

CloudClearing Weekly Monitoring Report

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|----------------------|--------------------------|
| Report Date: | October 20, 2025 |
| Analysis Period: | 2025-10-13 to 2025-10-20 |
| Regions Monitored: | 39 |
| Analysis Confidence: | MEDIUM |

EXECUTIVE SUMMARY

Market Status: ■ WEAK MARKET - Limited opportunities detected

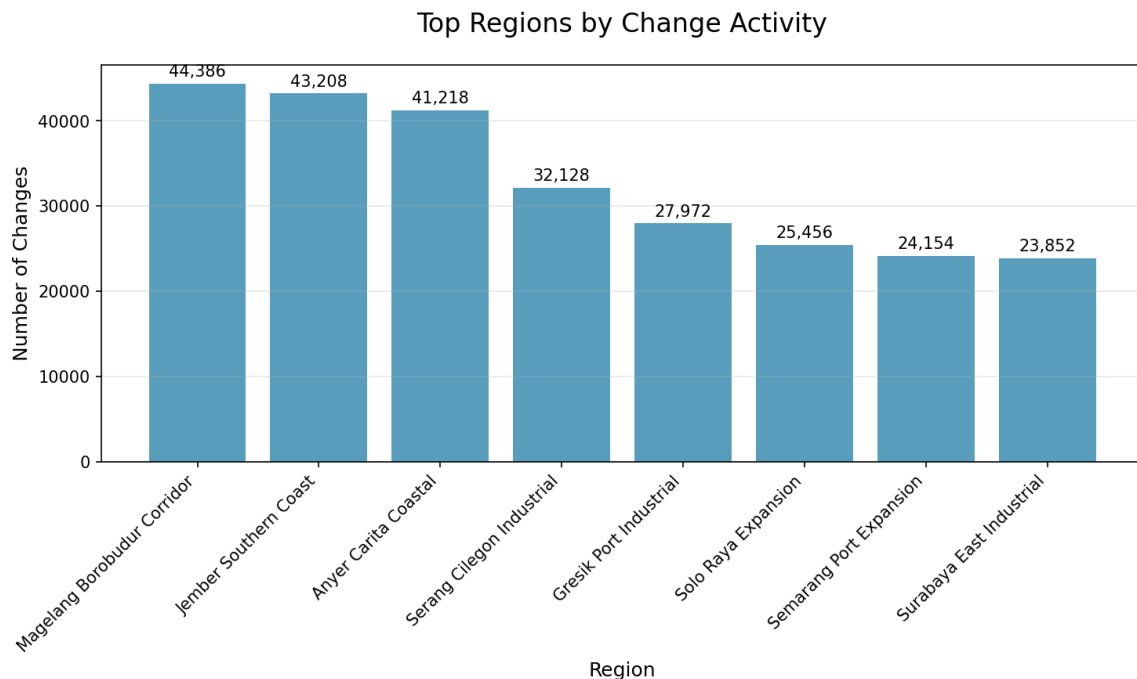
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|---------------------------|--------------------|
| Total Changes Detected: | 763,360 |
| Total Area Changed: | 136,706.5 hectares |
| Critical Alerts: | 68 |
| Investment Opportunities: | 0 |

MONITORING RESULTS

Most Active Regions:

| Region | Changes | Area (hectares) |
|-----------------------------|---------|-----------------|
| Magelang Borobudur Corridor | 44,386 | 5380.5 |
| Jember Southern Coast | 43,208 | 6073.0 |
| Anyer Carita Coastal | 41,218 | 5735.4 |
| Serang Cilegon Industrial | 32,128 | 11611.5 |
| Gresik Port Industrial | 27,972 | 7700.6 |

Regional Activity Overview:



■ INVESTMENT OPPORTUNITIES

■ INVESTMENT OPPORTUNITIES / SATELLITE IMAGERY

Investment Methodology: Our analysis combines satellite-detected land use changes with market intelligence and infrastructure data. Each region receives an **investment score (0-100)** based on: **(1) Development Activity** - volume and pace of land use changes detected via satellite, **(2) Infrastructure Quality** - proximity to major roads, ports, airports, and active construction projects, **(3) Market Dynamics** - property price trends and real estate market heat.

Confidence Levels: Each score includes a confidence percentage (20-90%) that reflects data completeness. Higher confidence means we have real-time market data, detailed infrastructure analysis, and high-quality satellite imagery. Lower confidence means we're relying primarily on satellite-detected changes with limited market/infrastructure data. Typical confidence is 40-60% during early analysis phases.

Imagery Notes: Satellite imagery shows before/after comparisons where available. NDVI (vegetation index) maps highlight **vegetation loss (red)** indicating land clearing for potential construction sites, and **vegetation gain (green)** showing revegetation.

■ WATCH - Bandung North Expansion - Investment Score: 38.2/100 (95% confidence)

Development Activity: 22,458 land use changes detected across 3013.3 hectares

Change Type Breakdown:

- Urban conversion (agriculture → urban): 11,517 sites (51.3%)
- Construction activity (bare → built): 6,329 sites (28.2%)
- Other significant changes: 2,917 sites (13.0%)
- Land clearing (vegetation → bare earth): 1,048 sites (4.7%)
- Urban densification (expansion): 647 sites (2.9%)

Key Investment Factors:

- Excellent infrastructure access (85/100)
- ■■ 5109 major roads within range (35/35 pts)
- ✈️ ■ Airport: Bandar Udara Internasional Husein Sastranegara (18km, 20/20 pts)

Score Composition:

- Market momentum: 0.0% price trend
- Infrastructure: 85/100 quality rating
- Development activity: 22,458 satellite-detected changes

Infrastructure Breakdown (85/100):

- Primary: Jalan Merdeka (18.0km)
- Primary: Jalan Cicendo (18.2km)
- Secondary: Jalan Tamansari (17.9km)

Confidence Breakdown (95%):

- ■ Satellite imagery: High-resolution change detection active
- ■■ Market data: API unavailable - using neutral baseline (0% trend)
- ■ Infrastructure data: Live road/airport/port data available

High confidence - comprehensive data across all sources

■ Financial Projection

■ Data Sources & Quality:

- Data Sources: **Satellite Sentinel2, Regional Benchmarks, Infrastructure Fallback**

Land Value Analysis:

- Current Market Value: **Rp 4,512,500/m²**
- 18-Month Projection: **Rp 5,374,460/m²** (6.0% annual appreciation)
- Expected Value Gain: **Rp 861,960/m²** over 18 months

Return on Investment:

- 3-Year ROI: **1.2%**
- 5-Year ROI: **13.7%**
- Break-Even Point: **2.8 years**

Investment Sizing:

- Recommended Plot Size: **500 m²** (0.05 hectares)
- Total Acquisition Cost: **Rp 2,256,250,000** (~\$150,417 USD)
- Projected 18-Month Value: **Rp 2,687,229,850**
- Estimated Gain: **Rp 430,979,850** (~\$28,732 USD)

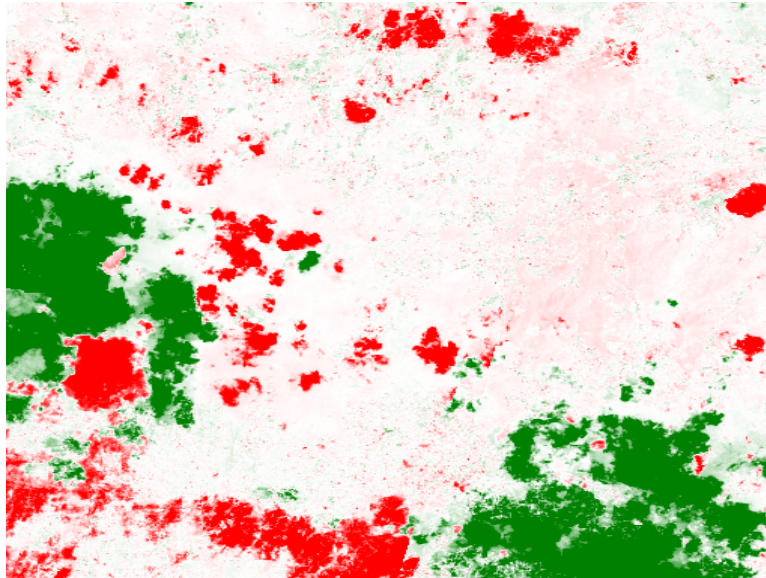
Development Considerations:

- Development Cost Index: **79/100** (High cost region)
- Terrain Difficulty: **Difficult**

Note: Financial projections are estimates based on current market data, satellite-detected development activity, and infrastructure analysis. Actual returns may vary based on market conditions, regulatory changes, and development timing. This is not financial advice.

Note: Satellite imagery unavailable for this period. Analysis based on statistical change detection.

Vegetation Change Analysis (NDVI): Red = vegetation loss/land clearing (potential construction sites), Green = vegetation gain/revegetation



■ WATCH - Semarang Port Expansion - Investment Score: 38.2/100 (95% confidence)

Development Activity: 24,154 land use changes detected across 4700.2 hectares

Change Type Breakdown:

- Urban conversion (agriculture → urban): 12,593 sites (52.1%)
- Land clearing (vegetation → bare earth): 4,393 sites (18.2%)
- Construction activity (bare → built): 3,590 sites (14.9%)
- Other significant changes: 2,079 sites (8.6%)
- Urban densification (expansion): 1,499 sites (6.2%)

Key Investment Factors:

- Excellent infrastructure access (85/100)
- ■■■ 3559 major roads within range (35/35 pts)
- ✈️ ■ Airport: Bandar Udara Ahmad Yani (9km, 20/20 pts)

Score Composition:

- Market momentum: 0.0% price trend
- Infrastructure: 85/100 quality rating
- Development activity: 24,154 satellite-detected changes

Infrastructure Breakdown (85/100):

- Primary: Jalan Simpang Lima (5.4km)
- Secondary: Jalan Mayor Jenderal Donald Isaac Panjaitan (4.4km)
- Trunk: Jalan Pengapon (1.7km)

Confidence Breakdown (95%):

- ■ Satellite imagery: High-resolution change detection active
- ■■■ Market data: API unavailable - using neutral baseline (0% trend)
- ■ Infrastructure data: Live road/airport/port data available

High confidence - comprehensive data across all sources

■ Financial Projection

■ Data Sources & Quality:

- Data Sources: **Satellite Sentinel2, Regional Benchmarks, Infrastructure Fallback**

Land Value Analysis:

- Current Market Value: **Rp 1,995,000/m²**
- 18-Month Projection: **Rp 2,376,077/m²** (6.0% annual appreciation)
- Expected Value Gain: **Rp 381,077/m²** over 18 months

Return on Investment:

- 3-Year ROI: **-15.0%**
- Break-Even Point: **5.8 years**

Investment Sizing:

- Recommended Plot Size: **537 m²** (0.05 hectares)
- Total Acquisition Cost: **Rp 1,070,661,896** (~\$71,377 USD)
- Projected 18-Month Value: **Rp 1,275,175,449**
- Estimated Gain: **Rp 204,513,553** (~\$13,634 USD)

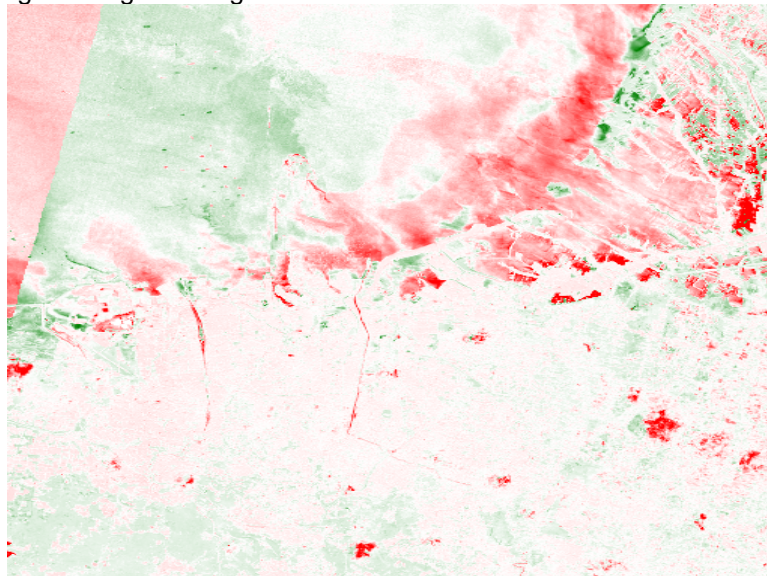
Development Considerations:

- Development Cost Index: **81/100** (High cost region)
- Terrain Difficulty: **Difficult**

Note: Financial projections are estimates based on current market data, satellite-detected development activity, and infrastructure analysis. Actual returns may vary based on market conditions, regulatory changes, and development timing. This is not financial advice.

Note: Satellite imagery unavailable for this period. Analysis based on statistical change detection.

Vegetation Change Analysis (NDVI): Red = vegetation loss/land clearing (potential construction sites), Green = vegetation gain/revegetation



■ WATCH - Solo Raya Expansion - Investment Score: 38.2/100 (95% confidence)

Development Activity: 25,456 land use changes detected across 2616.1 hectares

Change Type Breakdown:

- Urban conversion (agriculture → urban): 12,953 sites (50.9%)
- Construction activity (bare → built): 8,095 sites (31.8%)
- Other significant changes: 3,658 sites (14.4%)
- Land clearing (vegetation → bare earth): 408 sites (1.6%)
- Urban densification (expansion): 342 sites (1.3%)

Key Investment Factors:

- Excellent infrastructure access (85/100)
- ■■ 4243 major roads within range (35/35 pts)
- ✈️ ■ Airport: Bandar Udara Adi Sumarmo (11km, 20/20 pts)

Score Composition:

- Market momentum: 0.0% price trend
- Infrastructure: 85/100 quality rating
- Development activity: 25,456 satellite-detected changes

Infrastructure Breakdown (85/100):

- Primary: Jalan Soekarno-Hatta (42.6km)
- Trunk: Jalan Adi Sucipto (11.2km)
- Primary: Jalan Diponegoro (45.9km)

Confidence Breakdown (95%):

- ■ Satellite imagery: High-resolution change detection active
- ■■ Market data: API unavailable - using neutral baseline (0% trend)
- ■ Infrastructure data: Live road/airport/port data available

High confidence - comprehensive data across all sources

■ Financial Projection

■ Data Sources & Quality:

- Data Sources: **Satellite Sentinel2, Regional Benchmarks, Infrastructure Fallback**

Land Value Analysis:

- Current Market Value: **Rp 4,655,000/m²**
- 18-Month Projection: **Rp 5,544,179/m²** (6.0% annual appreciation)
- Expected Value Gain: **Rp 889,179/m²** over 18 months

Return on Investment:

- 3-Year ROI: **1.6%**
- 5-Year ROI: **14.2%**
- Break-Even Point: **2.7 years**

Investment Sizing:

- Recommended Plot Size: **500 m²** (0.05 hectares)
- Total Acquisition Cost: **Rp 2,327,500,000** (~\$155,167 USD)
- Projected 18-Month Value: **Rp 2,772,089,740**
- Estimated Gain: **Rp 444,589,740** (~\$29,639 USD)

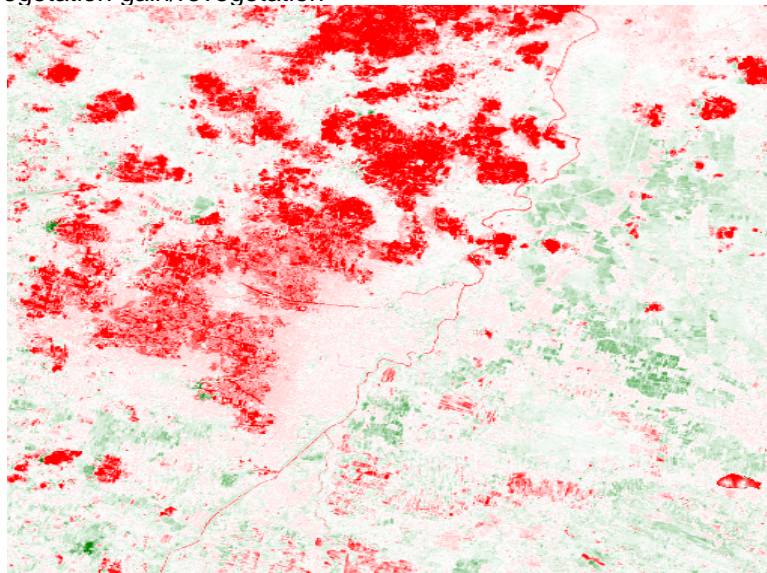
Development Considerations:

- Development Cost Index: **82/100** (High cost region)
- Terrain Difficulty: **Difficult**

Note: Financial projections are estimates based on current market data, satellite-detected development activity, and infrastructure analysis. Actual returns may vary based on market conditions, regulatory changes, and development timing. This is not financial advice.

Note: Satellite imagery unavailable for this period. Analysis based on statistical change detection.

Vegetation Change Analysis (NDVI): Red = vegetation loss/land clearing (potential construction sites), Green = vegetation gain/revegetation



■ Complete Regional Analysis

| Region | Changes | Area (ha) | Score | Investment Notes | Period |
|-----------------------------|---------|-----------|----------|--|------------------|
| Bandung North Expansion | 22,458 | 3013.3 | 38.2/100 | Watch (95% confidence): Stagnant prices <i>(Limited: Market API unavailable)</i> | June 23-30, 2025 |
| Semarang Port Expansion | 24,154 | 4700.2 | 38.2/100 | Watch (95% confidence): Stagnant prices <i>(Limited: Market API unavailable)</i> | June 23-30, 2025 |
| Solo Raya Expansion | 25,456 | 2616.1 | 38.2/100 | Watch (95% confidence): Stagnant prices <i>(Limited: Market API unavailable)</i> | June 23-30, 2025 |
| Jember Southern Coast | 43,208 | 6073.0 | 38.2/100 | Watch (95% confidence): Stagnant prices <i>(Limited: Market API unavailable)</i> | June 23-30, 2025 |
| Surabaya East Industrial | 23,852 | 12107.3 | 33.2/100 | Watch (95% confidence): Stagnant prices <i>(Limited: Market API unavailable)</i> | June 23-30, 2025 |
| Anyer Carita Coastal | 41,218 | 5735.4 | 33.2/100 | Watch (95% confidence): Stagnant prices <i>(Limited: Market API unavailable)</i> | June 23-30, 2025 |
| Jakarta North Sprawl | 12,338 | 17988.2 | 32.8/100 | Watch (95% confidence): Stagnant prices <i>(Limited: Market API unavailable)</i> | June 23-30, 2025 |
| Subang Patimban Megaport | 17,665 | 3225.1 | 32.8/100 | Watch (95% confidence): Stagnant prices <i>(Limited: Market API unavailable)</i> | June 23-30, 2025 |
| Banyuwangi Ferry Corridor | 21,006 | 3400.7 | 29.9/100 | Watch (95% confidence): Stagnant prices, Poor infrastructure <i>(Limited: Market API unavailable)</i> | June 23-30, 2025 |
| Yogyakarta Urban Core | 12,516 | 1086.4 | 28.5/100 | Watch (95% confidence): Stagnant prices <i>(Limited: Market API unavailable)</i> | June 23-30, 2025 |
| Purwokerto South Expansion | 8,356 | 1183.9 | 27.3/100 | Watch (95% confidence): Stagnant prices <i>(Limited: Market API unavailable)</i> | June 23-30, 2025 |
| Malang South Highland | 6,123 | 541.1 | 27.3/100 | Watch (95% confidence): Stagnant prices <i>(Limited: Market API unavailable)</i> | June 23-30, 2025 |
| Magelang Borobudur Corridor | 44,386 | 5380.5 | 26.6/100 | Watch (95% confidence): Stagnant prices, Poor infrastructure <i>(Limited: Market API unavailable)</i> | June 23-30, 2025 |
| Gresik Port Industrial | 27,972 | 7700.6 | 26.6/100 | Watch (95% confidence): Stagnant prices, Poor infrastructure <i>(Limited: Market API unavailable)</i> | June 23-30, 2025 |
| Serang Cilegon Industrial | 32,128 | 11611.5 | 26.6/100 | Watch (95% confidence): Stagnant prices, Poor infrastructure <i>(Limited: Market API unavailable)</i> | June 23-30, 2025 |
| Bandung East Tech Corridor | 12,796 | 1238.5 | 25.6/100 | Watch (95% confidence): Stagnant prices, Poor infrastructure <i>(Limited: Market API unavailable)</i> | June 23-30, 2025 |
| Bogor Puncak Highland | 16,371 | 2549.9 | 25.6/100 | Watch (95% confidence): Stagnant prices, Poor infrastructure <i>(Limited: Market API unavailable)</i> | June 23-30, 2025 |
| Jakarta South Suburbs | 8,865 | 1518.5 | 23.8/100 | Pass (95% confidence): Stagnant prices <i>(Limited: Market API unavailable)</i> | June 23-30, 2025 |
| Tegal Brebes Coastal | 11,308 | 1687.9 | 22.8/100 | Pass (95% confidence): Stagnant prices, Poor infrastructure <i>(Limited: Market API unavailable)</i> | June 23-30, 2025 |
| Surabaya West Expansion | 19,706 | 4408.5 | 22.8/100 | Pass (95% confidence): Stagnant prices, Poor infrastructure <i>(Limited: Market API unavailable)</i> | June 23-30, 2025 |
| Tangerang Bsd Corridor | 2,365 | 295.9 | 21.8/100 | Pass (95% confidence): Stagnant prices <i>(Limited: Market API unavailable)</i> | June 23-30, 2025 |
| Bekasi Industrial Belt | 2,353 | 293.3 | 21.8/100 | Pass (95% confidence): Stagnant prices <i>(Limited: Market API unavailable)</i> | June 23-30, 2025 |
| Cirebon Port Industrial | 2,129 | 221.3 | 21.8/100 | Pass (95% confidence): Stagnant prices <i>(Limited: Market API unavailable)</i> | June 23-30, 2025 |

| | | | | | |
|--------------------------------|--------|--------|----------|---|------------------|
| Semarang South Urban | 6,762 | 865.0 | 21.4/100 | Pass (95% confidence): Stagnant prices, Poor infrastructure (<i>Limited: Market API unavailable</i>) | June 23-30, 2025 |
| Cikarang Mega Industrial | 1,680 | 250.2 | 19.0/100 | Pass (95% confidence): Stagnant prices (<i>Limited: Market API unavailable</i>) | June 23-30, 2025 |
| Merak Port Corridor | 865 | 263.5 | 12.8/100 | Pass (95% confidence): Low development, Stagnant prices (<i>Limited: Market API unavailable</i>) | June 23-30, 2025 |
| Yogyakarta Kulon Progo Airport | 0 | 0.0 | 5.5/100 | Pass (95% confidence): Very low activity, Small area (<i>Limited: Market API unavailable</i>) | June 23-30, 2025 |
| Sidoarjo Delta Development | 0 | 0.0 | 5.5/100 | Pass (95% confidence): Very low activity, Small area (<i>Limited: Market API unavailable</i>) | June 23-30, 2025 |
| Probolinggo Bromo Gateway | 0 | 0.0 | 5.5/100 | Pass (95% confidence): Very low activity, Small area (<i>Limited: Market API unavailable</i>) | June 23-30, 2025 |
| Yogyakarta Urban | 12,516 | 1086.4 | N/A | Not scored | June 23-30, 2025 |
| Yogyakarta Periurban | 0 | 0.0 | N/A | Not scored | June 23-30, 2025 |
| Sleman North | 63,805 | 8633.8 | N/A | Not scored | June 23-30, 2025 |
| Bantul South | 57,564 | 5877.1 | N/A | Not scored | June 23-30, 2025 |
| Kulonprogo West | 0 | 0.0 | N/A | Not scored | June 23-30, 2025 |
| Gunungkidul East | 65,017 | 6043.2 | N/A | Not scored | June 23-30, 2025 |
| Magelang Corridor | 44,386 | 5380.5 | N/A | Not scored | June 23-30, 2025 |
| Solo Expansion | 25,456 | 2616.1 | N/A | Not scored | June 23-30, 2025 |
| Semarang Industrial | 24,154 | 4700.2 | N/A | Not scored | June 23-30, 2025 |
| Surakarta Suburbs | 22,426 | 2413.0 | N/A | Not scored | June 23-30, 2025 |

■ REGIONAL BREAKDOWN

Yogyakarta Region Details:

Magelang Borobudur Corridor

Changes: 44,386 | Area: 5380.5 ha | Density: 8.2 changes/ha

■ **Satellite Imagery Available:** Before (Unknown) | After (Unknown)

Note: High-resolution satellite images saved to output/satellite_images/weekly/

Jember Southern Coast

Changes: 43,208 | Area: 6073.0 ha | Density: 7.1 changes/ha

■ **Satellite Imagery Available:** Before (Unknown) | After (Unknown)

Note: High-resolution satellite images saved to output/satellite_images/weekly/

Anyer Carita Coastal

Changes: 41,218 | Area: 5735.4 ha | Density: 7.2 changes/ha

■ **Satellite Imagery Available:** Before (Unknown) | After (Unknown)

Note: High-resolution satellite images saved to output/satellite_images/weekly/

Serang Cilegon Industrial

Changes: 32,128 | Area: 11611.5 ha | Density: 2.8 changes/ha

■ **Satellite Imagery Available:** Before (Unknown) | After (Unknown)

Note: High-resolution satellite images saved to output/satellite_images/weekly/

Gresik Port Industrial

Changes: 27,972 | Area: 7700.6 ha | Density: 3.6 changes/ha

■ **Satellite Imagery Available:** Before (Unknown) | After (Unknown)

Note: High-resolution satellite images saved to output/satellite_images/weekly/

Solo Raya Expansion

Changes: 25,456 | Area: 2616.1 ha | Density: 9.7 changes/ha

■ **Satellite Imagery Available:** Before (Unknown) | After (Unknown)

Note: High-resolution satellite images saved to output/satellite_images/weekly/

Semarang Port Expansion

Changes: 24,154 | Area: 4700.2 ha | Density: 5.1 changes/ha

■ **Satellite Imagery Available:** Before (Unknown) | After (Unknown)

Note: High-resolution satellite images saved to output/satellite_images/weekly/

Surabaya East Industrial

Changes: 23,852 | Area: 12107.3 ha | Density: 2.0 changes/ha

■ **Satellite Imagery Available:** Before (Unknown) | After (Unknown)

Note: High-resolution satellite images saved to output/satellite_images/weekly/

■ CRITICAL ALERTS

Critical Alerts (68):

- Critical: 12338 changes detected in jakarta_north_sprawl
- Critical: 17988.2 hectares changed in jakarta_north_sprawl
- Critical: 8865 changes detected in jakarta_south_suburbs
- Critical: 1518.5 hectares changed in jakarta_south_suburbs
- Critical: 2365 changes detected in tangerang_bsd_corridor
- Critical: 295.9 hectares changed in tangerang_bsd_corridor
- Critical: 2353 changes detected in bekasi_industrial_belt
- Critical: 293.3 hectares changed in bekasi_industrial_belt
- Critical: 1680 changes detected in cikarang_mega_industrial
- Critical: 250.2 hectares changed in cikarang_mega_industrial

