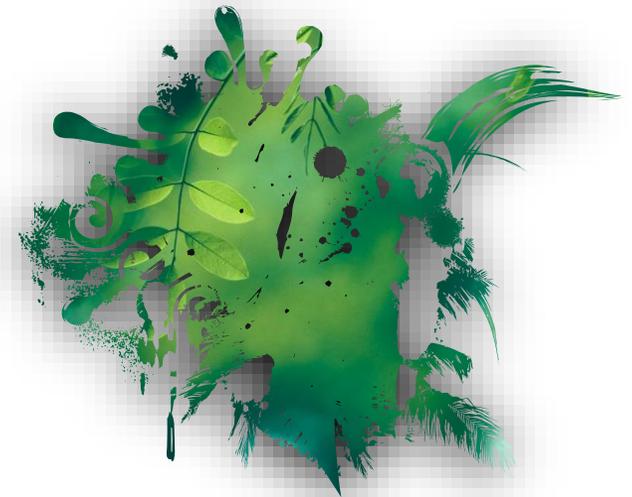


09 September 2020



## Working together to grow space economies (Indonesian remote sensing examples)

M. Rokhis Khomarudin



- The LAPAN's role on Remote Sensing
- Available Remote Sensing Data
- Remote Sensing Applications
- LAPAN Collaboration to grow Space Economies
  - Agriculture
  - Fisheries
  - Tax
  - Province governments supports



# The LAPAN's role on Remote Sensing

**Inpres No. 6/2012**  
on provisioning,  
usage, quality control,  
processing, and Data  
Distribution High  
Resolution Remote  
Sensing Satellites

**UU No. 21/2013**  
About Space

**Perpres No. 45/2017**  
about  
2016-2040 Space  
Management  
Master Plan

**PP No.11/2018**  
about  
Procedures for  
Implementing  
Remote Sensing  
Activities

**Remote Sensing  
LAPAN**

**Data**

**Methodology  
guidelines**

**Informations**

**Supervisions**

**Ministries / Institutions, TNI, POLRI, Local Government,  
College, Community, and Private**



# Optical and SAR data acquired by the current LAPAN Remote Sensing Earth Station

Very high  
resolution  
(50 cm)

- Pleiades 1A
- Pleiades 1B

High  
resolution  
(1.5 m)

- SPOT-6
- SPOT-7

Medium  
resolution  
(15 and 30 m)

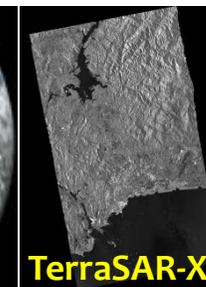
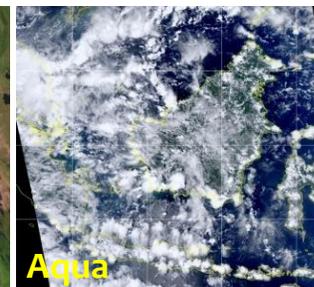
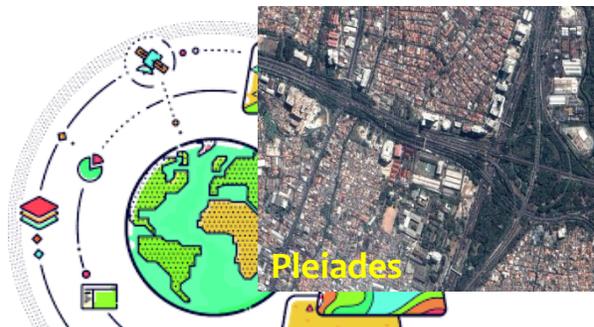
- Landsat-7
- Landsat-8

Low  
resolution  
( $\geq 250$  m)

- Terra
- Aqua
- S-NPP
- NOAA-18
- NOAA-19
- MetOp
- Himawari-8

SAR  
( $\leq 40$  m)

- TerraSAR-X
- TanDEM-X



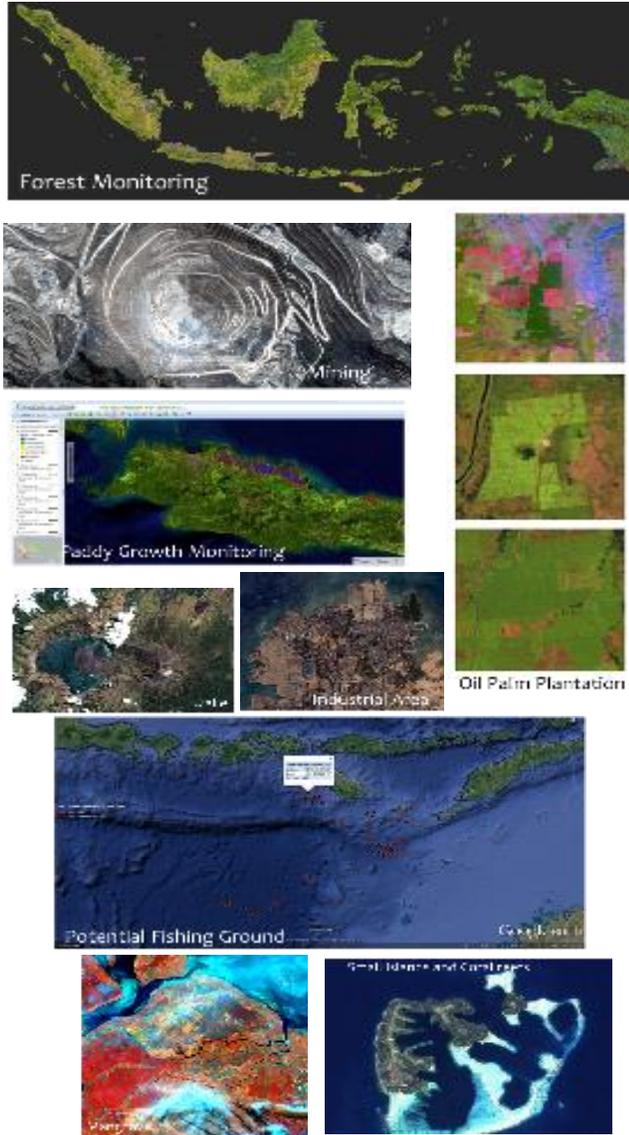
## *Availability of other Remote Sensing Data (Non - LAPAN Earth Station)*

- Sentinel-1 Data (SAR)
- Sentinel-2 Data(optical)
- ALOS PALSAR Data (SAR)
- Gaofen-1 Data (optical)

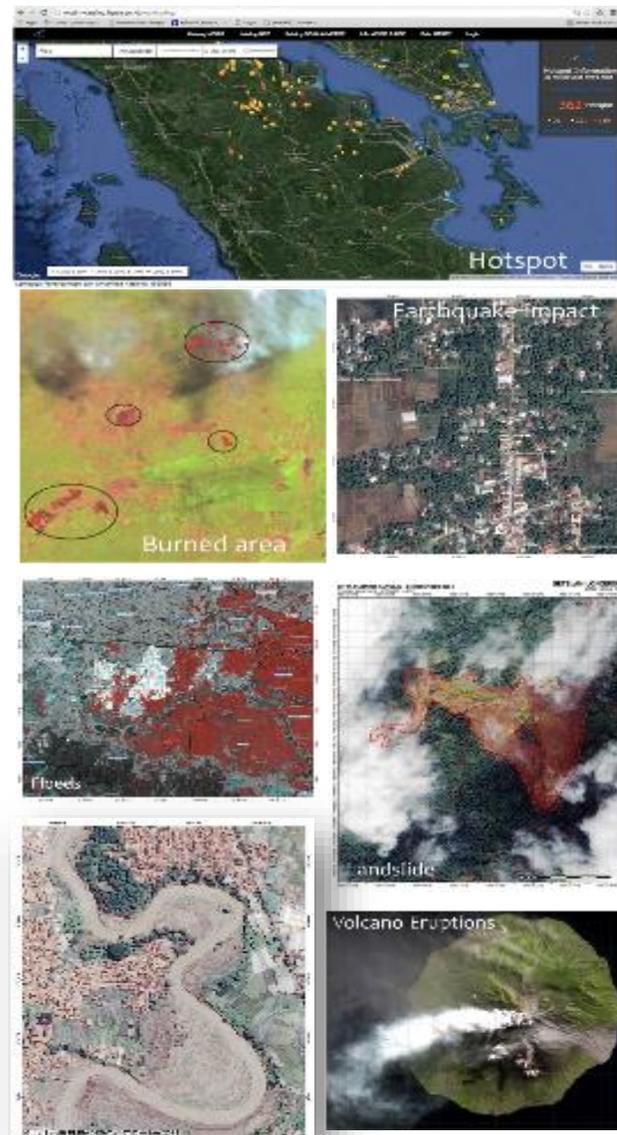


# Remote Sensing Applications

## Natural Resources



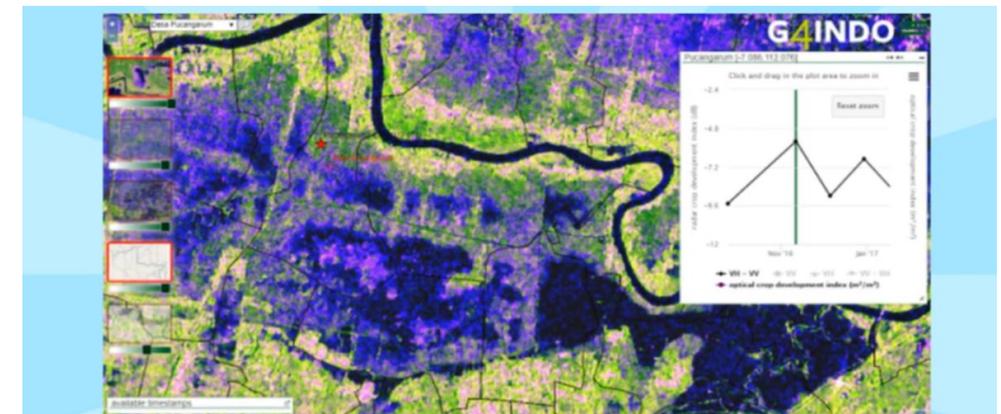
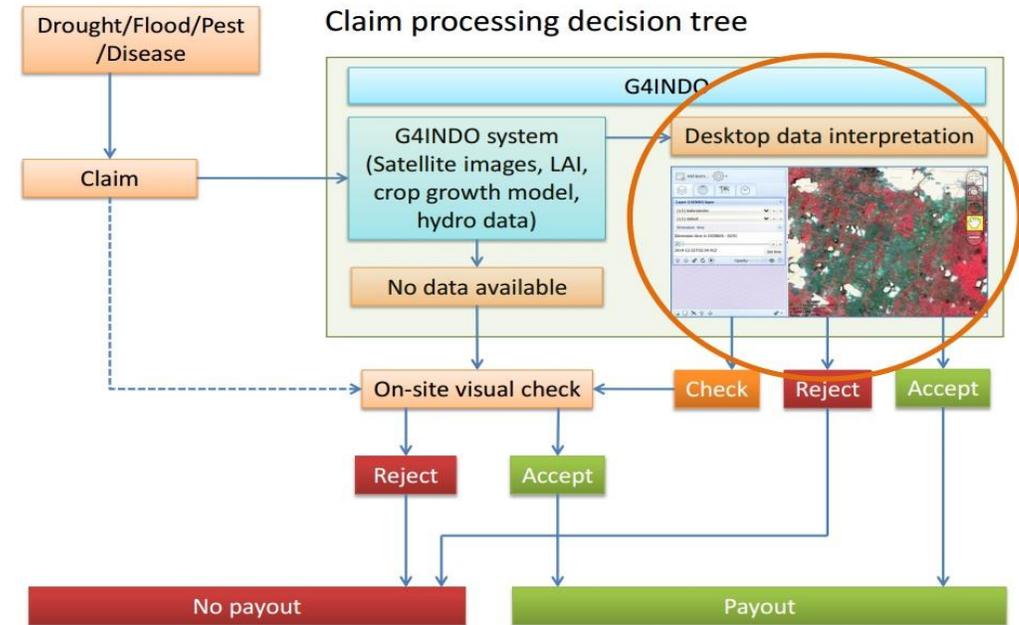
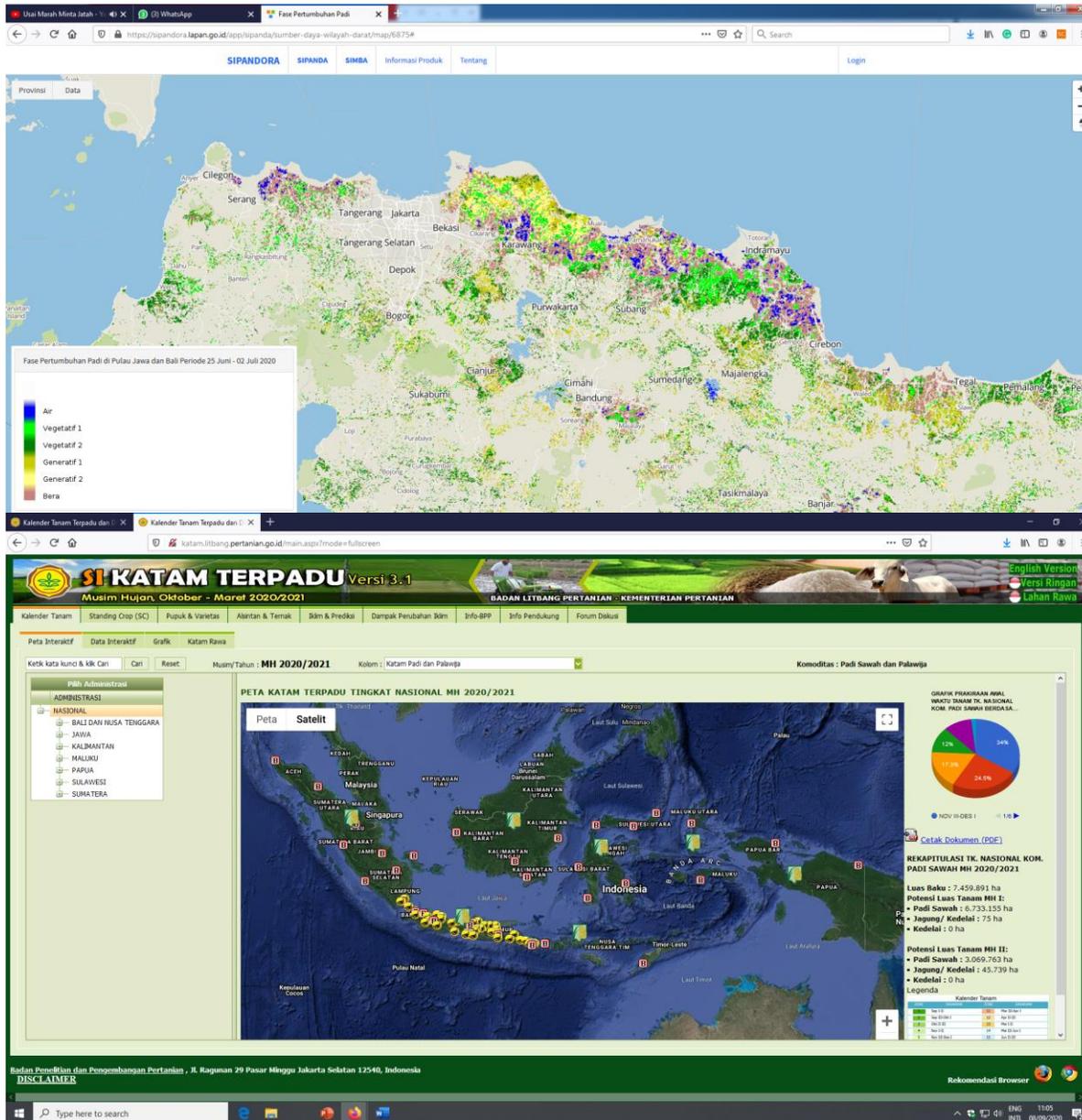
## Environment and Disaster



## Other Strategic



# Remote Sensing for Agriculture



SAR Data proved that the agriculture area failed to harvest caused by flood



# Remote Sensing for fisheries

## Potential fishing ground information application in Gorontalo Province



Application gadget, developed by private company



## Potential fishing ground information for Illegal fishing



Keterangan

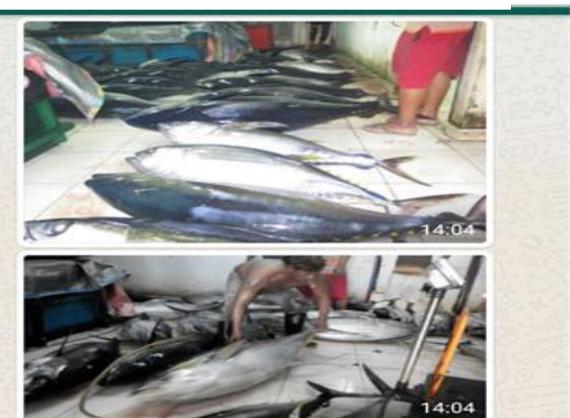
NO	NAMA KAPAL	IMO	MMSI	BENDERA	PANJANG	POSISI
1	BAYU RAJAWALI	9520417	525010273	Indonesia	20	105° 59' 43" E, 5° 55' 16" S
2	DHARMA BALI -07	7639460	525000093	Indonesia	20	106° 51' 0" E, 5° 30' 47" S
3	UNAVAILABLE	-	412440266	China	48	106° 23' 24" E, 4° 37' 12" S
4	STD NO.1	8508266	44135000	Korea	56	108° 56' 7" E, 2° 19' 15" S

## Testimony from users



FARIKIN

Alhamdulillah setelah menggunakan aplikasi Navigasi Nelayan Marlin, penghasilan saya meningkat. Khusus di wilayah Jepara tangkapan saya 2 ton ikan tongkol, dalam sehari bahkan pernah tangkapan saya sampai 12 ton semenjak menggunakan perangkat ini, banyak teman-teman ikut melaut bersama saya.



Hasil tangkapan berkat info zppi pak.. 14:04

120 ton hanya sehari penangkapan komoditas ikan tuna pak.. 14:05

# Remote Sensing to increase Tax



Pleiades (22 Mei 2012)



Pleiades (5 Ags 2015)



Sebelum



Sesudah



Land clearing (Landsat-8)



Oil plam growing (Landsat-8)



Oil palm harvest (Landsat-8)



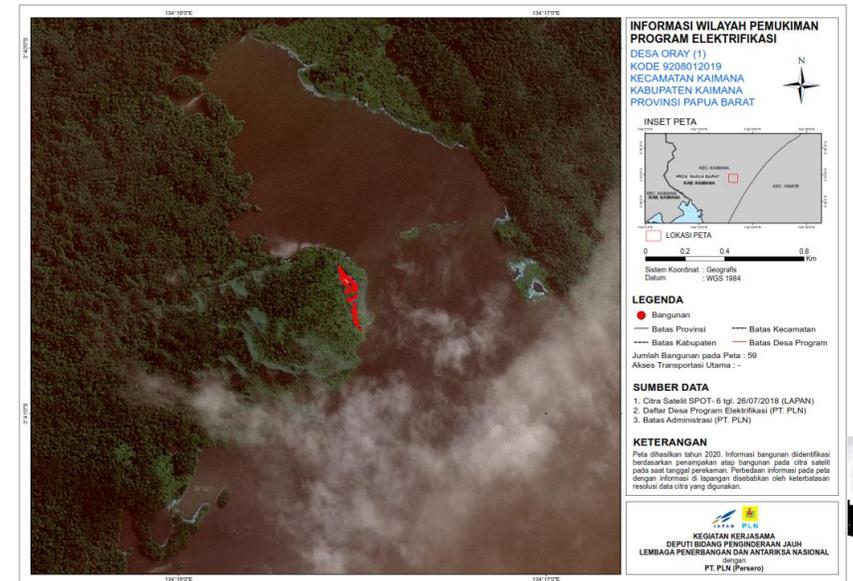
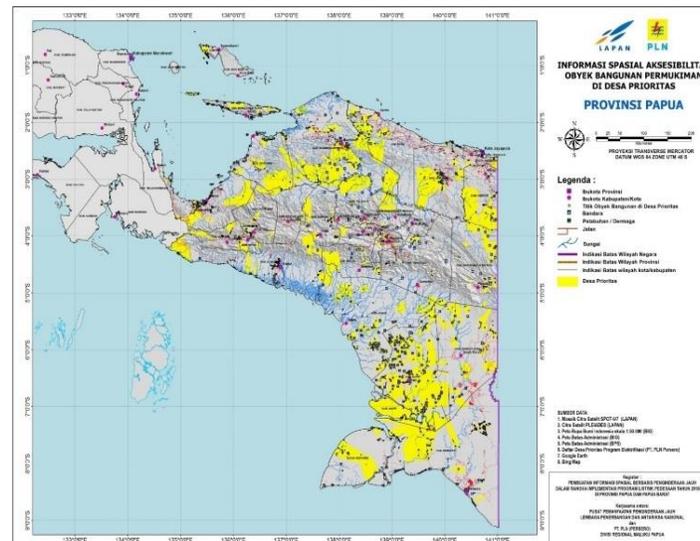
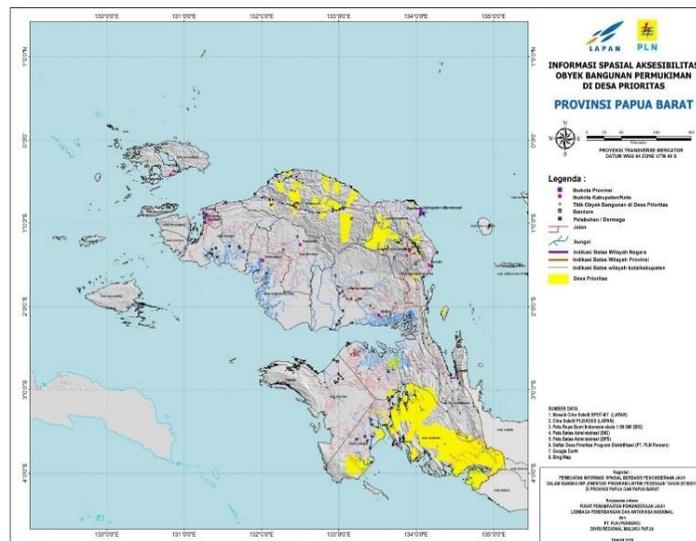
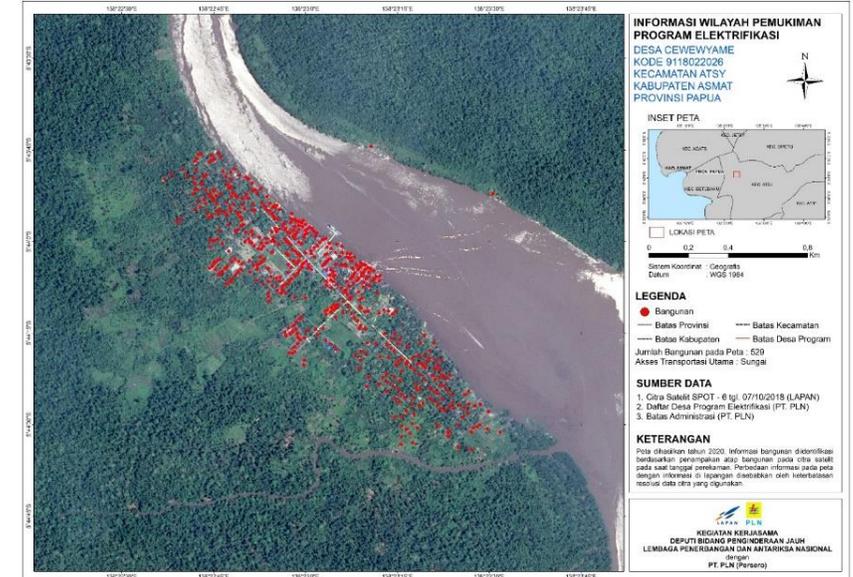
Oil palm monitoring



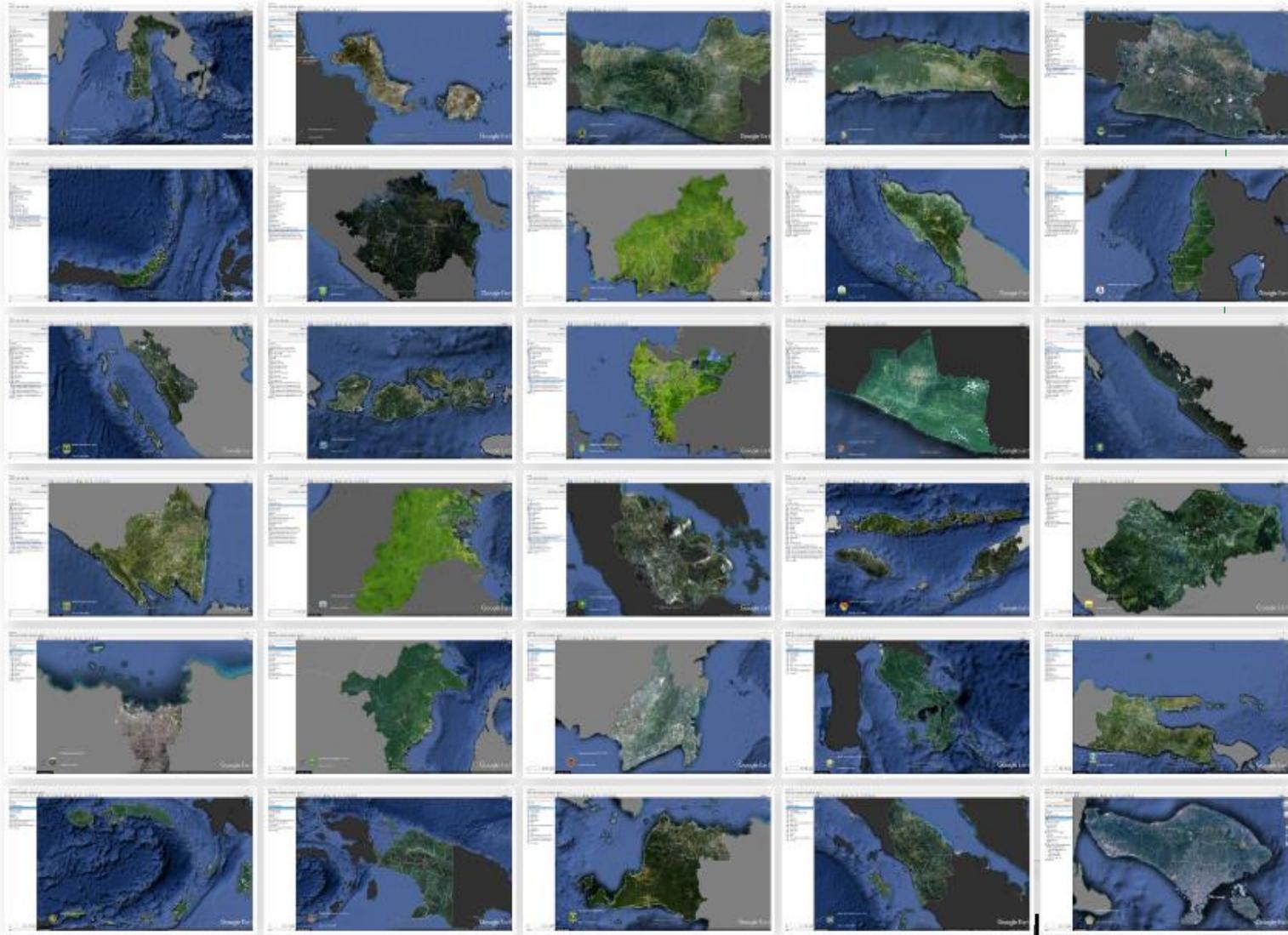
Oil palm monitoring



# Remote Sensing for Electricity Support (Papua Project)



# Local governments support



# National Cooperation Network K / L



BADAN INFORMASI  
GEOSPASIAL



**BMKG**



**B N P B**



KEMENTERIAN NEGARA LINGKUNGAN HIDUP  
DAN KEHUTANAN  
REPUBLIK INDONESIA



KEMENTERIAN KOORDINATOR  
BIDANG KEMARITIMAN



KEMENTERIAN KEUANGAN  
REPUBLIK INDONESIA



PT PERIKANAN NUSANTARA ( PERSERO )



KEPOLISIAN NEGARA  
REPUBLIK INDONESIA



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KESEHATAN  
REPUBLIK  
INDONESIA



KEMENTERIAN  
PEKERJAAN UMUM DAN  
PERUMAHAN RAKYAT



WRI INDONESIA

KEMENTERIAN PERTANIAN  
REPUBLIK INDONESIA



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YAQHANYELAY  
SUKSAMA  
EKHMET  
TINGKI  
BIYAN SHUKRIA  
THANK  
YOU  
BOLZIN  
MERCICI



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