

LEMBAGA PENERBANGAN DAN ANTARIKSA NASIONAL



## INDONESIAN RSO ACTIVITIES IN 2020 AND THE NEXT YEAR PLANNING

5 November 2020







## **Presentation Outlines**

- Overview Indonesian RSO (2013 Now)
- 2020 Activities
  - Pre-Disaster
  - Monitoring
  - Disaster response
  - Capacity building
  - Sharing Platform and Stakeholders
- Regional Activities (Covid-19 Response, Smart Cities)
- 2021 Planning

# **Overview RSO Indonesia Activities**





### Signed as RSO, 19 February 2013









· 1 st ASEAN WORKSHOP on "Development of Mechanisms for Acquisition and Utilization of Space-Based Information during Emergency Response", 15-16 April 2014, Yogyakarta Indonesia

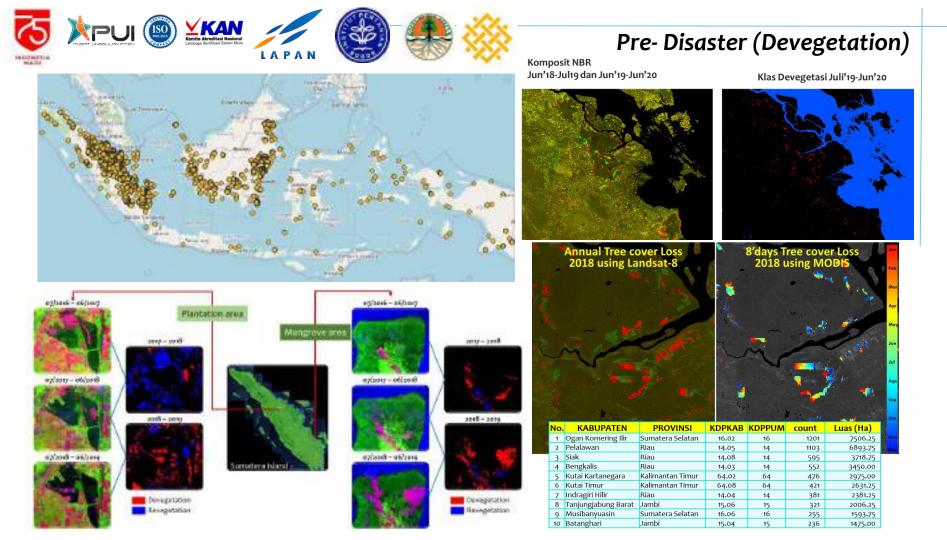


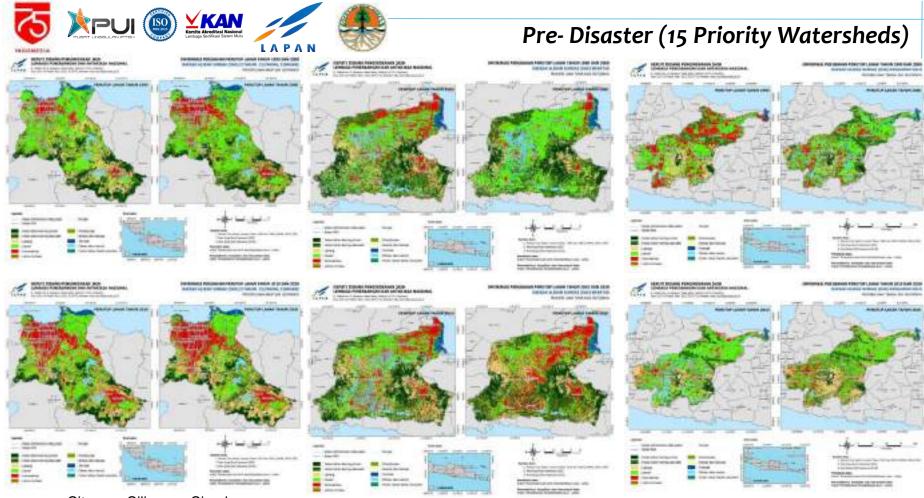
 4 nd ASEAN WORKSHOP on 'Simulation exercise on the procedural guidelines for sharing space-based information during emergency response', 19-21 April 2016, Bogor, Indonesia





Sharing Space-based Information Procedural Guidelines for Disaster Energentry Response in ASEAN Countries



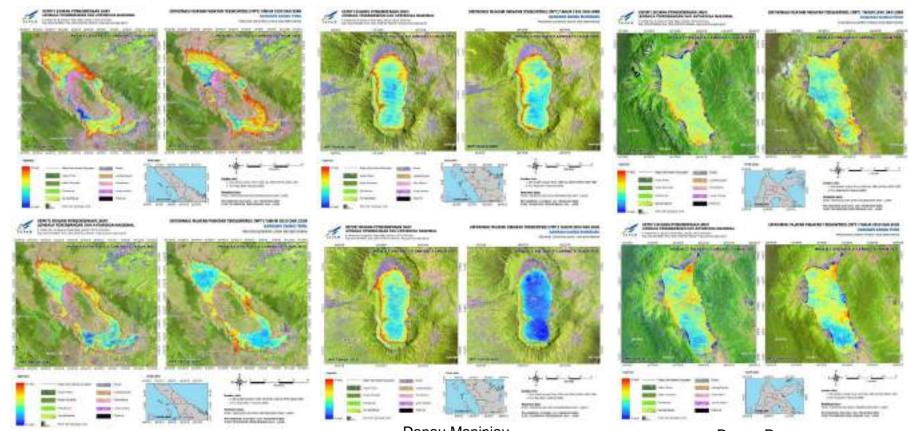


Citarum, Ciliwung, Cisadane 1990-2000 and 2010-2020

Brantas 1990-2000 and 2010-2020 Bengawan Solo 1990-2000 and 2010-2020



### Pre- Disaster (15 Priority Lakes)



Danau Toba 1990-2000 and 2010-2020 Danau Maninjau 1990-2000 and 2010-2020

Danau Poso 1990-2000 and 2010-2020



## Pre- Disaster (Urban Change)

Tahun 2015

Tahun 2016

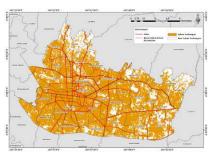




Kelas	Luas Lahan Terbangun (Ha)	
	Tahun 2015	Tahun 2016
Lahan Terbangun	7.115,9	5-977,3
Non Terbangun	9.773,1	10.911,1

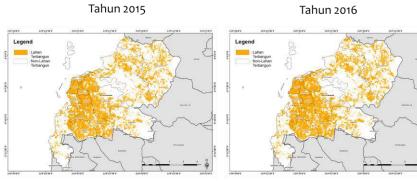
Tahun 2019

Tahun 2020





Kelas	Luas Lahan Terbangun (Ha)	
	Tahun 2019	Tahun 2020
Lahan Terbangun	7229.5	6191.1
Non Terbangun	9658.7	10697.9



Kelas	Luas Lahan Ter	Luas Lahan Terbangun (Ha)	
	Tahun 2015	Tahun 2016	
Lahan Terbangun	3.717,9	2.933,2	
Non Terbangun	13.775,9	1.4561,4	

Tahun 2019

Tahun 2020



Lahan Terbangun Non-Lahan Terbangun	\$0 F7	Te			) - ć
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Kelas	Luas Lahan Terbangun (Ha)	
	Tahun 2019	Tahun 2020
Lahan Terbangun	5.151,9	3.116,9
Non Terbangun	12.337,5	14.376,5



(m/tahun)

-0.08 - -0.02 -0.02 - -0.009

Rata-rata land subsidence

-0.043- -0.001

-0.001- 0.023

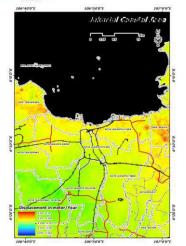
0.023-0.049

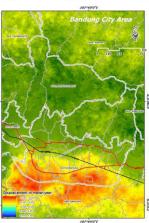
0.049- 0.074

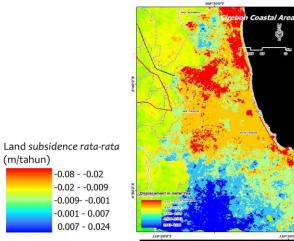
0.074-0.109

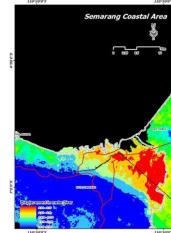
(m/tahun)

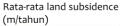
### **Pre-** Disaster (Land Subsidence)

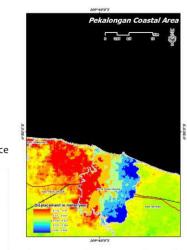


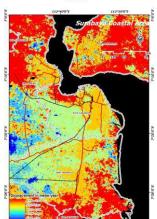












Rata-rata land subside	ence
m/tahun)	

-0.1120.07
-0.070.047
-0.0470.021
-0.021- 0.004
0.004- 0.046

Rata-rata land subsidence (m/tahun)

-0.043- -0.02 -0.02 - -0.017 -0.017- -0.003 -0.003 - 0.052 0.052-0.103

0.041- 0.078

Rata-rata land subsidence

-0.06- -0.03

-0.03- -0.018

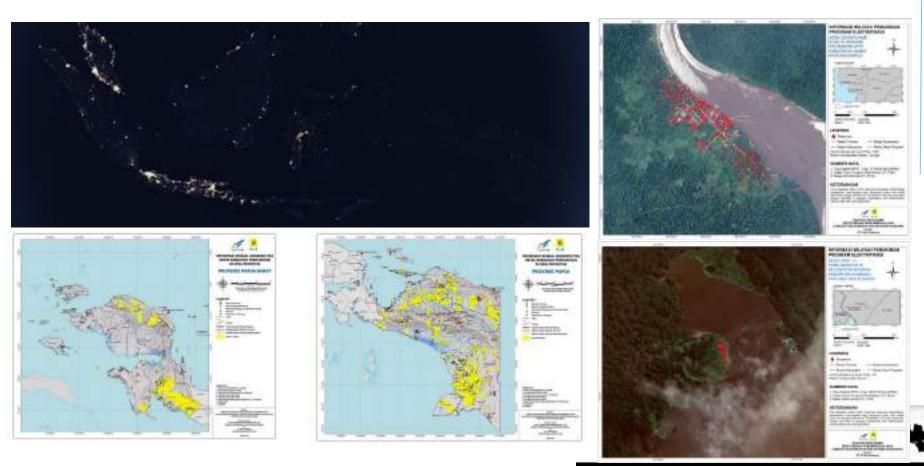
-0.018- -0.009

-0.009-0.041

(m/tahun)



## Electricity program at Papua





## **Disaster Monitoring**



### Fire Danger Rating System (FDRS)



#### Daily potential flood information



#### Monthly drought monitoring



Hotspot information as forest fire indicators



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Contra -----102

### **Disaster Response**

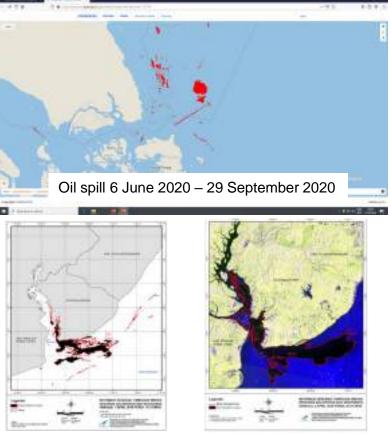


Flood Impact (Luwu, Sulsel, 2020)

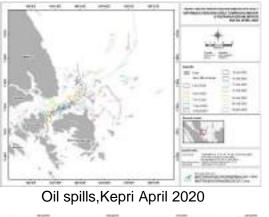
Flood Impact (Lebak, Banten, 2020)

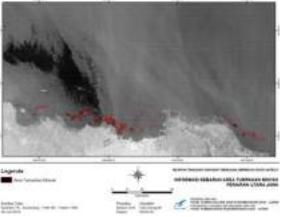


## Disaster Response (oil spills monitoring)



Oil spills in Balikpapan 2018





Oil spills in North Coast of Java 2019



LAPAN

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SYLNDARI.

## **Burned Area Mapping**

INFORMAST TANGGAP DARLIKAT BENCANA BERBASES DATA SATELET PENETHDERAAR BUSH SEBARAN ASAP DAN LOKASI TITUK PANAS (HOTSPOT) PROVINSI PAPUA

#### TANGGAL 09 OKTOBER 2020



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**Calabat** 

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ADDRESS ADDRESS OF ADD

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LEMBAGA PENERBANGAN DAN ANTARDISA NASIONAL

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Hotspiel Sengoli 07.10-2828

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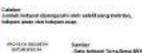


Links





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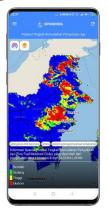
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## List of disaster response in 2020

No.	Disaster	Number of Products (Internal)	Number of Products (supported by sentinel asia and international charter)
1	Flood	86	58
2	Landslide	2	0
3	Forest fires	22	0
4	Earthquake	0	0
5	Tsunami	0	0
6	Volcano Eruption	3	0
7	Oil Spills	84	0

## **Digital Services**



## SIPANDORA

SISTEM PEMANTAUAN BUMI NASIONAL BERBASIS ANDROID



### http://spbn.pusfatja.lapan.go.id





#### Navigasi bagi nelayan

#### http://modis-catalog.lapan.go.id/monitoring/



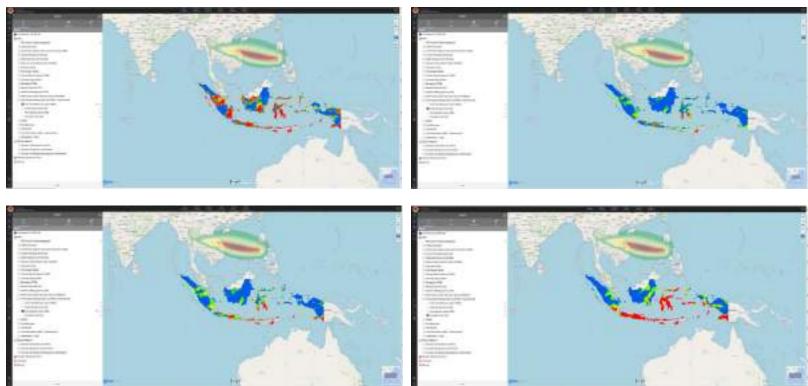
### Fire hotspot monitoring







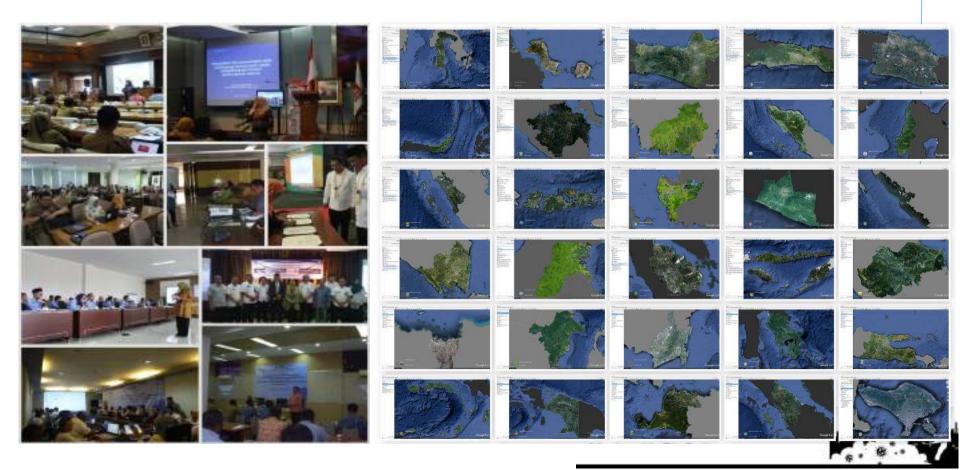
## Integration Products (with BNPB)



https://inaware.bnpb.go.id/inaware/



## Capacity Building (Local governments support)





# **National Collaborations**



BADAN INFORMASI **GEOSPASIAL** 





PB R

**KEMENTERIAN** 

PEKERJAAN UMUM DAN

Kementerian PPN/

PERUMAHAN RAKYAT

Bappenas



KEMENTERIAN KOORDINATOR **BIDANG KEMARITIMAN** 



**KEMENTERIAN KEUANGAN REPUBLIK INDONESIA** 





KEMENTERIAN NEGARA LINGKUNGAN HIDUP DAN KEHUTANAN REPUBLIK INDONESIA













**KEMENTERIAN** 



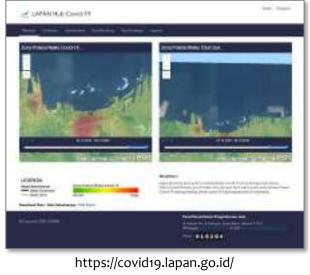








## Regional Activities (Covid-19 Response, Smart Cities)



Tahun 2019

Tahun 2020





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(https://www.unescap.org/sites/default/files/Space-Technology-Applications-for-Combatting-COVID-19-Pandemic-Developmentof-LAPAN-Hub-COVID-19\_LAPAN.pdf)



# 2021 Planning

- Continue on pre-, monitoring, disaster response
- Enhance sharing platform with stakeholders
- Continue on capacity building for local government and student
- Conduct training with UN ESCAP (Covid-19 and smart cities)
- Collaborations with DLR, AIT, and ADB on tsunami risk assessment





## Terima kasih

## www.pusfatja.lapan.go.id