“TOWARD FUTURE PRECIPITATION MEASUREMENT IN ASIA”

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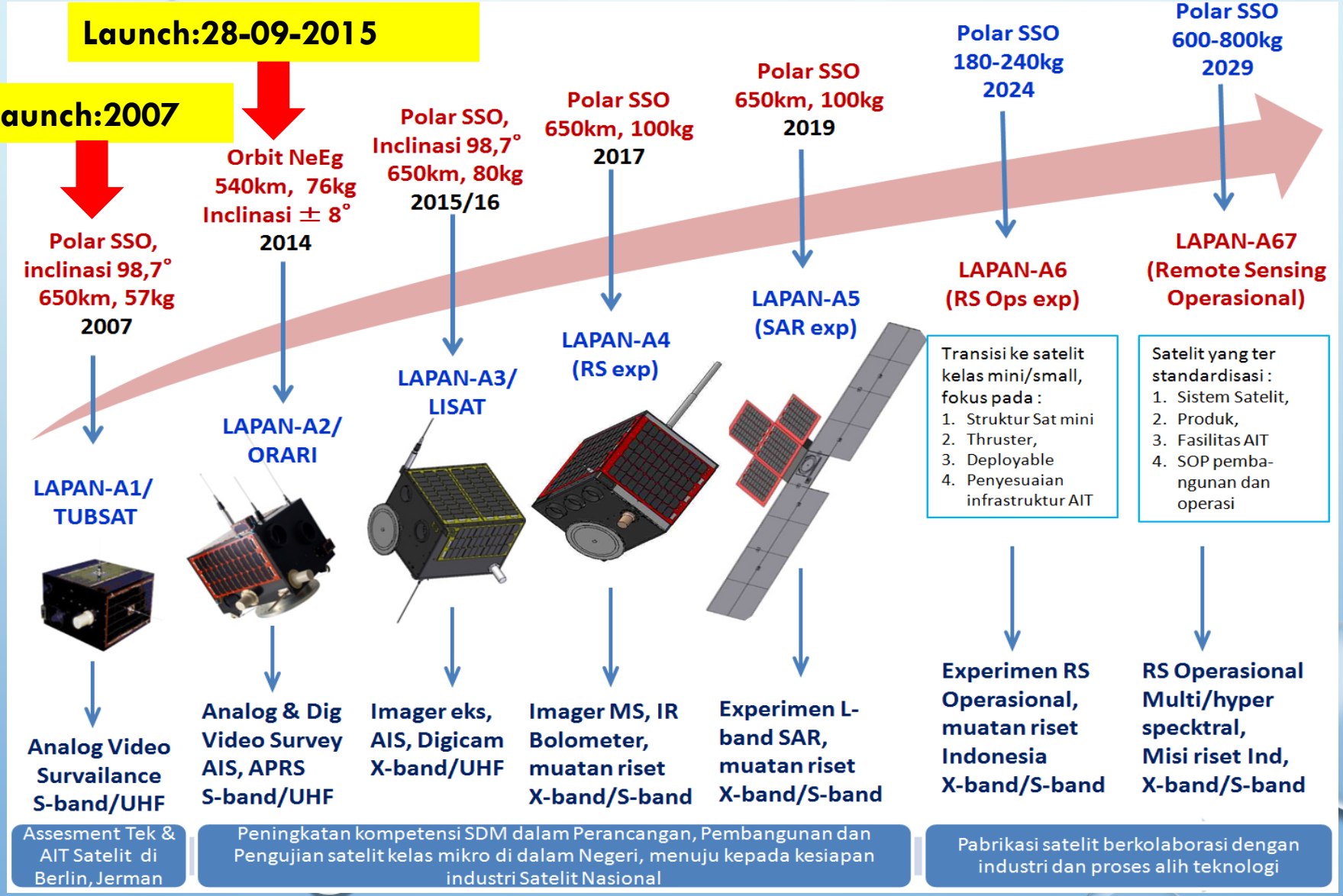
LAPAN

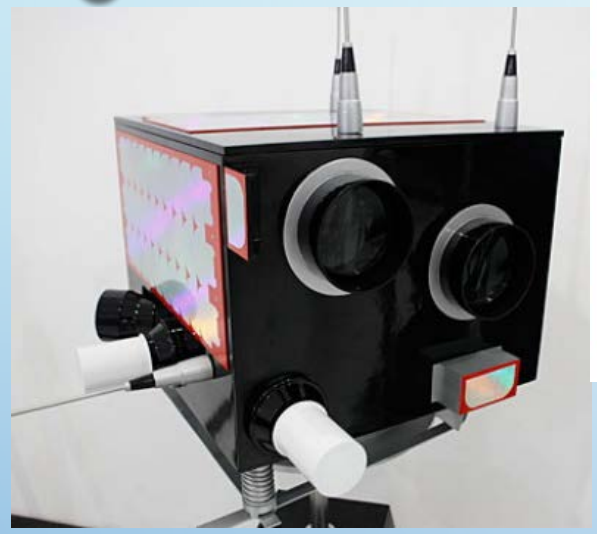
OBJECTIVES

1. TO INTRODUCE POSSIBLE OPTIONS FOR THE FUTURE SATELLITE PRECIPITATION MEASUREMENTS
2. TO SHARE EXPECTATIONS FROM USERS FOR THE FUTURE SATELLITE PRECIPITATION MEASUREMENTS
3. DISCUSS ABOUT THE PRESENTED OPTIONS AND HOW TO COLLABORATE TO REALIZE BETTER UTILIZATIONS OF SATELLITE PRECIPITATION MEASUREMENTS IN ASIA AND THE PACIFIC.

ROAD MAP LAPAN's Satellite Development



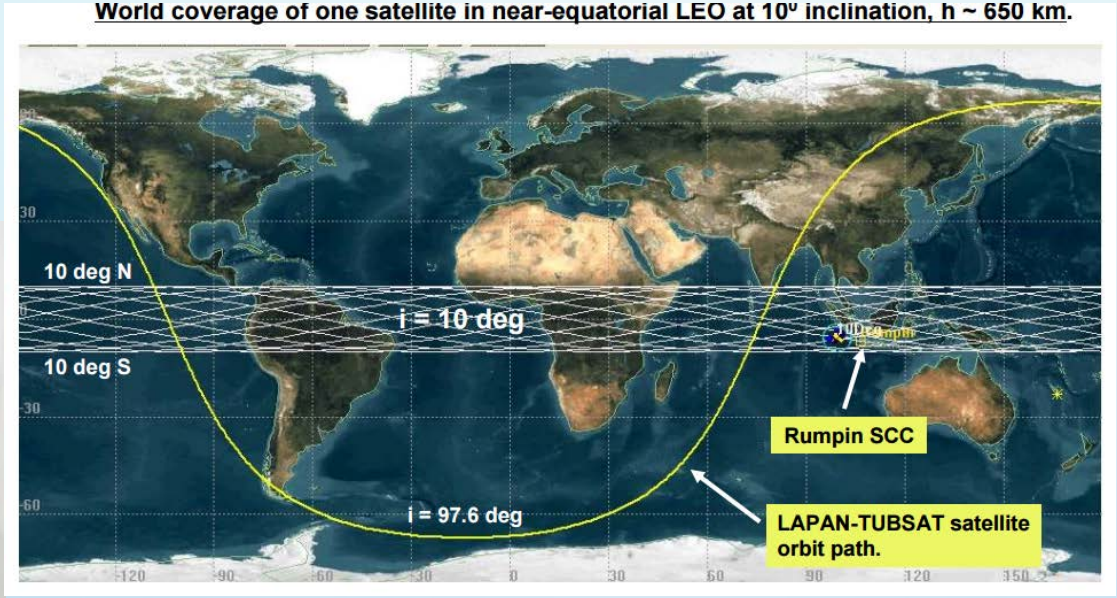
LAPAN Satelit

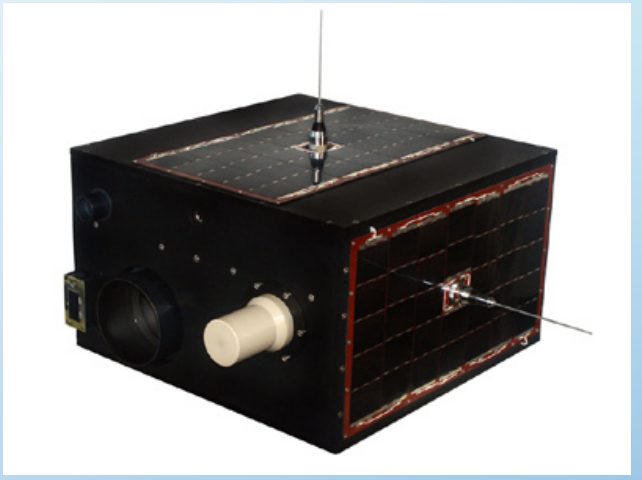


LAPAN/ORARI-A2 72 kg
28 September 2015
LEO: Equatorial

Mission:

- Automatic Identification System (AIS)
- Radio communication Amateur/ORARI to disaster support
- Earth observation using camera





LAPAN/TUBSat-A1 57 kg/2007
LEO: Equatorial

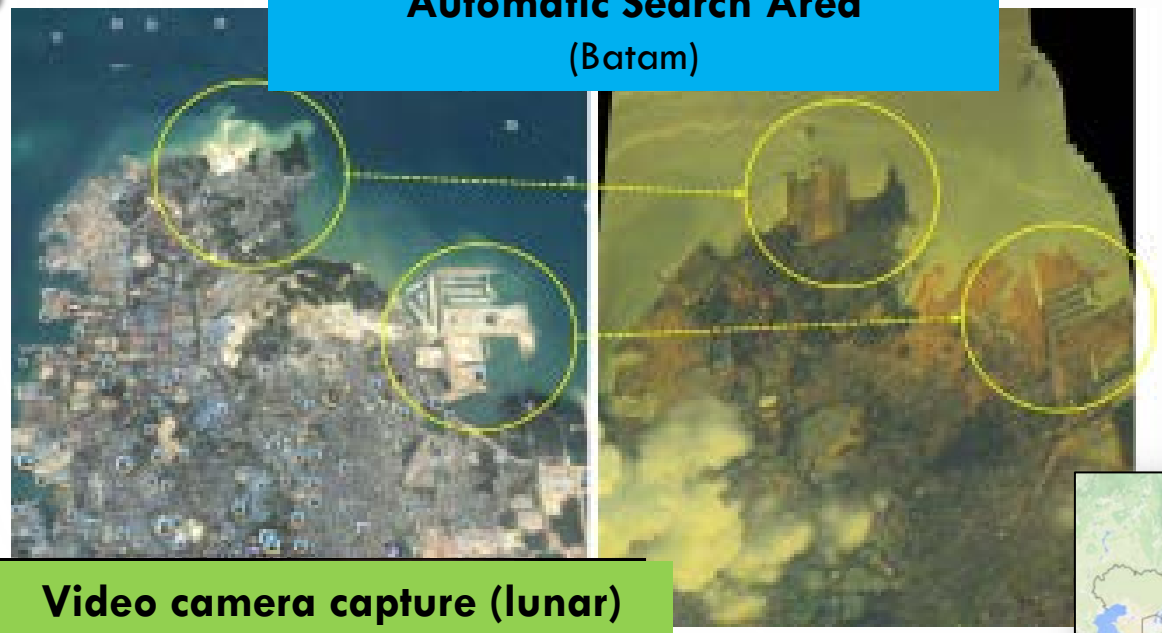
Mission:

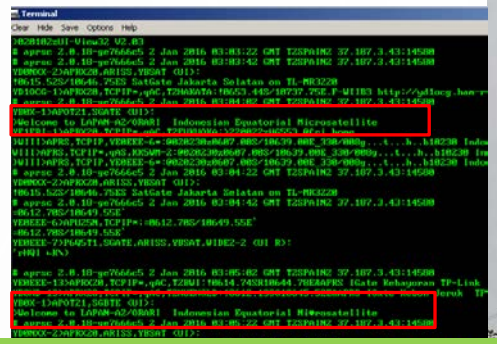
- Earth observation using camera

LAPAN A1 SatelliteProduct

CAPAIAN PUSTEKSAT TA 2015 : OPERASI SATELIT LAPAN-A2/ORARI

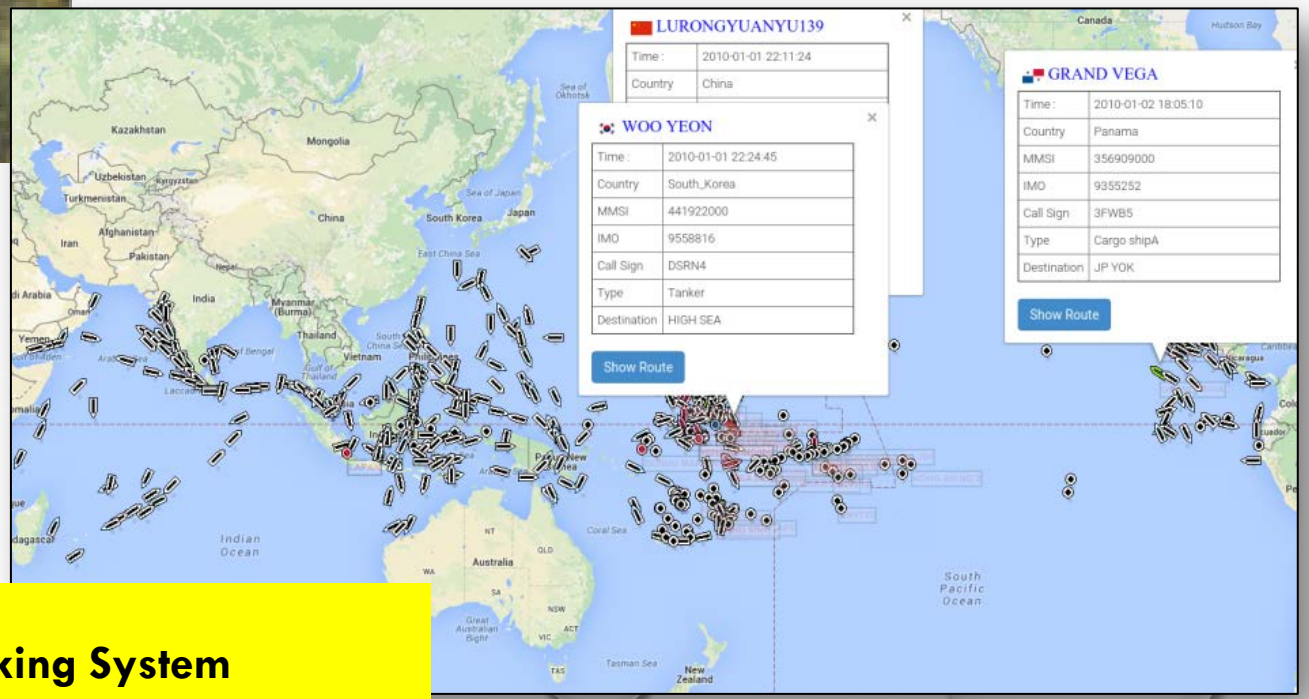
Automatic Search Area
(Batam)





Penerimaan data APRS oleh berbagai negara

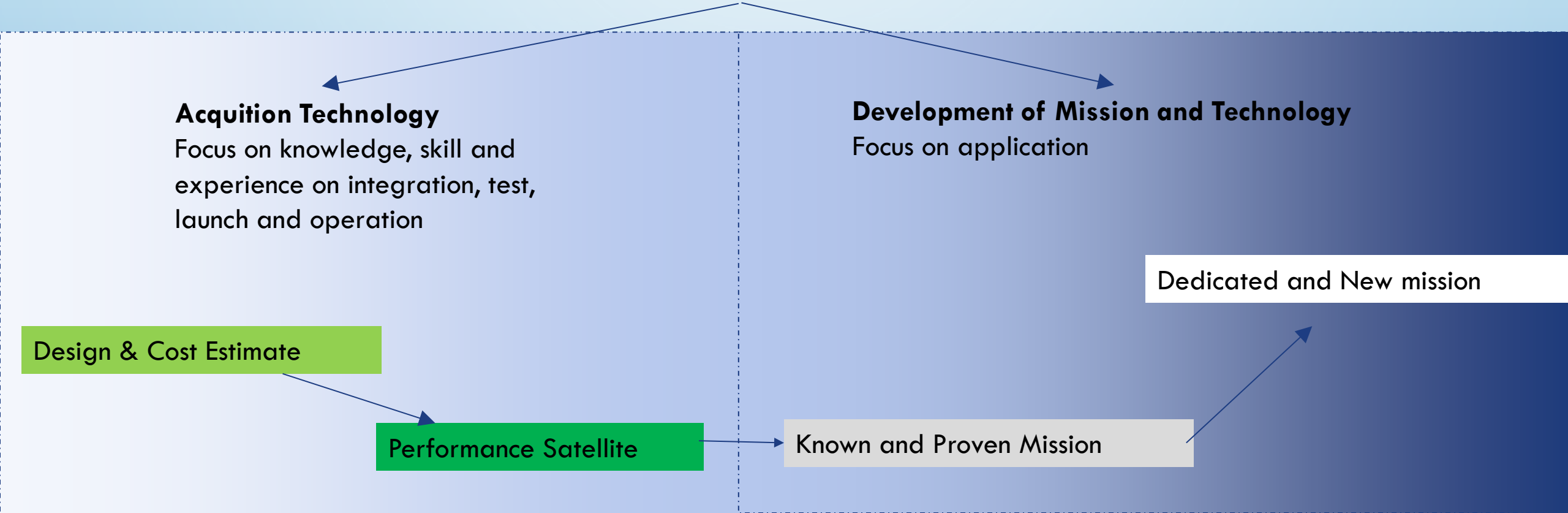
Video camera capture (lunar)



Ship Tracking System

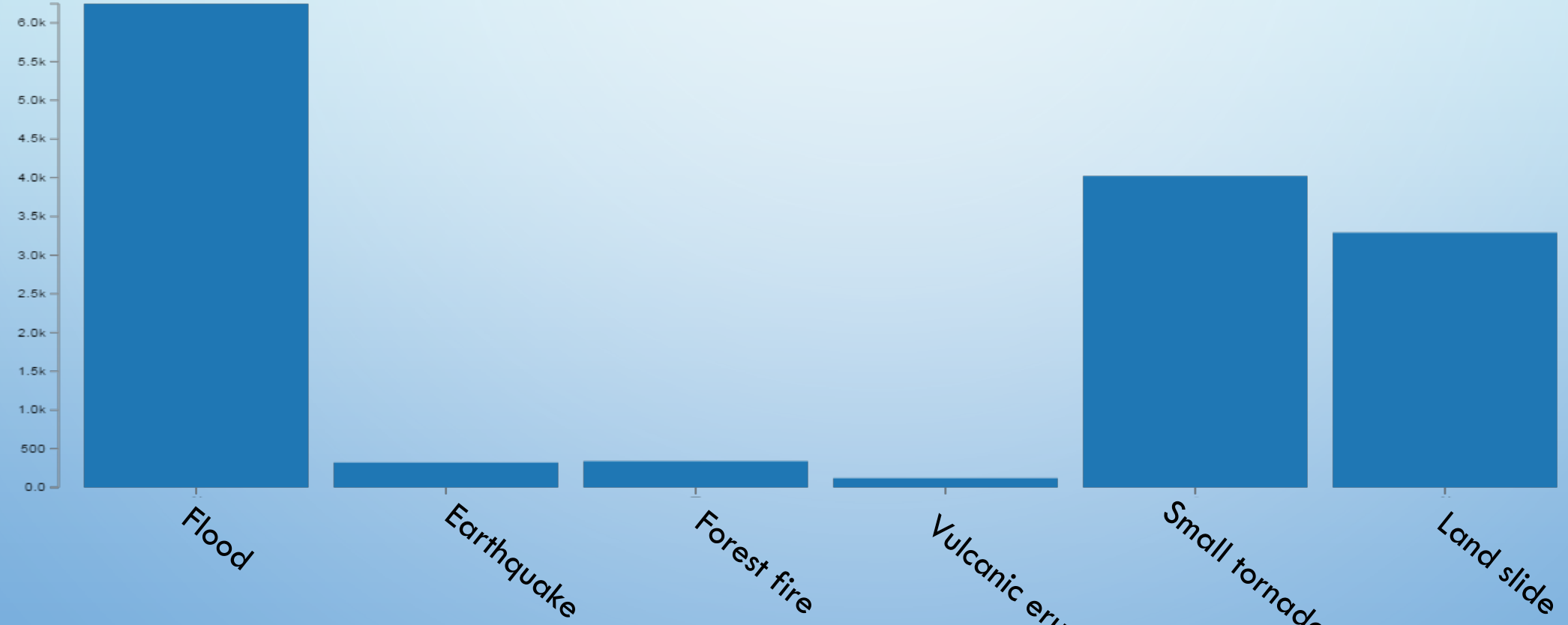
Possible options for the future satellite precipitation measurements

Consideration of developing small/micro-satellite program: Indonesia



EXPECTATIONS FROM USERS FOR THE FUTURE SATELLITE “PRECIPITATION“ MEASUREMENTS

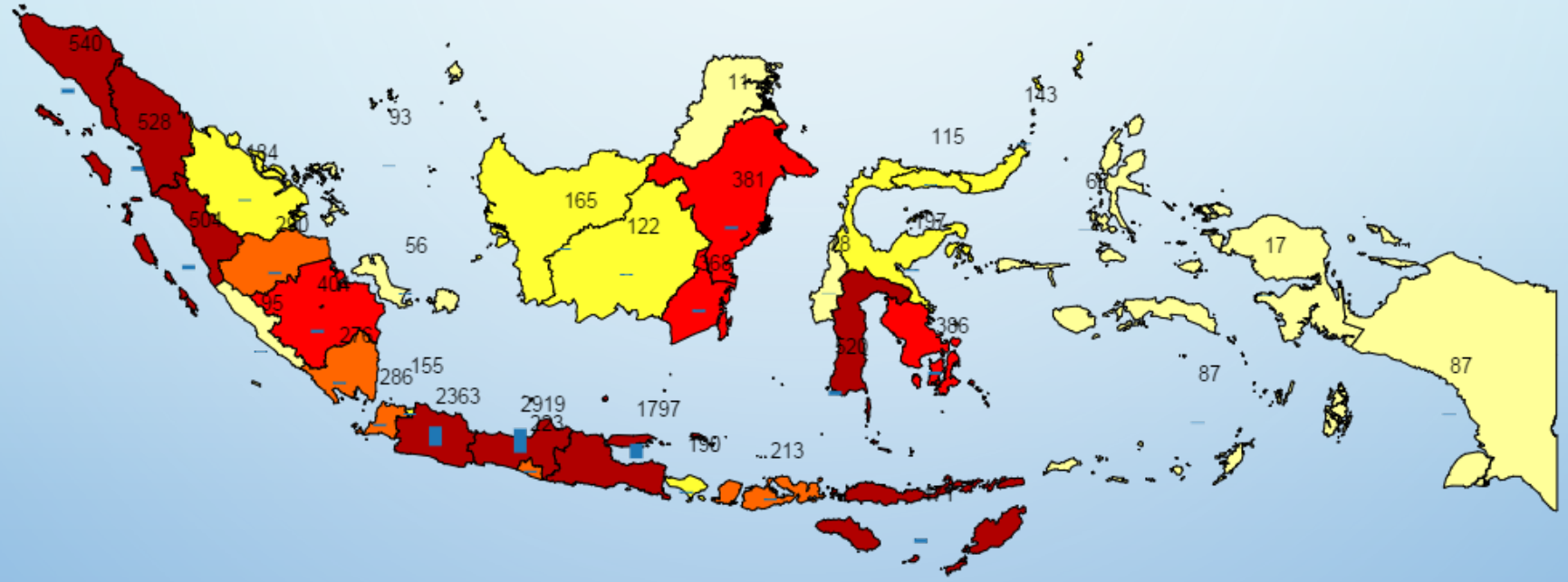
Indonesia Hazard
1900-2015



NATIONAL DISASTER MANAGEMENT AUTHORITY (BNPB)

- Flood
- Earthquake
- Forest fire
- Vulcanic eruption
- Small tornado
- Land slide

Indonesia Hazard 1900-2015



Jakarta, Jan-2013

Banjar negara, 2014

Kalimantan, 2015

MISSION APPLICATION (MAPPING AND SURVEILLANCE)

1. FOOD SECURITY APPLICATION
   - CROP GROWTH CYCLE
   - MARINE FOOD RESOURCE
   - AGRICULTURE LAND USE AND FARM ESTATES
2. MARINE APPLICATION
   - POTENTIAL FISHING GROUND;
   - COASTAL ZONE AND ENVIRONMENT;
   - MARINE POLLUTION;
   - MARINE VEHICLE MONITORING;
3. LAND APPLICATION

2.
OPTIONS AND HOW TO COLLABORATE TO REALIZE BETTER UTILIZATIONS OF SATELLITE PRECIPITATION MEASUREMENTS IN ASIA AND THE PACIFIC

STEPS TOWARD SATELLITE "PRECIPITATION" MEASUREMENTS

Indonesia (National) User Requirement

Potential Users:

- BMKG
- Disaster Management Authority
- Agriculture Ministry
- Ministry of Forestry
- Marine Ministy

Technical Department

- LAPAN
- BPPT
- LIPI

1

YES

Observing Principles and Standards

Potential Users & Technical Users

- Sensor (Multi-spectral bands, Radar)
- Scanning
- resolution

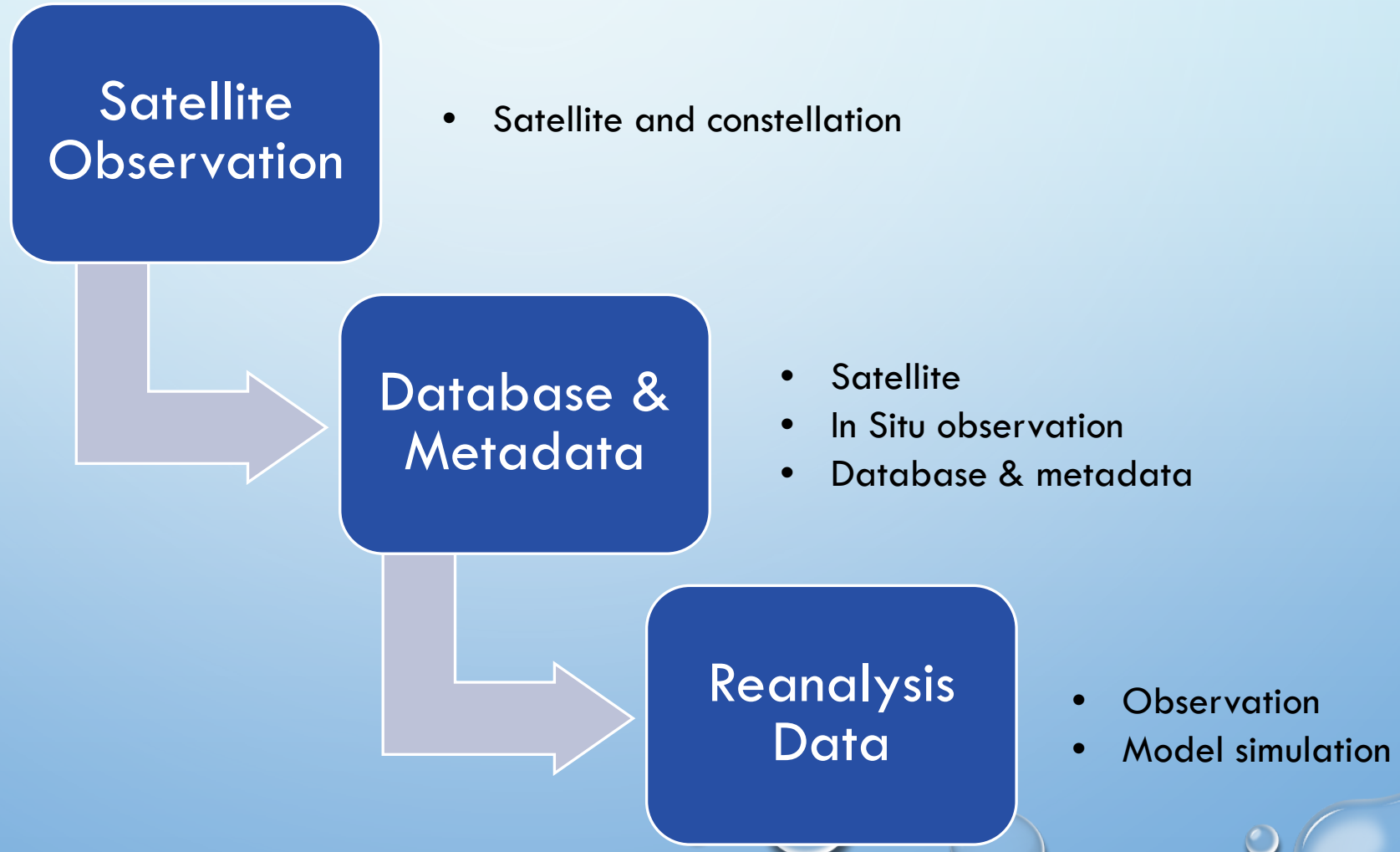
2

Available/Existing Satellite Data

Indonesian National development planning

Advanced Country
Japan, US

SUSTAINED OBSERVING SATELLITE PROGRAM



SUMMARY

- LAPAN have consideration on the potential use of equatorial and near-equatorial orbit EO satellites for indonesia;
- Micro-satellites are potential experimental satellites in the near-equator inclined orbit, to explore additional advantages and challenges;
- More study is needed to address Indonesia Nasional mission requirement
- National/International cooperation is significant to elaborate and utilize the optimum potential small satellite systems

THANK YOU FOR YOUR ATTENTION