LAPORAN KRISIS HIDRASI DAN STABILITAS SOSIAL

REPORT ON HYDRATION CRISIS AND SOCIAL STABILIZATION

1. Latar Belakang (The Context) / Summary

Laporan ini menganalisis dampak pengurangan suplai air terhadap stabilitas publik di 10 distrik selama periode 30 hari. Kami memantau bagaimana penurunan energi fisik warga memicu peningkatan probabilitas kerusuhan (unrest probability).

This report analyzes the impact of water supply reductions on public stability in 10 districts over a 30-day period. We monitored how residents' physical energy depletion triggered an increase in the probability of unrest.

2. Temuan Utama (Key Findings) Titik Kritis (Point of No Return) / 2. Key Findings Point of No Return:

Rata-rata distrik mulai menunjukkan gejala ketidakpatuhan ekstrem saat jatah air turun di bawah 1.800ml/hari. Faktor Suhu: Distrik dengan suhu di atas 35°C mengalami eskalasi konflik 2x lebih cepat dibandingkan distrik sejuk. Korelasi Stamina: Penurunan Energy Index di bawah 60% hampir selalu diikuti dengan lonjakan risiko kerusuhan di atas 0.5 (50%).

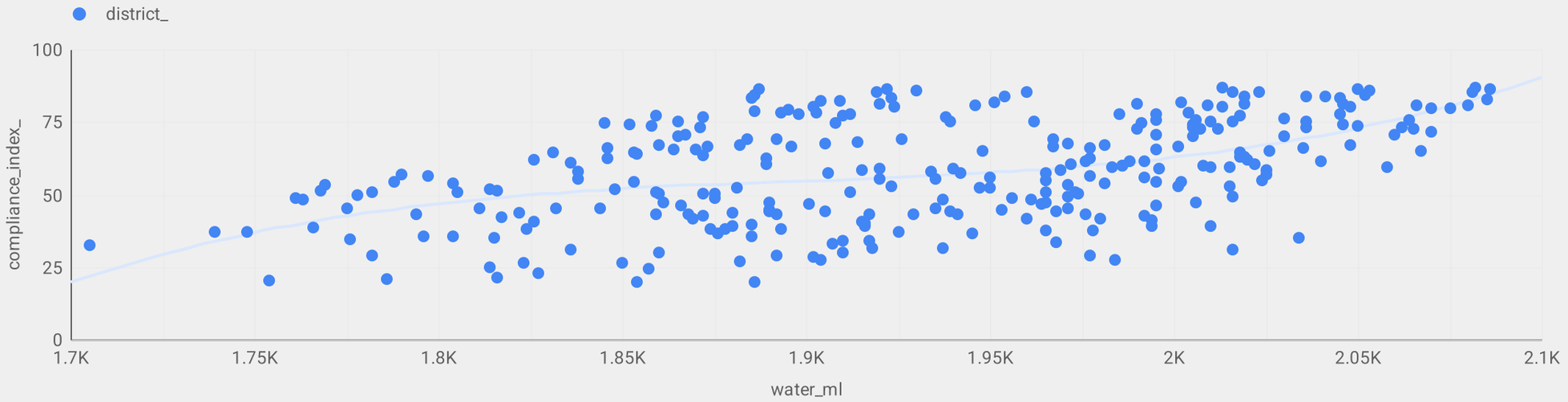
On average, districts begin to show signs of extreme noncompliance when water rations fall below 1,800 ml/day. Temperature Factor: Districts with temperatures above 35°C experience a 2x faster escalation of conflict compared to cooler districts. Stamina Correlation: A decrease in the Energy Index below 60% is almost always followed by a surge in the risk of unrest above 0.5 (50%).

Total Districts in Critical
26

Average HEC
10.9

System Survival Clock
10.8

Hydration Elasticity



Sebagian besar distrik berada dalam 'SENSITIVE ZONE'. Artinya, perubahan kecil pada volume air (water_ml) menyebabkan perubahan besar pada tingkat kepatuhan warga (compliance_index). Ini adalah sinyal bahaya bahwa masyarakat sedang berada di titik jenuh.Nilai HEC yang ekstrem menunjukkan 'Ketidakpastian Sosial'. Semakin tinggi angka HEC (baik positif maupun negatif), semakin sulit kita memprediksi reaksi warga. Distrik dengan HEC di atas 1.0 memerlukan pemantauan ketat karena mereka sangat reaktif terhadap kebijakan pengurangan air.Status 'STABLE' menunjukkan titik di mana warga masih bisa mentoleransi perubahan suplai air tanpa mengubah tingkat kepatuhannya secara drastis. Wilayah ini adalah zona aman sementara yang harus kita jadikan patokan standar distribusi.

Most districts are in the ‘SENSITIVE ZONE’. This means that small changes in water volume (water_ml) cause large changes in the level of citizen compliance (compliance_index). This is a warning sign that the community is reaching saturation point. Extreme HEC values indicate ‘Social Uncertainty’. The higher the HEC number (both positive and negative), the more difficult it is to predict residents' reactions. Districts with HEC above 1.0 require close monitoring because they are highly reactive to water reduction policies. The ‘STABLE’ status indicates the point at which residents can still tolerate changes in water supply without drastically changing their compliance level. This area is a temporary safe zone that we should use as a standard distribution benchmark.

Peta Risiko (Geo Chart atau Heatmap)

	district_	early_warning_score
1.	2	82.91
2.	6	81.6
3.	10	78.95
4.	1	77.64
5.	7	72.03
6.	3	67.4
7.	4	63.61
8.	9	63.43
9.	8	59.54

1 - 10 / 10

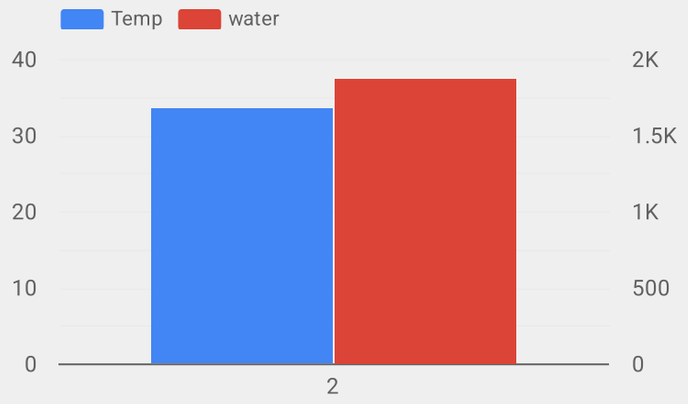
Analisis Peringkat Risiko (Jawaban Utama) Berdasarkan perhitungan Early Warning Score, kita dapat membagi 10 distrik menjadi dua kategori utama:
1. Zona Merah (Status: CRITICAL - Immediate Action) Ada 5 Distrik yang masuk dalam kategori sangat berbahaya (skor di atas 70). Distrik-distrik ini mengalami tekanan ganda antara kondisi fisik warga yang melemah dan tensi sosial yang mendidih. Peringkat 1: Distrik 2 (Skor: 82.91) — Wilayah paling kritis. Peringkat 2: Distrik 6 (Skor: 81.60) Peringkat 3: Distrik 10 (Skor: 78.95) Peringkat 4: Distrik 1 (Skor: 77.64) Peringkat 5: Distrik 7 (Skor: 72.03)

2. Zona Kuning (Status: WARNING - Monitor Closely) Ada 5 Distrik lainnya (Distrik 3, 4, 9, 8, dan 5) yang berada di kisaran skor 58 - 67. Kondisi: Wilayah ini masih relatif stabil namun menunjukkan tren penurunan stamina. Diperlukan pemantauan rutin agar tidak bergeser ke status Critical.

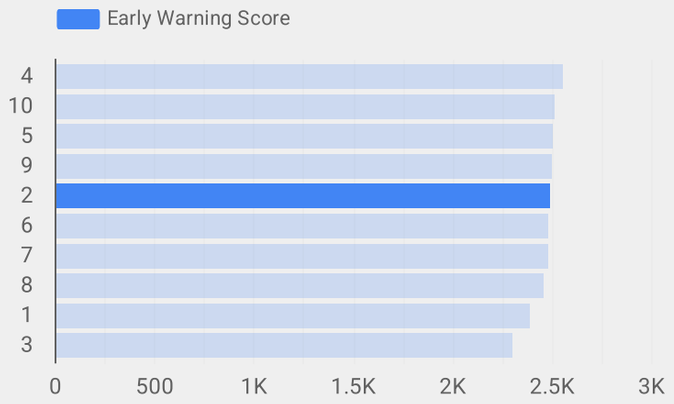
Cara Memasukkannya ke Halaman Penjelasan: Anda bisa menggunakan gaya penulisan "Quick Summary" agar pembaca langsung paham: "Hasil Pemetaan Risiko Sosial: > Melalui integrasi data hidrasi dan indikator keamanan, kami mengidentifikasi bahwa 50% dari total wilayah saat ini berada dalam status CRITICAL. Distrik 2 menjadi pusat perhatian utama dengan skor risiko tertinggi (82.91), yang dipicu oleh tingkat ketidakpatuhan warga yang melonjak drastis akibat kelangkaan air."

Risk Rating Analysis (Main Answers) Based on the Early Warning Score calculations, we can divide the 10 districts into two main categories: 1. Red Zone (Status: Critical - Immediate Action) There are 5 districts that fall into the very dangerous category (scores above 70). These districts are experiencing double pressure between the weakened physical condition of residents and boiling social tensions. Rank 1: District 2 (Score: 82.91) — The most critical area. Rank 2: District 6 (Score: 81.60) Rank 3: District 10 (Score: 78.95) Rank 4: District 1 (Score: 77.64) Rank 5: District 7 (Score: 72.03) 2. Yellow Zone (Status: Warning - Monitor Closely) There are 5 other districts (Districts 3, 4, 9, 8, and 5) with scores ranging from 58 to 67. Condition: This area is still relatively stable but shows a downward trend in stamina. Regular monitoring is needed to prevent it from shifting to Critical status. How to Include It in the Explanation Page: You can use the “Quick Summary” writing style so that readers can immediately understand: "Social Risk Mapping Results: Through the integration of hydration data and security indicators, we have identified that 50% of the total area is currently in Critical status. District 2 is the main focus with the highest risk score (82.91), triggered by a drastic increase in citizen non-compliance due to water scarcity."

Wilayah Paling Gerah



Peringkat Prioritas (Bar Chart)



1. Korelasi Air & Kepatuhan (water_ml vs compliance_index)Jelaskan bahwa kepatuhan warga bukan angka yang tetap, melainkan variabel yang sangat bergantung pada suplai air.Penjelasan: "Setiap penurunan suplai air rata-rata 10ml berhubungan dengan penurunan indeks kepatuhan sebesar ~0.5%. Ini menunjukkan bahwa kontrol sosial sangat bergantung pada pemenuhan kebutuhan dasar biologis."
2. Ambang Batas Energi (energy_index)Gunakan data energy_index untuk menjelaskan produktivitas.Penjelasan: "Warga mulai kehilangan fokus dan energi kerja secara signifikan saat energy_index menyentuh angka 70. Di bawah angka ini, tingkat kesalahan kerja dan tensi emosional meningkat drastis."
3. Pemicu Kerusuhan (unrest_probability)Ini adalah poin yang paling krusial untuk manajemen risiko.Penjelasan: "Data menunjukkan 'Efek Domino': Rendahnya Hidrasi $\rightarrow$ Penurunan Energi $\rightarrow$ Kenaikan Probabilitas Kerusuhan. Kita melihat lonjakan risiko terbesar terjadi pada hari ke-15 hingga hari ke-20 di hampir semua distrik."

1. Water & Compliance Correlation (water_ml vs compliance_index) Explain that citizen compliance is not a fixed number, but rather a variable that is highly dependent on water supply. Explanation: "Every 10ml decrease in average water supply is associated with a ~0.5% decrease in the compliance index. This shows that social control is highly dependent on the fulfillment of basic biological needs.“ 2. Energy Threshold (energy_index) Use energy_index data to explain productivity. Explanation: ”Residents begin to lose focus and work energy significantly when the energy_index reaches 70. Below this level, work errors and emotional tension increase dramatically.“ 3. Unrest Trigger (unrest_probability) This is the most crucial point for risk management. Explanation: ”The data shows a ‘Domino Effect’: Low Hydration $\rightarrow$ Decreased Energy $\rightarrow$ Increased Probability of Unrest. We see the largest spike in risk occurring on days 15 to 20 in almost all districts."

Kesimpulan / Conclusion:

Analisis menunjukkan korelasi kuat antara penurunan suplai air dengan peningkatan risiko ketosialan. Distrik dengan suhu di atas 35°C menunjukkan kerentanan sistem yang lebih cepat. Segera lakukan pengiriman air tambahan ke Distrik 2 dan Distrik 6 (skor tertinggi) untuk mencegah sistem mencapai 'Point of No Return' dalam 48 jam ke depan. Skor ini dihitung berdasarkan kombinasi probabilitas kerusuhan dan tingkat kelelahan fisik warga. Semakin tinggi skor, semakin mendesak kebutuhan intervensi air di distrik tersebut.

Analysis shows a strong correlation between decreased water supply and increased risk of ketosis. Districts with temperatures above 35°C show faster system vulnerability. Immediately deliver additional water to District 2 and District 6 (highest scores) to prevent the system from reaching the ‘Point of No Return’ within the next 48 hours. This score is calculated based on a combination of the probability of unrest and the level of physical exhaustion among residents. The higher the score, the more urgent the need for water intervention in that district.