

A LANDSCAPE 360 OCCASIONAL FACT SHEET

Fire in the Protected Areas

Indonesia's conservation estate in the 2026 season

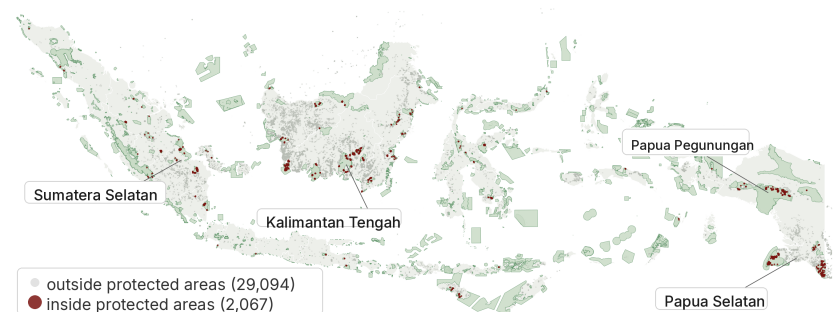


Figure 1. High-confidence hotspots, August 13 to September 5, 2026, against the protected area estate. Green polygons are the non-volcanic protected areas in the WDPA extract. Four provinces are marked for reference, and those labels follow the finer 38-province geometry rather than the 34-province file used in Table 1. Sources: NASA FIRMS; WDPA, UNEP-WCMC and IUCN.

The Share Inside the Boundary

Between August 13 and September 5, 2026, satellites recorded 31,161 high-confidence hotspots across Indonesia, an average of 1,298 a day in 36 provinces. Of those, 2,067 fell inside a protected area and 29,094 fell outside. Seven points in every hundred land in the conservation estate, so most of this season's fire is burning somewhere else.

Inside the estate the points still reach 185 sites out of 881, one in five. Counting every confidence class over the same window gives 31,703 detections at those sites. That figure sits close to the national high-confidence total and measures something different, so the two should never be read as one series.

The season escalated in the second half of the window. The first twelve days carried 12,556 high-confidence points and the next twelve carried 18,605, a rise of 48 percent. August 29 was the peak at 3,356 points.

The Ten Sites

Ten protected sites carry 70.4 percent of everything recorded inside the estate, and twenty-five carry 89 percent. Sungai Barito holds the highest density in the country at 6,201 points per 1,000 km², and the WDPA record still lists it as not designated. Sebangau, peat forest and orangutan habitat, holds 2,939 points. Wasur in Papua Selatan holds 4,195.

Legal strength tracks none of this. IUCN category Ia, the strictest class, holds 7,729 points across 145 sites. Category II, the national parks, holds 10,285 across 42. Protection on paper and protection on the ground are separate things, and targeting the ten sites would reach most of the problem.

The Detection Record

VIIRS supplied 60 percent of the detections and MODIS 40, and seventy percent came from daytime passes. Median fire radiative power was 20.9 MW and the strongest single detection reached 1,705 MW. A one-day spike moves with cloud cover and with the overpass window, so the shape of the curve carries more than any single day in it.

Every point is counted once even where it falls inside several overlapping designations, and thermal anomalies from volcanoes are removed before the overlay.



Landscape
360

Published for the internal network by **Landscape Advisory**, a member of **The Landscape Group**. It accompanies the Climate Change Updates section of Landscape 360.

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The Provincial Breakdown

Two provinces hold 62 percent of the hotspots recorded inside Indonesia's protected areas. Papua has the volume and Kalimantan Tengah has the density, four times as many points for every unit of protected land.

Table 1. Hotspots inside protected areas by province, August 13 to September 5, 2026. Ten provinces, ranked by count, against the national figure.

PROVINCE	SITES	EXPOSED	SHARE	HOTSPOTS	HIGH CONF.	PER 1,000 KM ²	SPECIES
TEN PROVINCES WITH THE MOST HOTSPOTS INSIDE PROTECTED AREAS							
Papua	28	13	46%	9,963	619	133	1
Kalimantan Tengah	26	14	54%	9,733	646	528	2
Kalimantan Barat	21	8	38%	4,444	188	203	1
Jambi	18	4	22%	1,794	225	325	1
Kalimantan Timur	20	8	40%	1,574	63	130	2
Sumatera Selatan	9	5	56%	735	92	271	1
Kalimantan Selatan	35	8	23%	499	25	111	1
Nusa Tenggara Timur	50	15	30%	467	31	9	0
Riau	23	8	35%	348	22	41	3
Lampung	9	2	22%	341	49	103	3
NATIONAL							
All 34 provinces	881	185	21%	31,703	2,060	—	6

Note. Counts cover August 13 to September 5, 2026 and include every confidence class unless the column says otherwise. Density is computed against the protected area itself, not the province. The national high-confidence count inside protected areas is 2,067, of which seven points carry no province attribute, so the column totals 2,060. Nationally 1,720 high-confidence points, 5.5 percent of the total, carry no province attribute at all. Boundaries come from Batas_34_Provinsi, generalized to about 1:5,000,000, which folds Papua Selatan into its parent province.

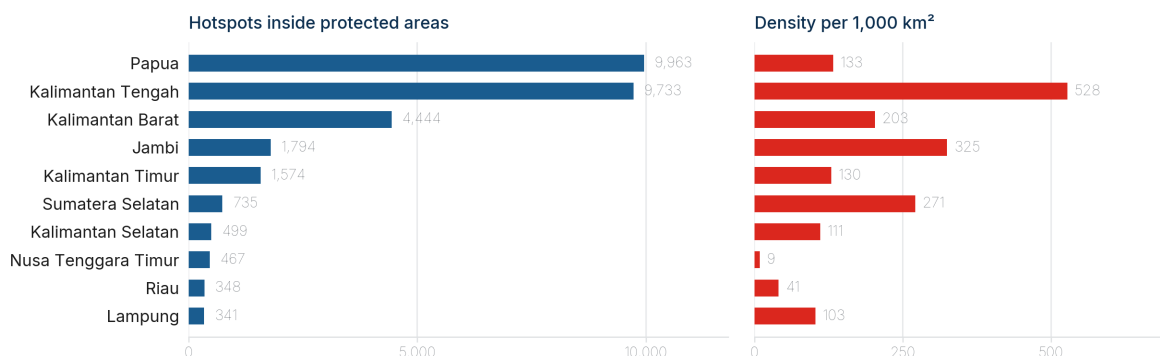


Figure 2. The ten provinces with the most hotspots inside protected areas, August 13 to September 5, 2026. The left panel counts every confidence class. The right panel divides that count by the protected area itself rather than by the area of the province, so the same ten provinces rank in a different order. Sources: NASA FIRMS; WDPA, UNEP-WCMC and IUCN.

Volume and Density

Papua and Kalimantan Tengah record almost the same count and mean different things. Papua holds its 9,963 points across an enormous estate, 133 for every 1,000 km². Kalimantan Tengah holds 9,733 in a far smaller one, at 528. Jambi and Sumatera Selatan sit low in the count and high in the density, at 325 and 271, because their protected areas are small and the fire is right on top of them.

The Kalimantan Share

The five Kalimantan provinces hold 16,268 points inside protected areas, 51.3 percent of the national figure, and four of them are in the top ten. Kalimantan Selatan is the odd one. It carries 35 protected sites, more than any province in the table except Nusa Tenggara Timur, and 499 points across the eight that were touched.

The Concentration of Pressure

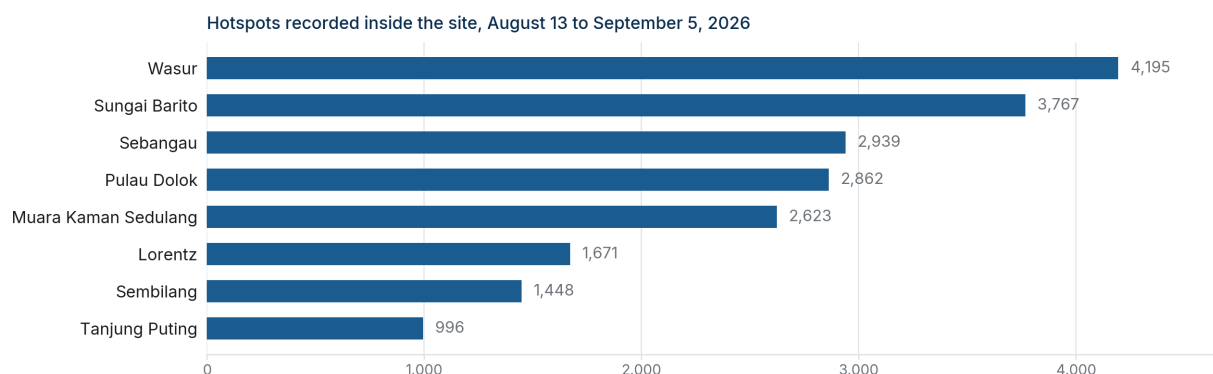


Figure 3. The eight protected sites, with the most hotspots recorded inside them. Sungai Barito also holds the highest density in the country, 6,201 points per 1,000 km², and its WDPA record lists it as not designated. Muara Kaman Sedulang is carried as the source analysis reports it, and the name attaches to two distant polygons. Sources: NASA FIRMS; WDPA, UNEP-WCMC and IUCN.

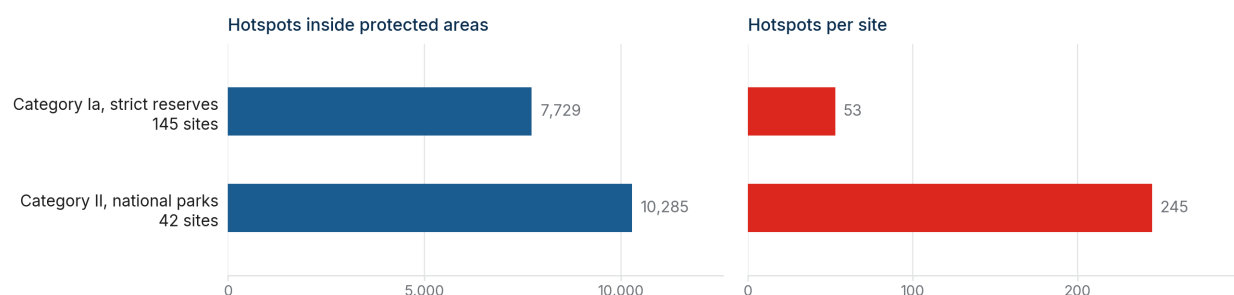


Figure 4. Hotspots inside protected areas by IUCN management class, August 13 to September 5, 2026. Category Ia is the strictest class in the scheme, a reserve managed mainly for science with access tightly limited. Category II is the national park. The strictest class holds fewer points across three times as many sites. Sources: NASA FIRMS; WDPA, UNEP-WCMC and IUCN.

The Geography of the Points

The points inside protected areas fall in three belts. The largest runs through the peat districts of Kalimantan Tengah and Kalimantan Barat, where the sites sit in the same lowlands as the plantations and the drained peat around them. The second runs down the east coast of Sumatera through Sembilang and the Jambi sites. The third is in Papua, at Wasur and Pulau Dolok in the south and in the highland reserves.

Papua Pegunungan is the extreme case of a small province with a large estate. About 60 percent of its points fall inside a protected area, the highest share in the country, because protected land covers so much of it. Kalimantan Barat is the opposite. It recorded 8,413 high-confidence points and 2.2 percent of them landed inside a protected area.

Riau is the quietest of the ten on both measures. It carries 23 protected sites and recorded 348 points across the eight that were touched, a density of 41. Lampung has nine sites, two of them touched, and a density of 103.

Hotspots and Hectares

A hotspot is a thermal detection, not an area. The official burned-area register, SiPongi at the Ministry of Forestry, put the national figure at 202,011 hectares to the end of July 2026, 57 percent of it inside the forest estate. That register lags by about a month and is restated upward as interpretation finishes.

The two measures rank the country differently. Nusa Tenggara, Maluku and Bali hold 52,347 hectares of that total, 26 percent, while barely registering in the daily hotspot series. Grass and savanna burn wide and fast and leave a short thermal signature. Peat smoulders for days and produces repeated detections over small areas. That is why Nusa Tenggara Timur can hold fifteen touched sites at a density of nine, and why a peat site like Sebangau holds 2,939 points in one place.

The register is a mapped burn scar product built from Landsat imagery with field verification, so it answers a different question from a hotspot count. June added 34,901 hectares and July added 94,545. The August figure was not yet published when this sheet went out.

Species Under Pressure

Only 32 of the 881 protected sites carry species occurrence data. The six species in that sample sit under heavy fire pressure, and the layer is thin enough that the sample says as much about coverage as about risk.

Table 2. Fire pressure at the sites where priority species are recorded, same window. Ordered by the hotspot count at those sites.

SPECIES	SITES	EXPOSED	HOTSPOTS	HIGH CONF.	OCCURRENCE	MOST PRESSURED SITE
SIX PRIORITY SPECIES WITH OCCURRENCE DATA						
Bornean orangutan	12	10	8,602	422	395	Sebangau (2,939)
Southern cassowary	6	4	6,564	390	56	Wasur (4,195)
Sun bear	8	6	3,887	240	521	Sebangau (2,939)
Sumatran elephant	6	5	1,266	149	501	Padang Sugihan (661)
Sumatran tiger	6	3	531	58	500	Way Kambas (281)
Sumatran orangutan	2	2	266	13	485	Tropical Rainforest Heritage (242)

Note. Based on the 32 sites that carry occurrence data, 3.6 percent of the 881, holding 2,089 records for six species. One site can record several species, so the hotspot column cannot be summed down the rows and Sebangau appears twice. Occurrence counts records in the layer, not animals. A site with no record is a gap in the occurrence layer rather than a site without wildlife.

The Species Overlap

Sites with Bornean orangutan records hold 8,602 hotspots and Sebangau alone holds 2,939. Sites with southern cassowary records hold 6,564, with Wasur carrying 4,195 of them. The two heaviest species totals rest on the two heaviest sites.

The Counting Rules

Volcanic polygons are excluded from the protected area layer, so the estate here is the non-volcanic one. Density uses the protected area in each province as the denominator. High confidence is the FIRMS class, and the other columns count all classes.

The Sebangau Case

Sebangau is the clearest single case in the table. It is peat forest in Kalimantan Tengah, it holds 2,939 points in this window, and it is the most pressured site for two of the six species, the Bornean orangutan and the sun bear. Peat also burns below the surface, so a point there means something different from a point on grassland.

Sources and method

Protected areas: WDPA, UNEP-WCMC and IUCN, Protected Planet, 969 Indonesian records, release month to be recorded at publication. **Hotspots:** NASA FIRMS, MODIS NRT (Terra and Aqua) and VIIRS NRT (S-NPP, NOAA-20, NOAA-21).

What Is Still Open

Three inputs remain unsettled. The WDPA extract carries no release month, which the citation will need. The species occurrence layer has no source recorded in its attributes. The burn scar layer reaches 973 hectares at 16 sites and is too incomplete to carry province numbers, so nothing here rests on it. Separate dNBR detection from Sentinel-2 is still in calibration.

The Reading for the Season

This is a 24-day window inside one season. The season runs to about October across most of the fire belt, so these counts will rise, and the window opens well after the first fires of the year. Comparison with 2015 or 2019 needs the same window and the same detection mix to carry meaning.

The Deployment Question

Ten sites carry 70.4 percent of the points inside the estate and twenty-five carry 89 percent. Count and density point to different places. Kalimantan Tengah concentrates a large number in a small estate. Nusa Tenggara Timur spreads a small number across fifteen touched sites. The two need different crews and different timing.

Boundaries: Batas_34_Provinsi, 34 features, WGS 1984. **Burn scar:** Sentinel-2 SR Harmonized with Cloud Score+ and JRC Global Surface Water. **Context:** SiPongi, Kementerian Kehutanan, to August 20, 2026. Data courtesy of NASA EOSDIS FIRMS.