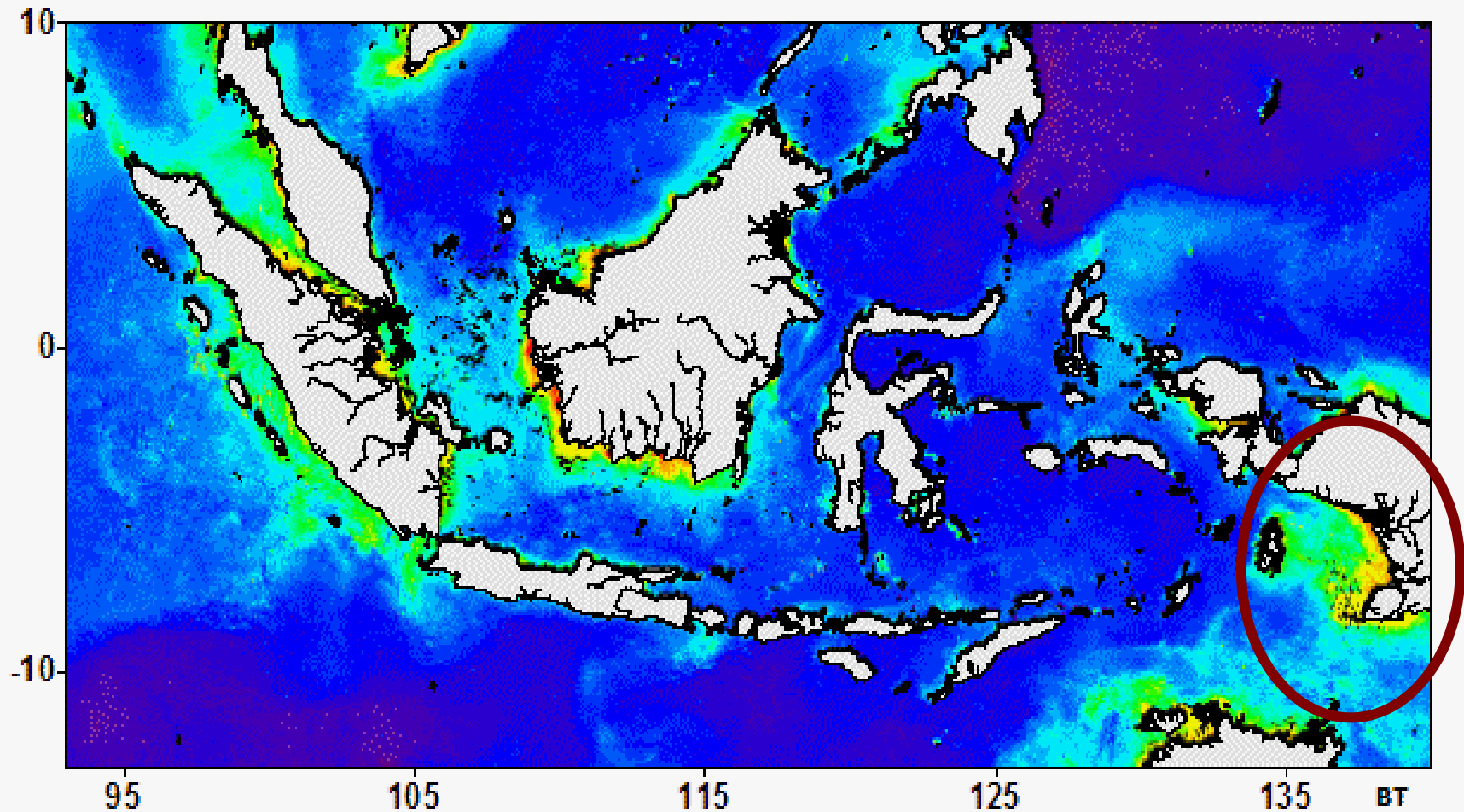
# WHY MEMBERAMO RIVER?



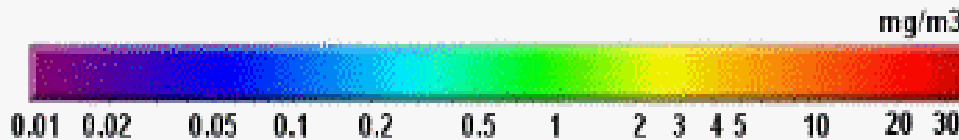
# High Marine Productivity and Air-Sea Impact

Konsentrasi Klorofil-a

Januari 1998

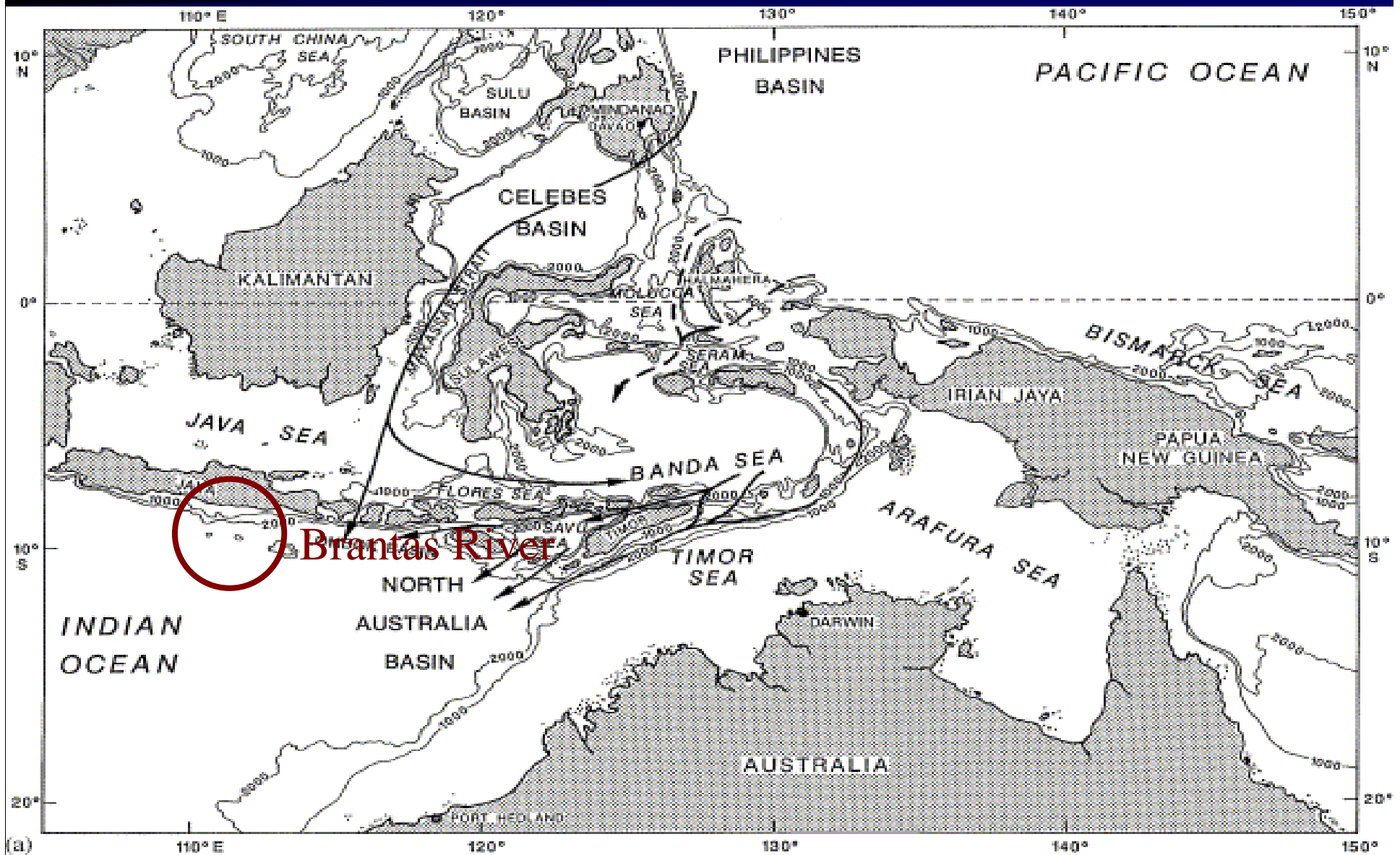


Visualisasi :  
P3 TISDA - BPPT



Data : SeaWiFS & MODIS Aqua  
Sumber : GSFC - NASA

# WHY BRANTAS RIVER?



# Currents and Waves in the Eastern Indian Ocean

- Indian Ocean Kelvin waves (IOKWs) along the southern coast of Indonesia, Observations:

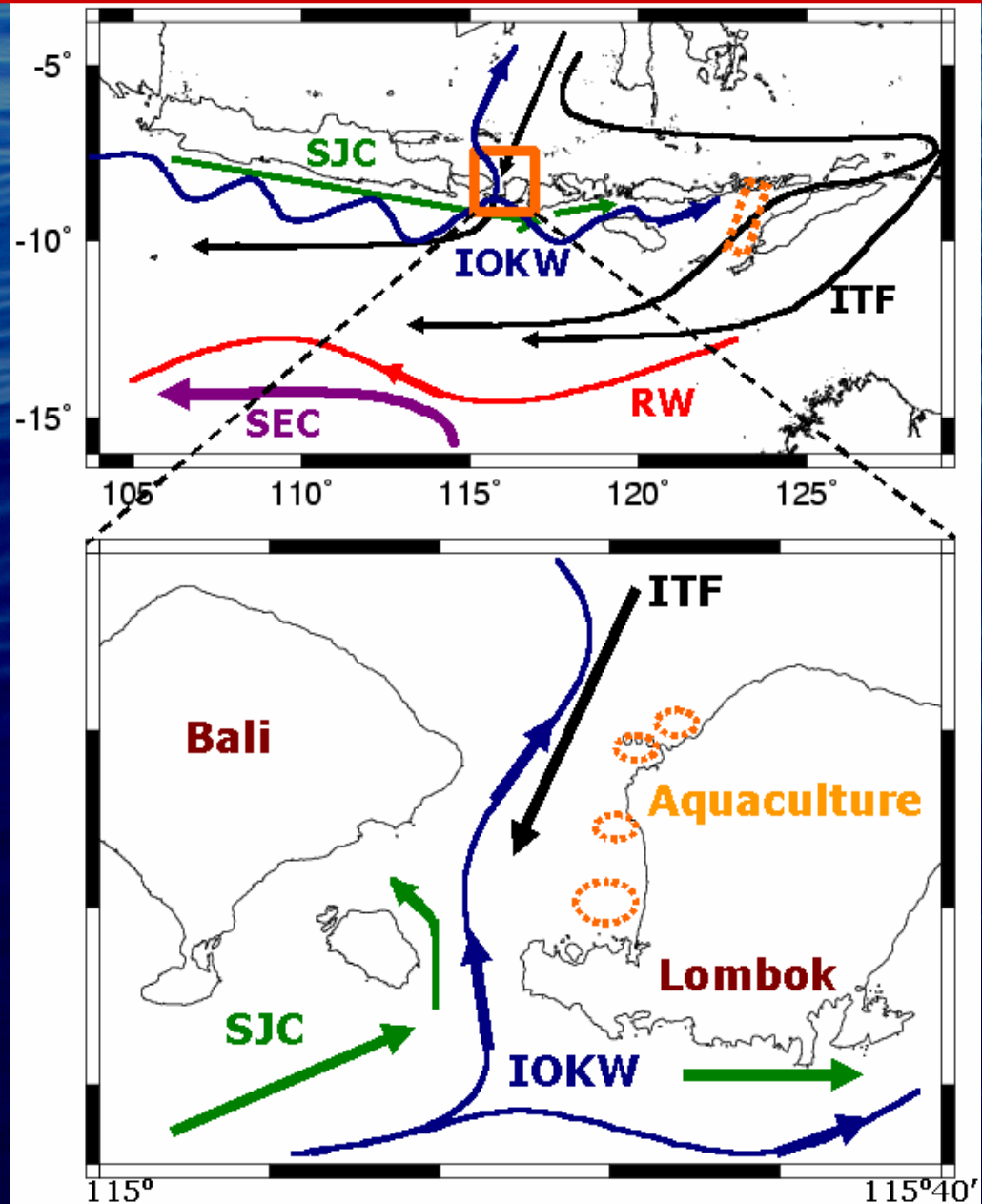
[Arief and Murray, 1996; Michida and Yoritaka, 1996; Sprintall et al., 1999, 2000; Syamsudin et al., 2004]

Models:

[Yamagata et al., 1996, Qiu et al., 1999, Durland and Qiu, 2003, Syamsudin et al., 2004].

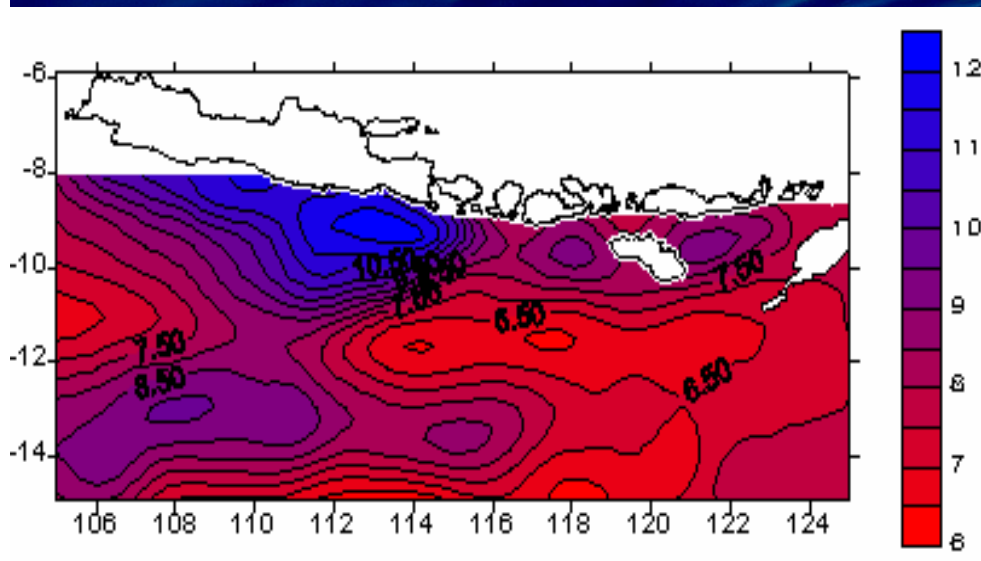
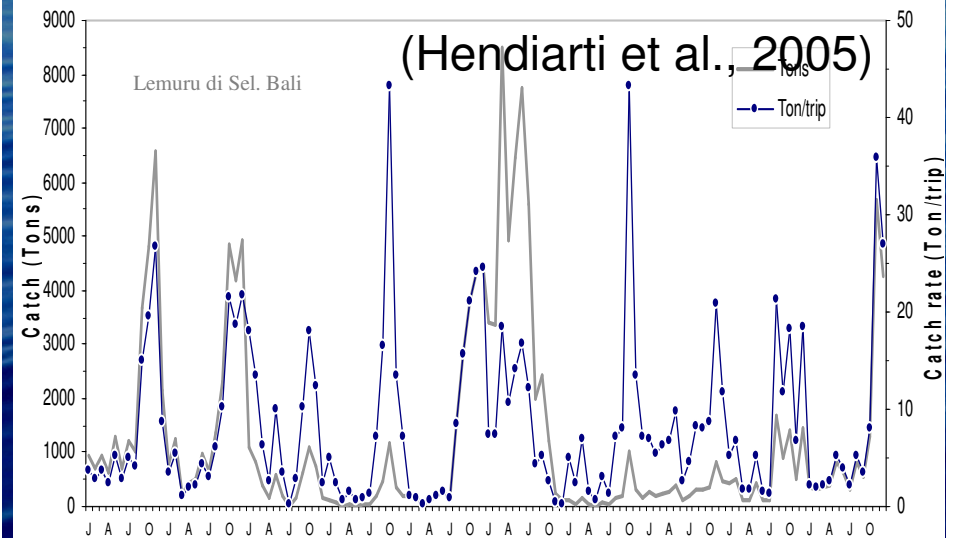
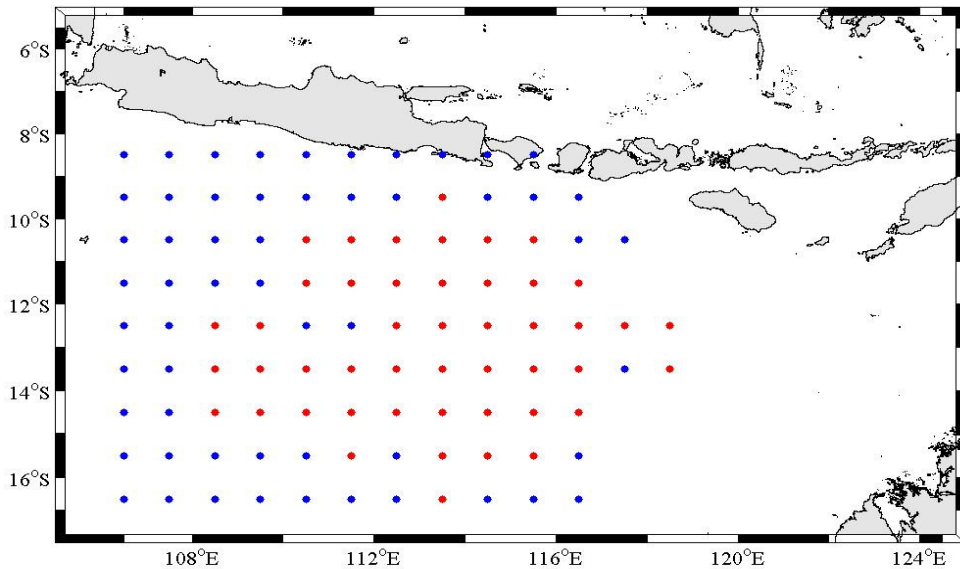
- South Java Current (SJC) found along the southern coast of Indonesia: [Quadfasel and Cresswell, 1992; Sprintall et al., 1999].

- The regions are rich with sources of interannual, seasonal, intraseasonal, and smaller scale features that have direct impact to environmental changes: aquaculture, marine sport activities, sea-land transportation, and so on.



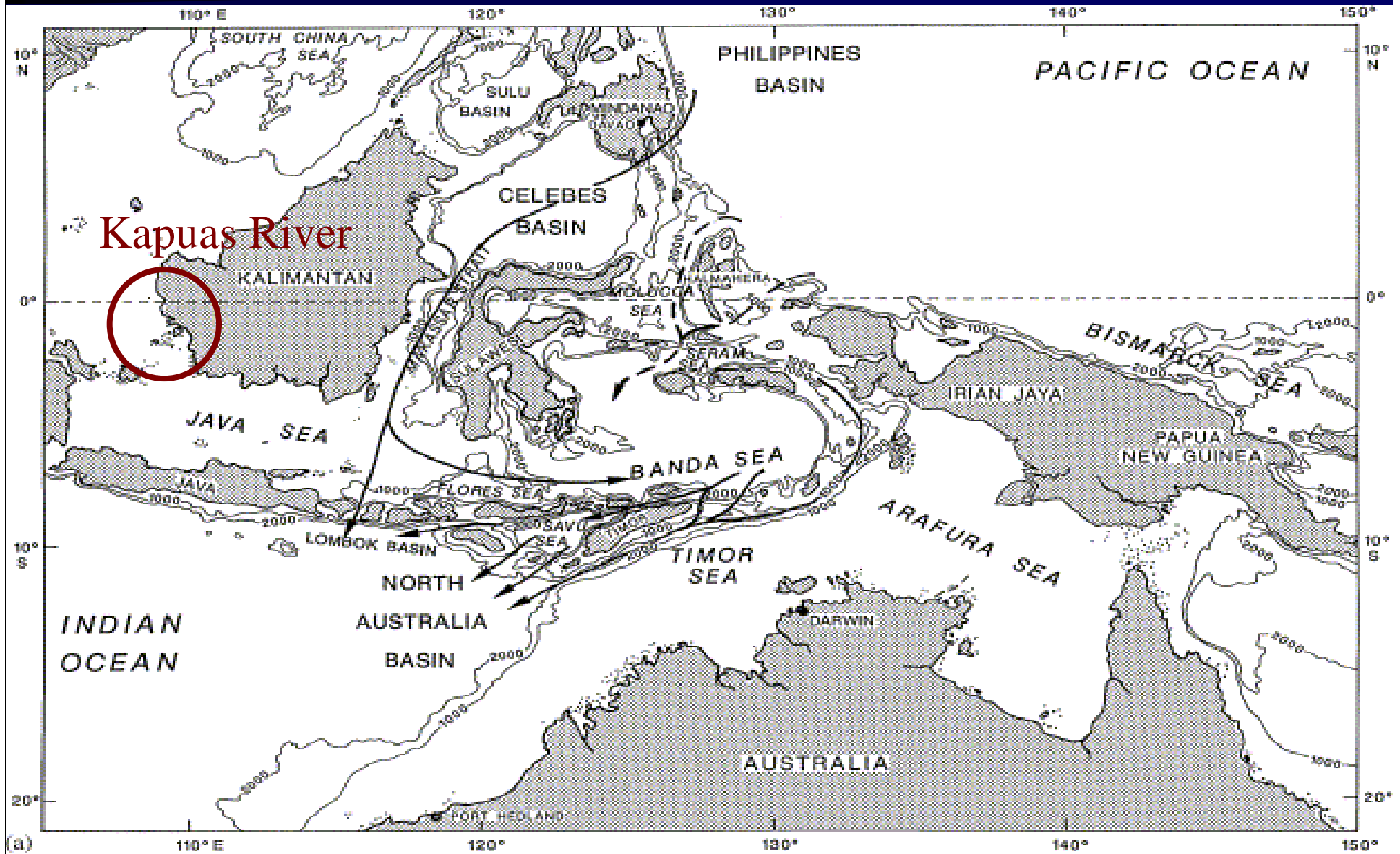


# Ocean climate impact to marine fisheries



Big Eye Tuna and Sardine Catches have strong mutual relationship between conducive westward upwelling Rossby wave propagation and Indian Ocean Dipole event that generate cyclonic eddy around eastern Java water and southern Bali-Lombok

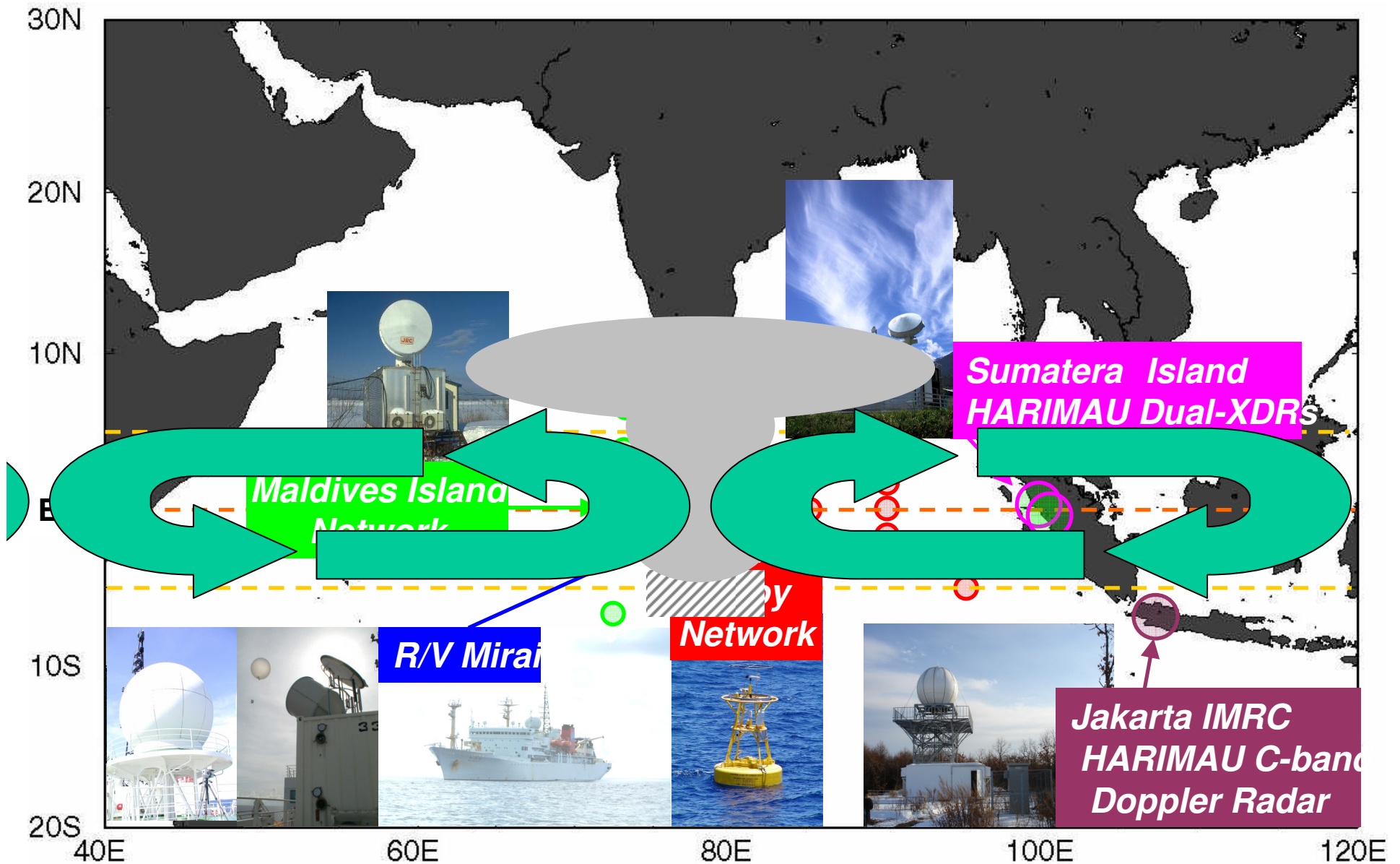
# WHY KAPUAS RIVER?



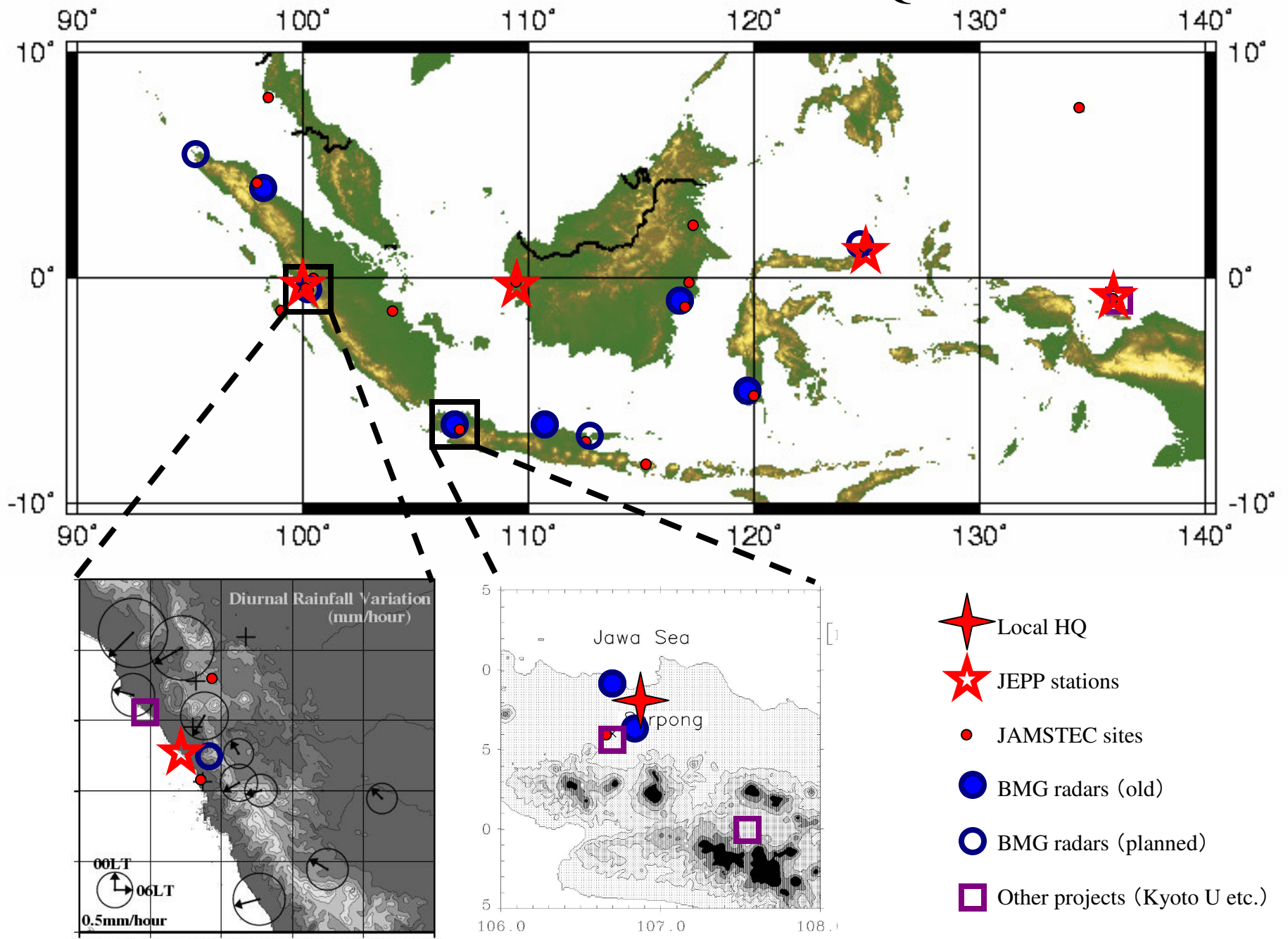


**HARIMAU2006** with MISMO during October 23 – November 21, 2006

(**MIRAI** Indian Ocean cruise for the **Study on MJO-convections Onset**)



# Planned stations and a local HQ



# DATA AVAILABILITY

## 1. Atmosphere

### 1. BMG

1. Fklim (Sumatera 1990-2002)
2. Hujan (Sumatera 1960-2000, Indonesia 2001)
3. Pibal (Sumatera 2000-2002)
4. Radar (Kototabang 2001) → Non BMG
5. Rason (Indonesia 1992-2002)
6. Synop (Sumatera 1991-2002)

### 2. Global

1. GANAL
2. NCEP
3. NCDC
4. GMS
5. TRMM
6. WMO
7. CIDC
8. GAME

### 3. Non BMG

1. ARG
2. AWS
3. Disdrometer
4. GPS
5. Sodar
6. PJT
7. Serpong



# DATA AVAILABILITY

## 2. Land

1. Gtopo30
2. Hydro1k-USGS
3. NASA
4. Riverflow
5. Hotspot
6. Geo-matt

## 3. Ocean

1. Jamstec
2. NODC
3. JODC
4. Seawatch
5. Ship BMG
6. Tao Triton

## 4. Map

1. Coast
2. DPM