



Webinar
2023 El Niño Season and Transboundary Haze

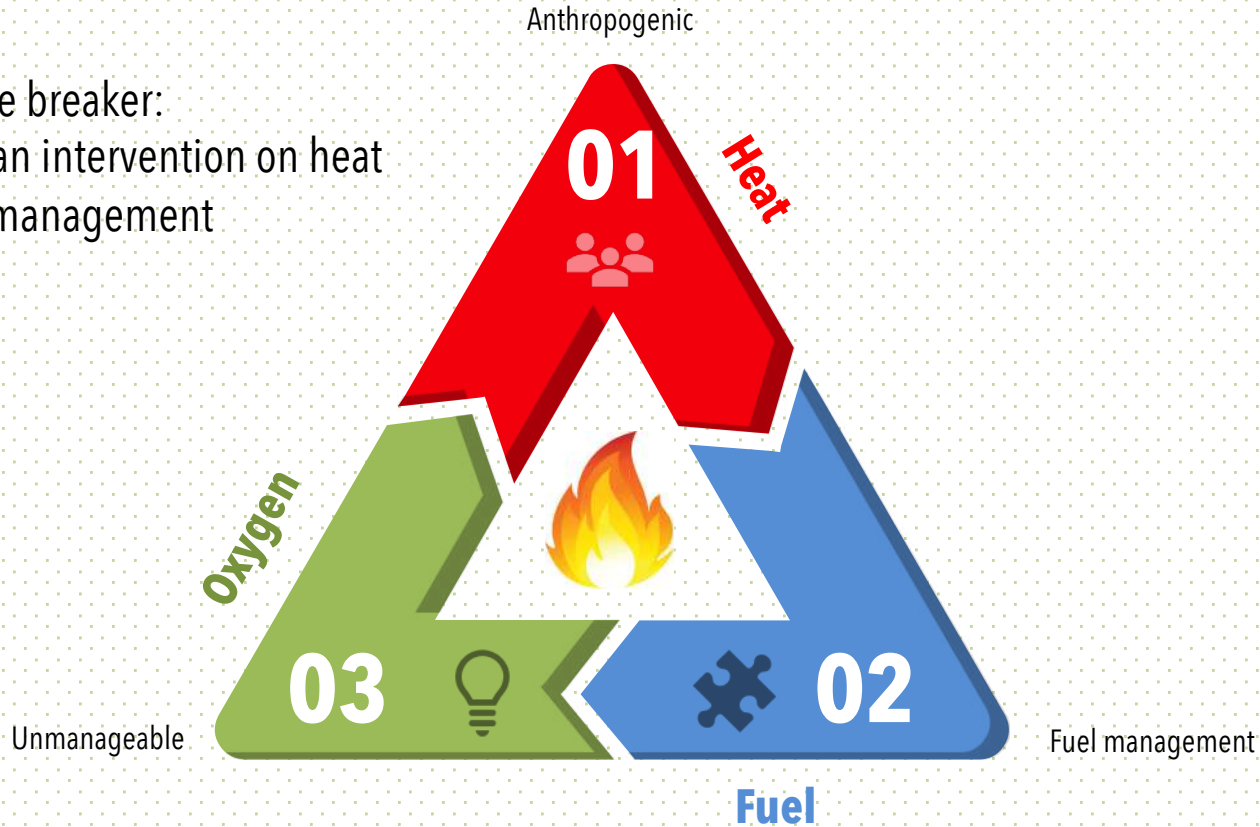
11 May 2023

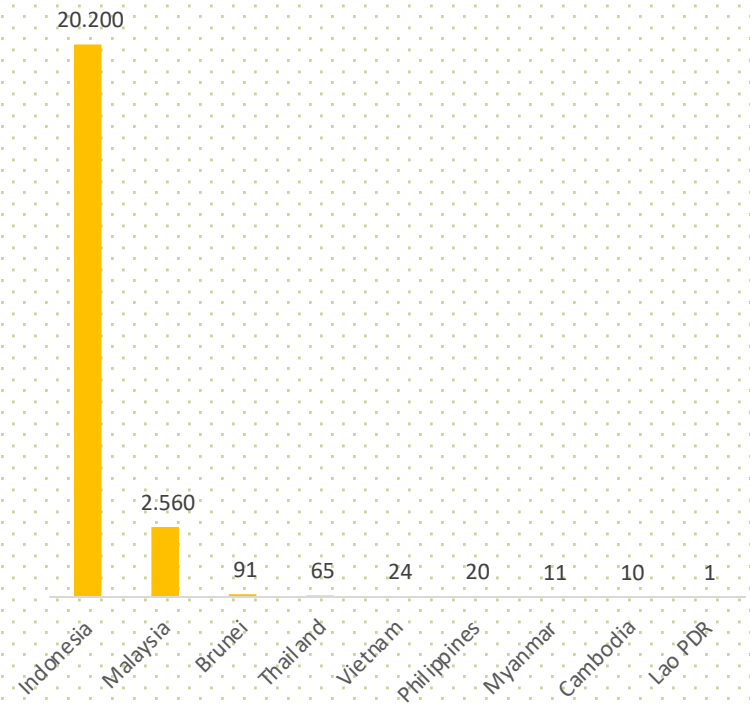
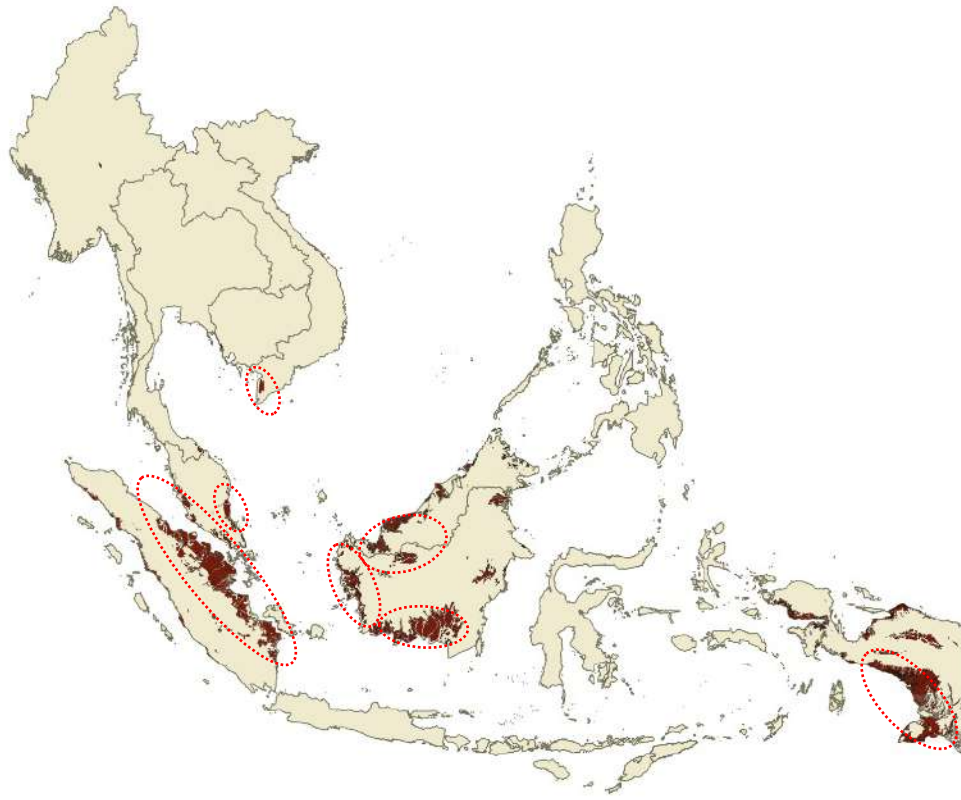
Implementing measures to prevent fires and transboundary haze

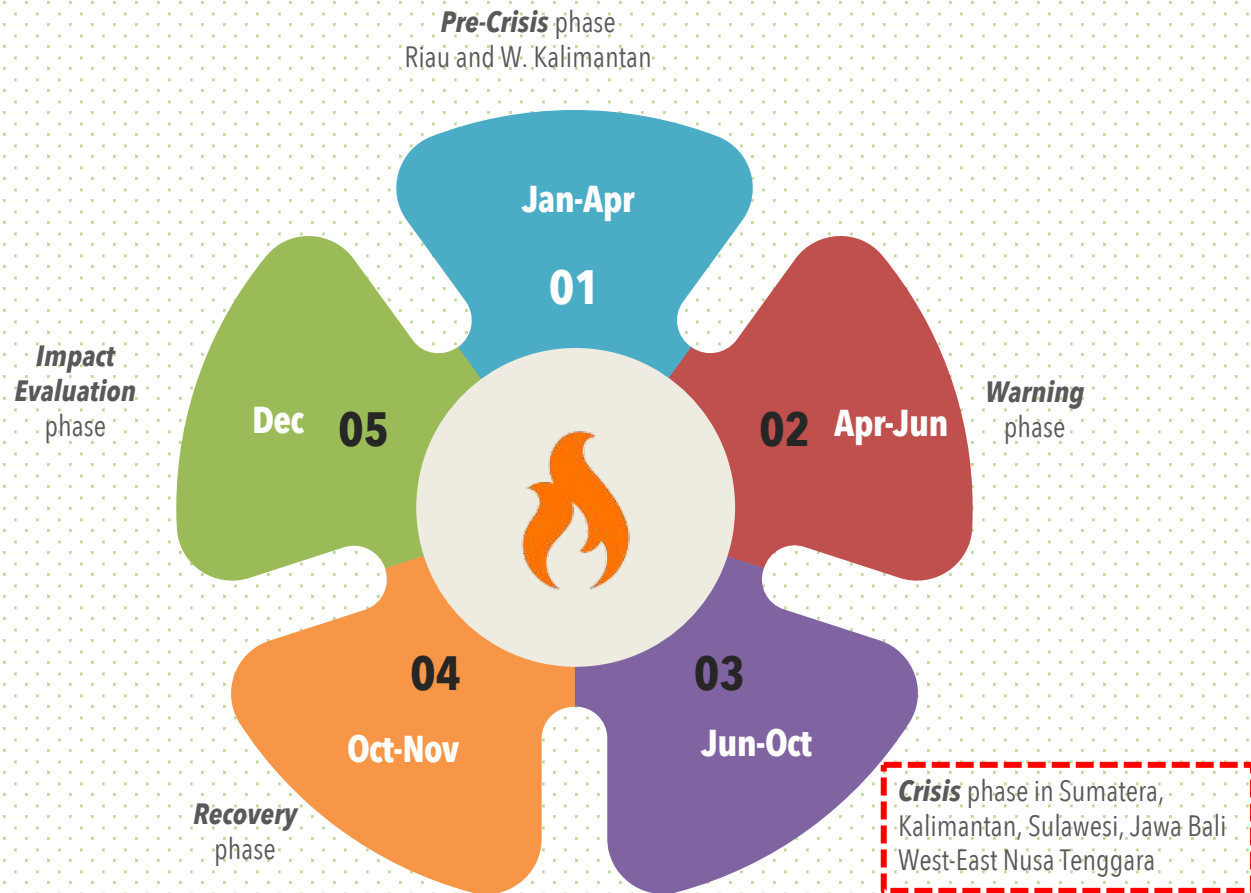
Dr. Israr Albar
Deputy Director for Fire Suppression
Directorate of Forest and Land Fire Management
Ministry of Environment and Forestry, Indonesia

Forest Fire breaker:

- Human intervention on heat
- Fuel management







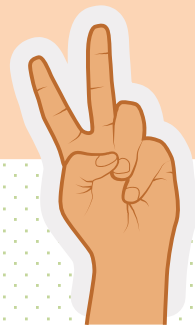
PREVENTION

- **Regulations** & Strengthening Coordination
- **Early warning** and **early detection**
- **Integrated** Fire Prevention **Patrol**
- **Campaign** and capacity building
- Land Clearing **Without Burning** Practices (PLTB)
- **Fire Care Community**/Masyarakat Peduli Api
- **Weather Modification** (peat re-wetting)



SUPPRESSION

- **Ground** suppression
- **Joint suppression** (Inter-agencies)
- Air Operation: **Water bombing**, Surveillance



POST FIRE

- **Law** Enforcement
- **Burned area** estimation





1997



NOAA

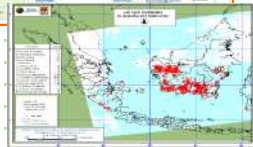
- Ground station Bogor-Jakarta
- Dissemination: radio, fax, email



2001

Dissemination :

- Radio
- Fax
- Email
- TV



Mailing list Sipongi at yahoo groups

2006



L-X band at rooftop (dome)-relay NOAA, Terra/Aqua hotspot

2009-2011

Collaboration Indonesia-Australia
www.indofire.org

2014-2016

Re-launch Sipongi

www.sipongi.menlhk.go.id

Integration Sipongi and KMS

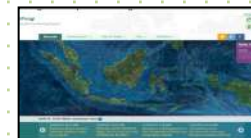
- Fully automatic
- Dual Interface (Public and Internal)
- NOAA only
- Social media (Facebook and twitter)

2017- 2018



- Hotspot (NASA and LAPAN) Terra Aqua, NOAA and SNPP
- Cluster hotspot → for ground check
- Update every 30 minute
- Social media (Instagram, Youtube)

2019



- Landsat hotspot from LAPAN and NASA
- Mobile app (Android)
- SMS blast (with Ministry of Informatics)
- Online based Reporting (private sector)

2020



- Refresh dashboard,
- Added GC direction on Mobile app (Android)

2021



- Sipongi+
- Weather forecasts, peat water level, LFC
- Mobile app (IOS)

2022

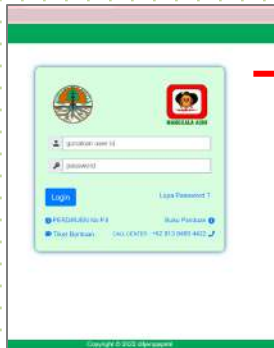


- Refresh Dashboard
- Shp automatic
- Online Based Report (GC and Suppression)



Data and Information in SiPongi Public :

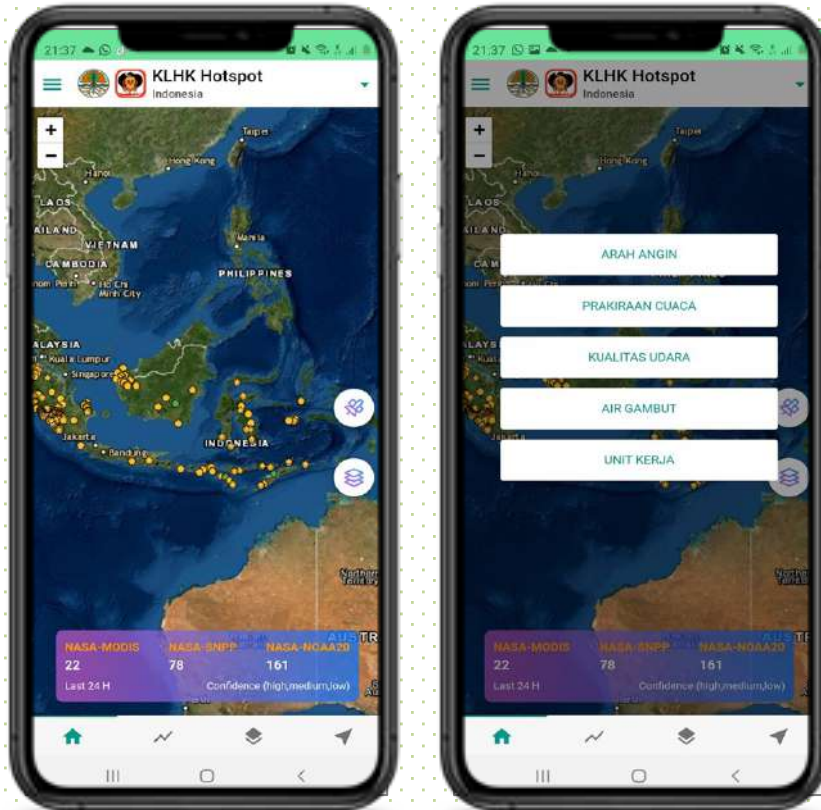
- Hotspot
- Wind direction
- Weather forecasting
- Air quality
- Peat water level
- LFC (Daops) Location
- Burnt area and emission
- Regulation
- News
- **Private Sector Reporting**



→ **Private Sector Online Reporting** →
Registration needed

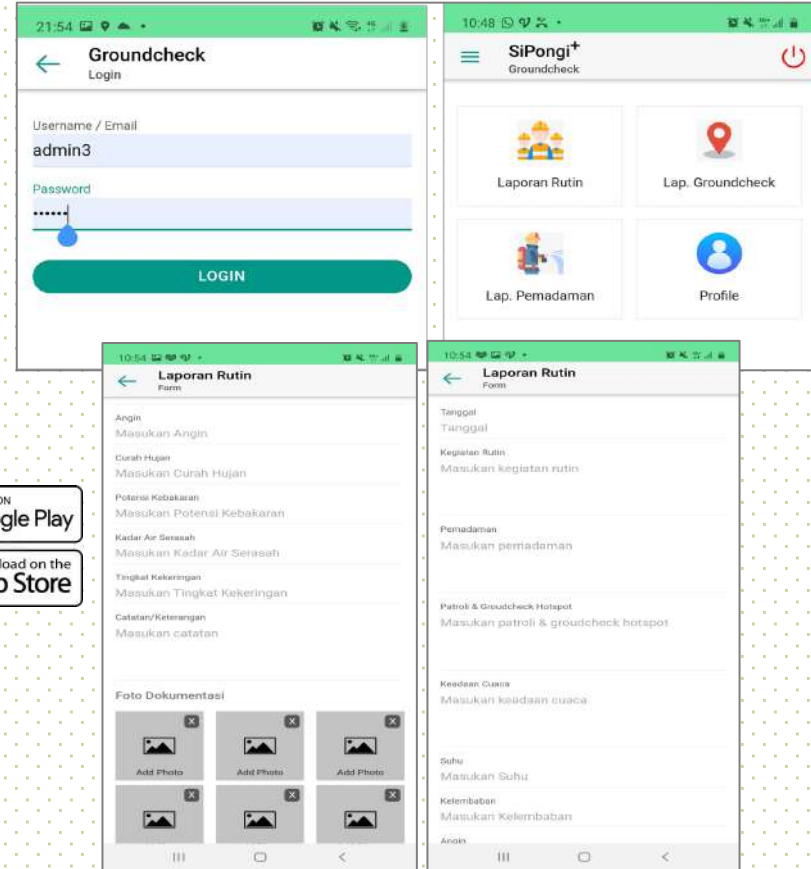
Fire Danger Rating System → Data from BMKG (Indonesian Meteorology, Climatology and Geophysics Agency)

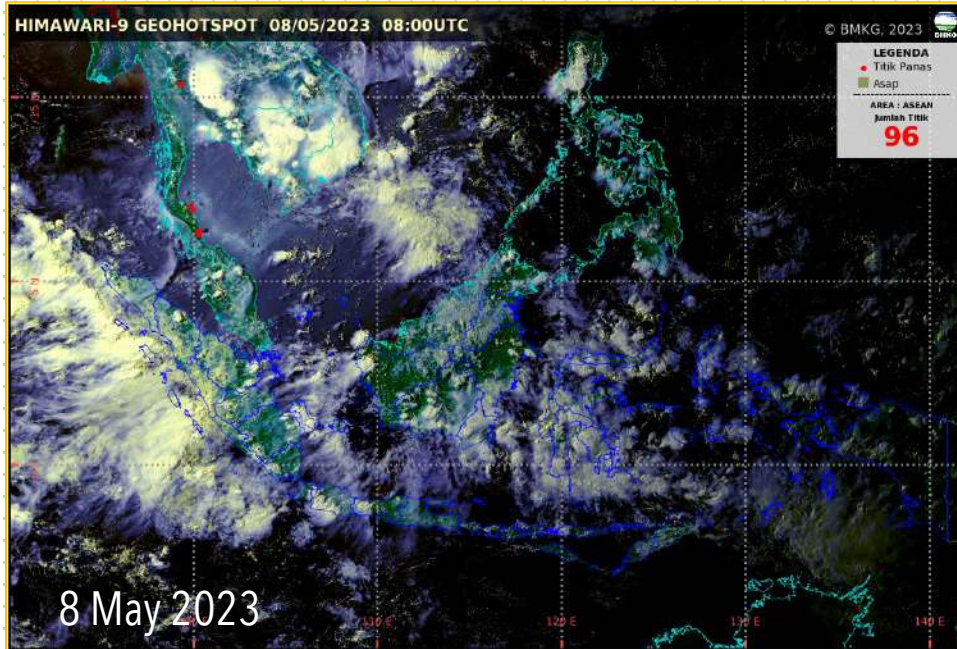




Basically have the same Data and Information with SiPongi Web

Groundchecking and Suppression Reporting → personnel only-registration needed

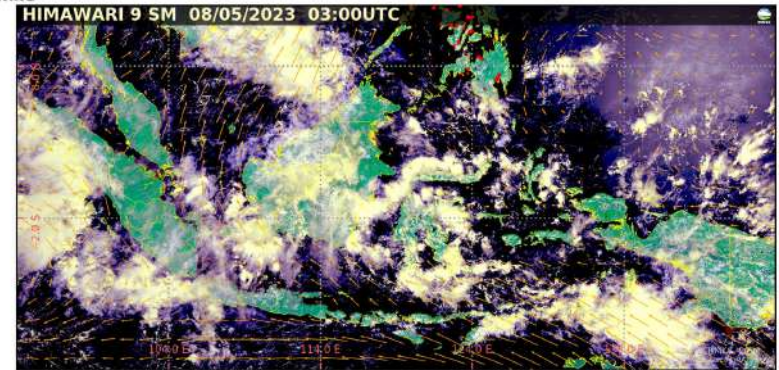




Potential forest and land fires can be observed by satellite of Himawari-8, using infrared channel brightness temperature for cloud filtering, as well as determining heat anomalies that indicate the potential for forest fires (red dots). In addition, RGB images are also displayed on visible channels and near infrared to detect the distribution of smoke (yellow-brown) to better ensure that the area of fire occurs.

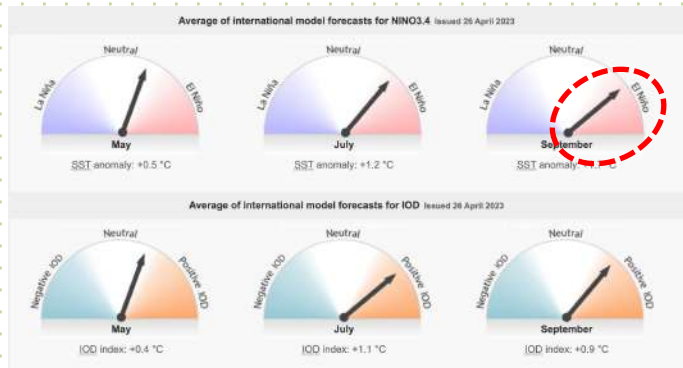


CITRA SEBARAN ASAP WILAYAH INDONESIA 08 MEI 2023 PUKUL 10.00 WIB

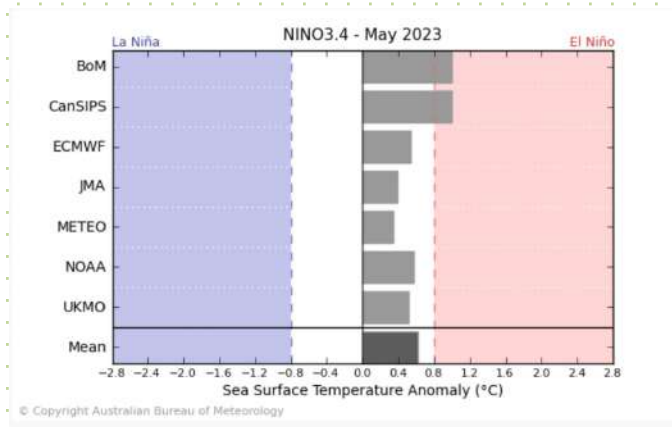


- Tidak terdeteksi asap di wilayah Indonesia.
- Arah angin di Indonesia pada umumnya bertiup dari Timur – Selatan ke Barat – Utara.
- Tidak terdeteksi adanya *Transboundary Haze*.

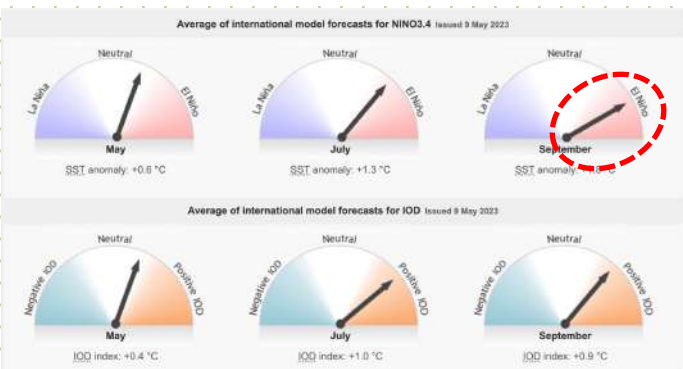




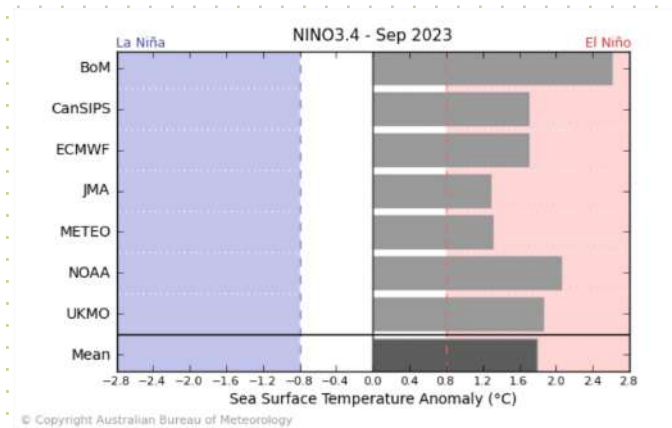
April 29



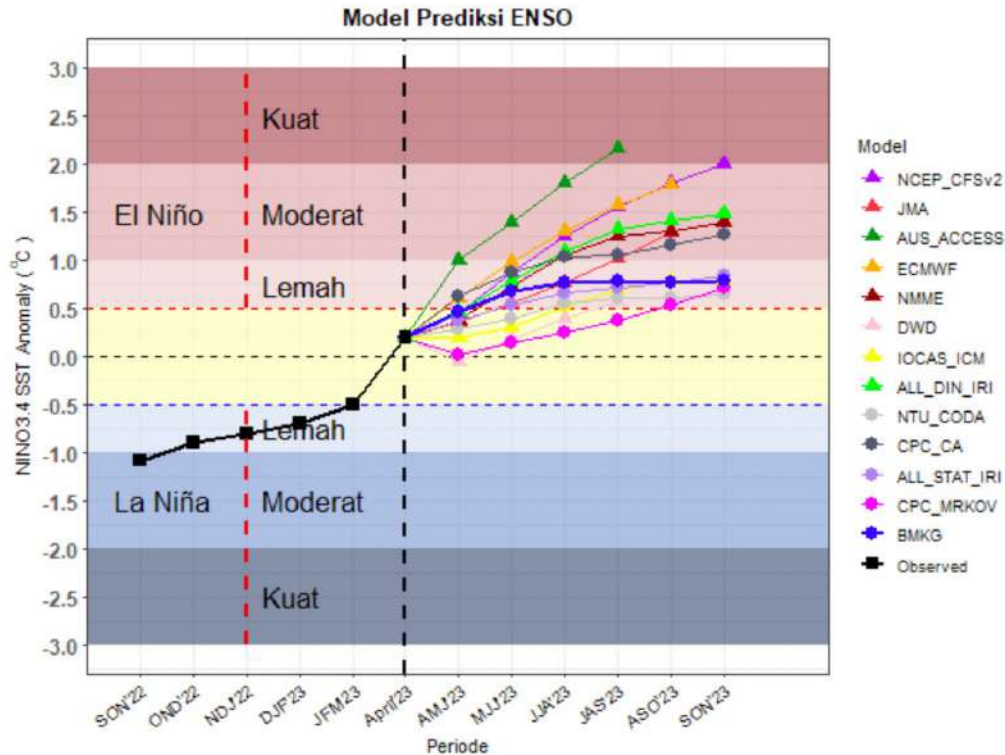
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May 9

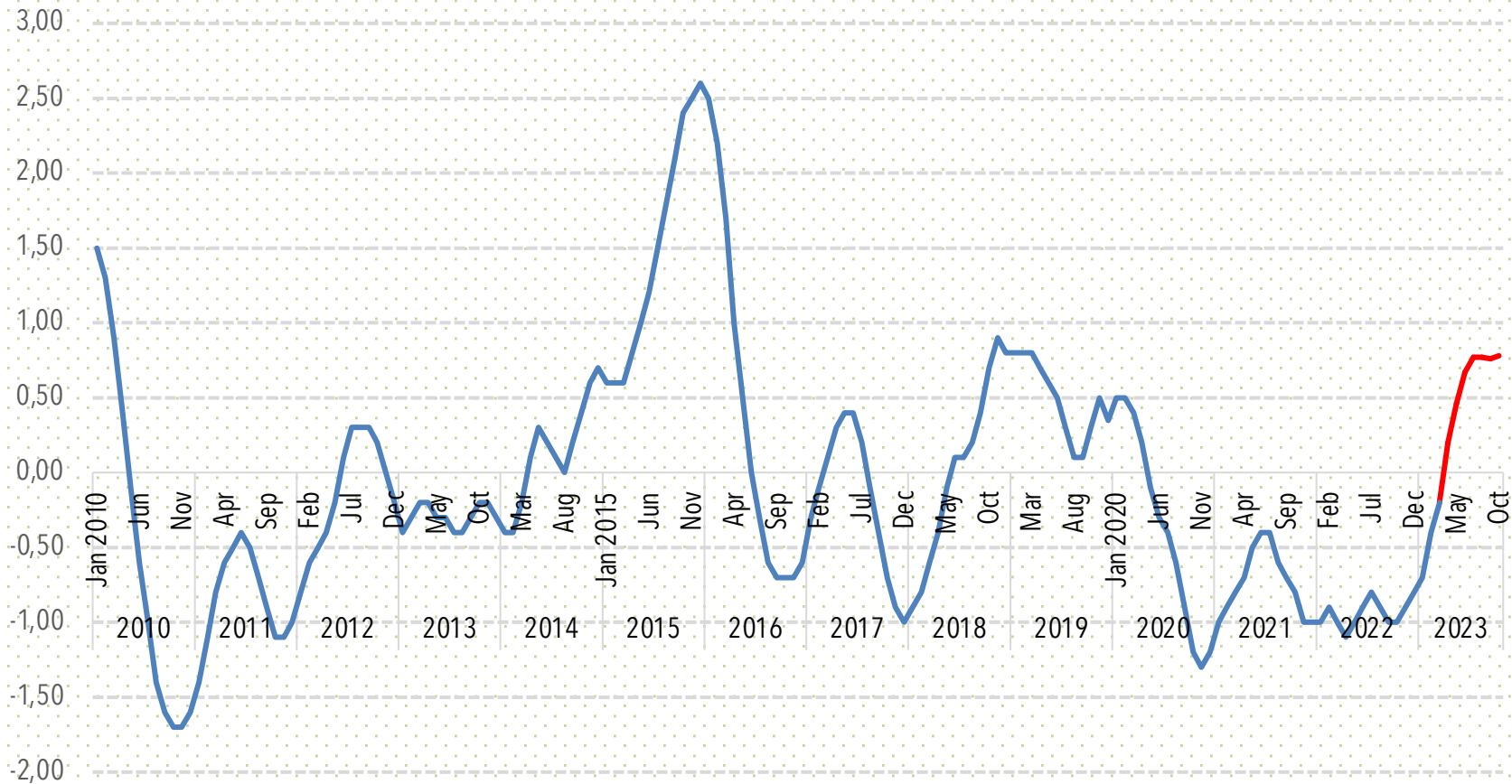


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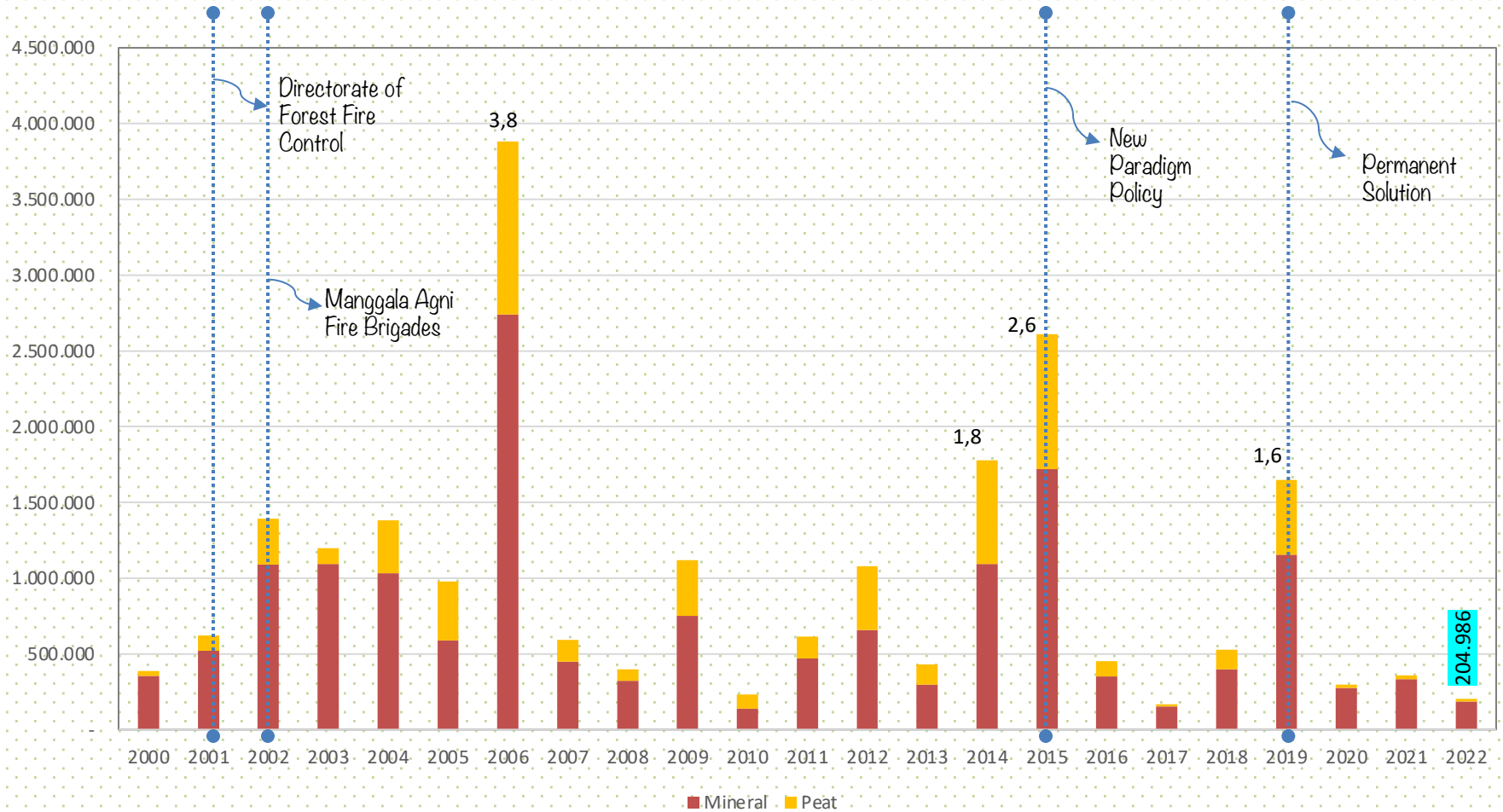
The monthly ENSO index in April 2023 is +0.20 (Neutral).
 BMKG and several World Climate Centers predict ENSO Neutral Conditions and there is a chance of El-Niño in semester II 2023.

Prediksi ENSO BMKG					
AMJ'23	MJJ'23	JJA'23	JAS'23	ASO'23	SON'23
0.46	0.67	0.77	0.77	0.76	0.78





NO.	Provinsi	JANUARI		FEBRUARI		MARET		APRIL		MEI		JUNI		JULI		AGUSTUS		SEPTEMBER		OKTOBER		NOVEMBER		DESEMBER		JUMLAH		
		Frekuensi Kejadian	Luas Areal ditangani (Ha)	Frekuensi Kejadian	Luas Areal ditangani (Ha)	Frekuensi Kejadian	Luas Areal ditangani (Ha)	Frekuensi Kejadian	Luas Areal ditangani (Ha)	Frekuensi Kejadian	Luas Areal ditangani (Ha)	Frekuensi Kejadian	Luas Areal ditangani (Ha)	Frekuensi Kejadian	Luas Areal ditangani (Ha)	Frekuensi Kejadian	Luas Areal ditangani (Ha)	Frekuensi Kejadian	Luas Areal ditangani (Ha)	Frekuensi Kejadian	Luas Areal ditangani (Ha)	Frekuensi Kejadian	Luas Areal ditangani (Ha)	Frekuensi Kejadian	Luas Areal ditangani (Ha)	Frekuensi Kejadian	Luas Areal ditangani (Ha)	
1	Aceh					0,00				5	85,01	9	86,00	1	0,00	6	7,00					0,00		0,00			21	178,01
2	Sumatera Utara	4	10,00	2	7,50	43	81,00	22	61,70	18	27,30	32	76,00	66	239,75	36	333,00	31	93,50	10	37,00	1	0,00			265	966,75	
3	Riau	28	148,00	13	25,00	78	253,44	56	328,60	28	50,59	59	180,15	82	242,35	38	186,26	5	26,00			0,00	5	2,67			392	1.440,39
4	Sumatera Barat					9	7,00	11	11,00													0,00		0,00			20	18,00
5	Kepulauan Riau	1	1,00	1	3,00		7,00															0,00		0,00			2	11,00
6	Jambi	2	3,00	4	2,00	25	39,73	10	18,40	18	23,10	15	28,60	20	33,65	27	63,75	31	39,65	1	1,00	11	13,05	1	0,30	165	252,88	
7	Sumatera Selatan	1	2,00	3	2,25	11	17,00	6		19	22,30	17	29,00	26	39,18	34	99,94	31	47,86	10	10,00	3	0,75			161	269,53	
8	Kep. Bangka Belitung														2	2,50		2	0,70			0,00		0,00			4	3,20
9	Bengkulu					2	0,00											2	0,70			0,00		0,00			2	0,00
10	Lampung	6	109,00	1	247,00		0,00			2	85,01							1	75,00	1	40,00	1	700,00	2	5,00	14	556,01	
11	Kalimantan Barat	15	22,35	36	78,70	145	583,72	66	123,48	52	94,20	31	30,90	150	224,79	136	130,87	50	42,50	6	4,45	2	0,50	1	2,00	690	1.335,96	
12	Kalimantan Tengah	12	21,20	17	58,17	21	53,42	12	79,59	10	24,72	11	38,74	20	20,05	21	54,29	32	86,09	13	2,63	9	10,40	3	1,83	181	438,90	
13	Kalimantan Selatan	2	0,00	6	16,50	6	8,03	11	43,00	6	5,50	13	26,00	14	22,50	28	47,36	83	101,67	6	10,97	4	4,92			179	281,53	
14	Kalimantan Timur	4	5,00	4	5,00	14	18,50	8	18,00	12	15,50	20	27,50	10	8,00	36	36,00	108	166,50	17	18,55	7	6,00	5	6,00	245	318,55	
15	Kalimantan Utara			1	1,00	3	0,05	4	8,00	4	3,00	8	27,50	3	1,00	30	68,14	23	26,00	2	2,00	3	2,50			81	136,69	
16	Sulawesi Tengah			1	1,00		0,00												6	75,50						7	76,50	
17	Sulawesi Selatan	1	10,00	3	8,00	1	0,00	3	14,00						2	2,50	11	62,81	5	15,50			0,00		0,00	26	112,81	
18	Sulawesi Utara					1	0,20			1	0,00				1	0,40					1		0,00	1	0,00	4	0,60	
19	Sulawesi Tenggara					1	0,00	7	183,12	1	6,39							1	11,79	1	2,70			0,00		11	204,00	
20	Gorontalo					1	0,00	1	1,10													0,00		0,00			2	1,10
21	Jawa Barat																	5	0,00			0,00		0,00			5	0,00
22	Jawa Timur														8	16,93	5	6,05			0,00	1	0,00			14	22,98	
23	Nusa Tenggara Barat					0,00						4	89,76	1	45,00	3	0,00					0,00		0,00			8	134,76
24	Nusa Tenggara Timur					0,00								1	2,09	1	30,00					0,00		0,00			2	32,09
25	Papua Barat											1										0,00					1	0,00
26	Papua					1	0,00					2						2				0,00		0,00			5	0,00
Total		76	331,55	92	455,12	362	1.069,09	217	889,99	176	443	218	550	396	921	407	1.096	425	816,13	78	220,30	48	740,79	12	15,13	2.507	7.548,15	





NORTH SUMATERA	
1. Sibolangit	62
2. Pematang Siantar	63
3. Labuhan Batu	63

RIAU	
1. Dumai	62
2. Pekanbaru	35
3. Rengat	62
4. Siak	62
5. Batam	32

JAMBI	
1. Jambi	64
2. Muara Bulian	32
3. Bukit Tempurung	47
4. Sarolangun	62
5. Muara Tebo	62

SOUTH SUMATERA	
1. Banyuasin	64
2. Musi Banyuasin	64
3. Ogan Komering Ilir	64
4. Lahat	64

WEST KALIMANTAN	
1. Pontianak	64
2. Singkawang	61
3. Sintang	91
4. Ketapang	61

EAST KALIMANTAN	
1. Passer	61
2. Sangkima	49

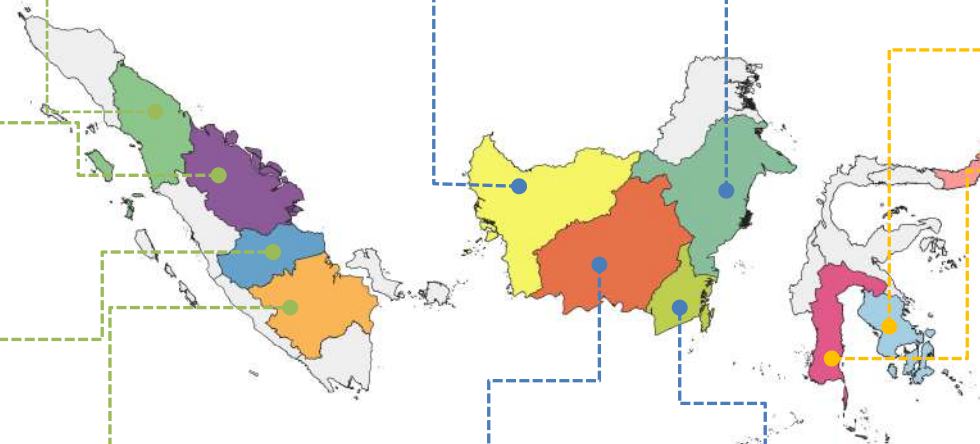
NORTH SULAWESI	
1. Bitung	33

SE SULAWESI	
1. Tinanggea	31

SOUTH SULAWESI	
1. Gowa	64
2. Malili	63

CENTRAL KALIMANTAN	
1. Palangka Raya	80
2. Kapuas	48
3. Muara Teweh	46
4. Pangkalan Bun	62

SOUTH KALIMANTAN	
1. Banjar	63
2. Tanah Bumbu	62
3. Tanah Laut	62



34
LFC



46
workshop



1.901
MA



Manggala Agni
Fire Center,
Ogan Komering
Ilir, South
Sumatera (2021)



Manggala Agni Daops OKI



ASEAN Summit, May 7-12, 2023
Komodo-Labuan Bajo, East Nusa
Tenggara



Daily Hotspot Monitoring (MODIS) (28/3/2022)



Pesisir Selatan Regency, West Sumatera

Ground Check (29/3/2022)

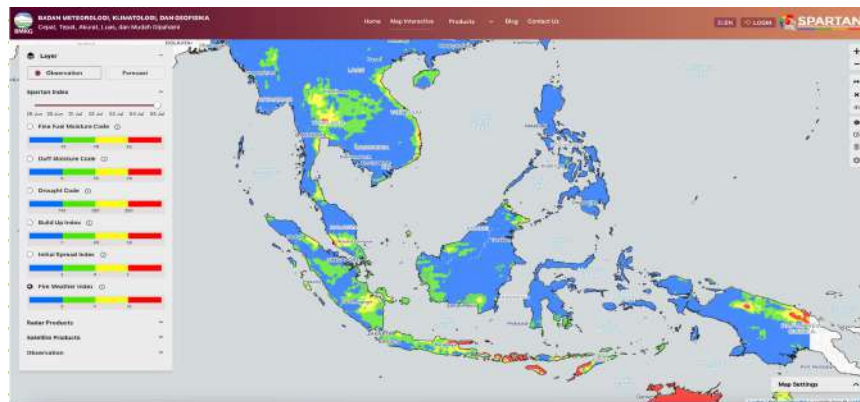


Suppression by Manggala Fire Brigades and stakeholders (30/3-2/4/2022)

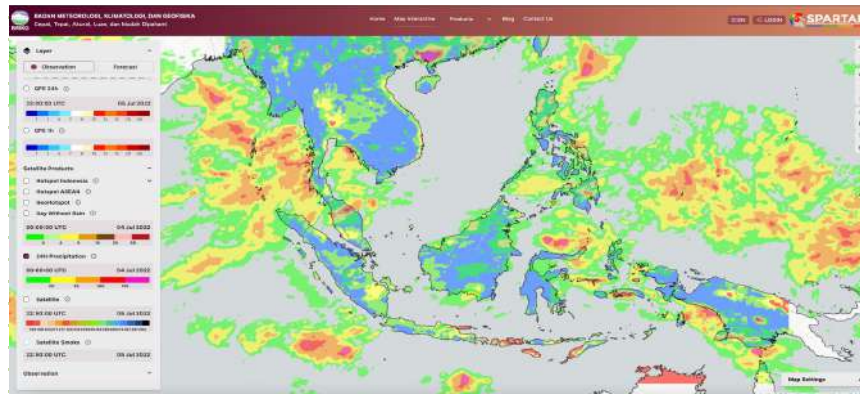


Burned area estimation (Landsat/Sentinel) (11/4/2022)

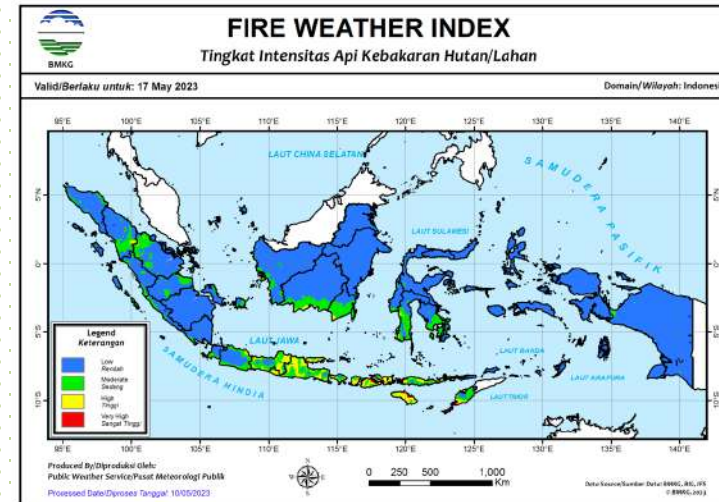




FWI Observation for ASEAN



24H Precipitation



FWI Prediction (D+7) - 17 May 2023

Risk assessment strategies for early detection of ASEAN regions called **SPARTAN** (Integrated and Interactive Forest Fire Warning System). Website: spartan.bmkg.go.id

To build and validate low-cost haze monitoring sensors that can be deployed in remote rural areas to warn rural citizens when too much haze is present.

<https://canarin.net/seahazemon/map.html>

Thailand : 44 nodes

Philippines : 7 nodes

Indonesia : 3 nodes

Laos : 2 nodes





MANGGALA AGNI

Directorate of Land and Forest Fire Management

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