

Terra Lens — Land History Report

2024 burn event parcel (example) · report date 2026-08-25 · generated deterministically from the frozen pipeline (zero LLM)

	1 · Parcel identifier and geometry source
Parcel identifier	parcel-a-burn-2024
Public label	2024 burn event parcel (example)
Geometry source	detector-derived study window around the largest gate-passing patch (frozen respike selection rule)
Geometry confidence	coordinates-only
Window bbox (lon/lat)	123.18786, 9.12259 – 123.20877, 9.14226
	The window is a detector-derived study box, not a title boundary; it is reported as coordinates-only for that reason. Period covers the detection pair and all same-sensor follow-ups in the committed archive.

	2 · Period and observation coverage
Requested period	2024-04-03 → 2026-05-15
Cloud-valid scenes used	10
First / last valid scene	2024-04-03 / 2026-05-15
Scenes (dates)	2024-04-03, 2024-04-13, 2024-05-13, 2024-05-23, 2024-06-22, 2025-01-18, 2026-03-16, 2026-04-05, 2026-04-25, 2026-05-15
Cloud-blind intervals > 90 days	2 (UNOBSERVED, listed below)

Unobserved interval (cloud-blind)	Days
2024-06-22 → 2025-01-18	210
2025-01-18 → 2026-03-16	422

3 · Event chronology — evidence label OBSERVED

Change family: burn — inferred from spectral index stack, not field-verified.

Pre-image	Post-image	Area (ha)	Family	Label	Max persistence
2024-04-03 (S2A)	2024-04-13 (S2A)	15.73	burn	OBSERVED	0.991

Patches (candidates pending human confirmation)

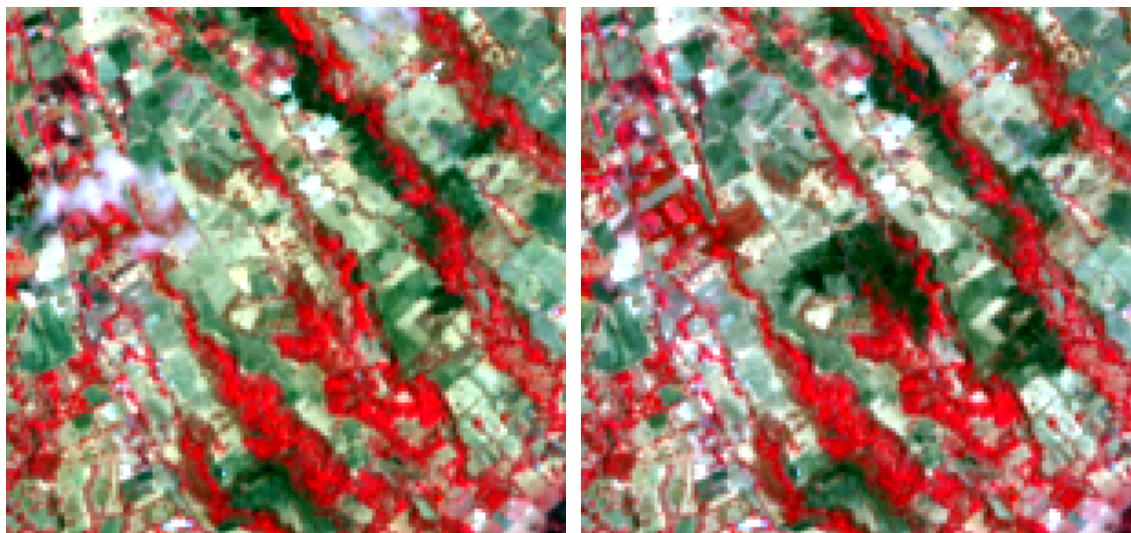
Patch	Area (ha)	Mean dNBR	Mean dNDVI	Mean dNBR2	Severe frac	Severity
corridor-P01	9.877	-0.312	-0.029	-0.153	0.617	high
corridor-P02	3.960	-0.256	-0.046	-0.132	0.449	moderate
corridor-P03	1.890	-0.273	-0.083	-0.132	0.500	high

Persistence timeline (same-sensor follow-ups)

Persistence date	Item	Cloud %	Valid event px	Persistent frac	Mean NBR rec
2024-05-13	S2A_51PWL_20240513_0_L2A	31.9	0	—	—
2024-05-23	S2A_51PWL_20240523_0_L2A	6.4	699	0.986	-0.287

Persistence date	Item	Cloud %	Valid event px	Persistent frac	Mean NBR rec
2024-06-22	S2A_51PWL_20240622_0_L2A	20.4	699	0.991	-0.315
2025-01-18	S2A_51PWL_20250118_0_L2A	25.8	42	0.000	0.275
2026-03-16	S2A_51PWL_20260316_1_L2A	9.9	699	0.072	0.024
2026-04-05	S2A_51PWL_20260405_1_L2A	21.3	699	0.080	0.017
2026-04-25	S2A_51PWL_20260425_2_L2A	8.3	699	0.106	-0.014
2026-05-15	S2A_51PWL_20260515_1_L2A	25.3	699	0.153	-0.043

Before / after — false colour (near-infrared/red/green), parcel window; vegetation appears red



	4 • Methodology
Satellite	Copernicus Sentinel-2 L2A (10 m native; 15 m analysis grid), anonymous Tier-1 archive (Earth Search STAC)
Bands	B03 green, B04 red, B08 NIR, B11 SWIR16, B12 SWIR22, SCL
Indices	NDVI, NBR, NBR2, NDWI; pair deltas dNBR, dNDVI, dNBR2, dNDWI
Thresholds (frozen)	core dNBR ≤ -0.15 , severe dNBR ≤ -0.27 , dNDVI ≤ 0.02 , brightening ratio ≤ 1.3 , SWIR rise ratio ≤ 1.05 , vegetation baseline NDVI ≥ 0.2 ; no tuning, provenance in DETECTOR_CARD.md
Minimum mapping unit	0.5 ha (detection floor; sub-MMU changes are not reported)
Pairing	same-sensor detection pairs only (cross-sensor = trajectory only); pair scenes < 20% scene cloud; pair SCL-valid fraction ≥ 0.80
BOA harmonization	PB ≥ 04.00 with boa_offset_applied != True: -1000 DN subtracted at ingest (both pair scenes PB 05.10, offset pre-applied by the producer, 0 DN subtracted); pre-04.00 scenes carry no offset.
SCL masking	scene-classification invalid classes {0,1,3,8,9,10,11} masked; SCL resampled nearest-neighbour only
Persistence	same-sensor follow-ups < 40% cloud; persistent when NBR stays ≥ 0.1 below the pre-event NBR over the event pixels
	5 • Limits
Detection floor	changes below the 0.5 ha minimum mapping unit (~1 ha practical detection floor at 15 m grid) are not detected and not reported

No ground survey	no ground survey and no field verification were performed; spectral families are candidates
Cloud-blind intervals	every interval > 90 days without a cloud-valid scene is listed UNOBSERVED in section 2 — absence of a detected event there is absence of observation, not of change
Geometry	the window is a study box (geometry confidence: see section 1), not a titled boundary

6 • Disclaimers

Decision-support document only. This report is not a survey, is not field-verified, and makes no legal claim. Detections are candidates pending human confirmation.

Data attribution: Free and open use of Copernicus Sentinel data (ESA). Attribution: "Contains modified Copernicus Sentinel data [2024-2026]".