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POLICY BRIEF

Intelligence-Led and Proportionate Security Responses with GIS Hotspot Monitoring and Strengthened Investigation, Prosecution and Victim Support

Target Audience: *The Ministry of Information, Communication and the Digital Economy, National Police Service, the Directorate of Criminal Investigations, the criminal justice system (Office of the Director of Public Prosecutions and the Judiciary), and County Security Committees.*

1.0 Background and Context

Boda-boda-related crime in Kenya is not evenly distributed. It is a differentiated security issue concentrated in identifiable places, times and patterns. Indiscriminate security operations often alienate legitimate boda-boda riders while allowing organised criminal groups to adapt and continue operating. The study established that crime frequency and pattern intensity vary substantially by county, with crime-frequency scores ranging from 53.0 per cent to 70.2 per cent and crime-pattern indices ranging from 2.0 per cent to 96.0 per cent, confirming that responses must be differentiated rather than uniform.

The study also documented that criminal activity evolves in response to enforcement: the Marsabit court register reveals that criminal methods shifted from motorcycle theft to immigration and human-trafficking offences over the course of a decade, while the Mombasa court register records a steady increase in case filings from 189 to 321 between 2022 and 2025. Both trends require adaptive intelligence rather than static responses. This policy brief makes the case for intelligence-led and proportionate security responses, GIS and hotspot-based monitoring, and a strengthened criminal justice response beyond arrest.

2.0 Methodology

The study adopted a mixed-methods comparative design across seven counties (Bomet, Busia, Kirinyaga, Machakos, Marsabit, Mombasa and Nyeri). Quantitative survey data were collected from 2,631 respondents. Qualitative data were obtained through Key Informant Interviews and Focus Group Discussions with riders, stage leaders, SACCO officials, county transport officers, NGAO officers, police officers, prosecutors, border and security officers, community leaders and Civil Society Organization (CSO) representatives. Archival records from police crime registers, law court case registers and a health facility in four counties provided independent documentary evidence, while GIS-based spatial analysis, including DBSCAN clustering, mapped crime-risk sites and hotspot patterns. Data were analysed using descriptive and inferential statistics, spatial risk indices, hotspot analysis and thematic analysis.

3.0 Key Findings

3.1 Crime is county-differentiated and requires tailored responses. Marsabit recorded the highest crime-frequency score (70.2%), followed by Busia (63.8%) and Machakos (57.6%), while Mombasa recorded the lowest frequency (53.0%). Busia recorded the strongest crime-pattern index (0.96), followed by Marsabit (0.78) and Bomet (0.51). The dominant crime forms also vary: snatching and assault dominate the urban Mombasa registers; motorcycle theft dominates Marsabit; and immigration and trafficking offences accumulate in the Sololo court records.

3.2 Crime is spatially patterned and concentrated in identifiable hotspots. Remote roads emerged as the most consistent reported crime location across counties, especially in Busia, Kirinyaga, Machakos, Marsabit and Nyeri. Poor lighting, weak police presence and easy escape routes were the most common explanations for hotspot formation. DBSCAN clustering confirmed localised hotspot groupings, and Mombasa, Busia and Marsabit recorded the highest mean spatial risk levels. Respondents identified Kisauni area in Mombasa; Somare, Manyatta, Biashara Street, the Hellu–Ginnisa corridor and informal border crossing points in Marsabit; and the bridge between Nasira and Bukalama and other border-adjacent areas in Busia as recurring crime locations. Hotspots shift in response to enforcement, underscoring the need for dynamic monitoring.

3.3 Criminal methods evolve in response to enforcement. The Marsabit court register documents a decade-long shift from motorcycle theft (2016–2019) to immigration and human-trafficking offences (2020–2026), while the Mombasa court register shows case filings rising from 189 in 2022 to 321 in 2025. These trends demonstrate that enforcement must be adaptive and intelligence-led.

3.4 Weak prosecution and witness fear undermine deterrence. Key informants in Mombasa described how suspects negotiate lower bond amounts in court and are released with amounts they can easily afford. FGD participants in Kirinyaga reported that police response is often slow

and that riders frequently organise their own investigations. Key informants in Busia noted that members of the public are often unwilling to testify in court due to concerns about personal safety and potential repercussions, and that individuals who report criminal activities often become targets of threats and victimisation.

3.5 The victim burden is real and health-system-visible. Hospital records from a Level 5 health facility in Machakos County documented 15 assault and rape cases and 39 total crime-related attendances in January 2026 alone, highlighting the need for referral pathways between law enforcement and health services. Riders themselves are major victims of motorcycle theft.

3.6 Community policing works. In Nyeri, direct communication between stage chairmen and senior police officers and rider assistance in tracking suspects were credited with a seventy per cent improvement in sector security. In Busia, the inclusion of boda-boda representatives in local security committees was identified as a most effective intervention.

4.0 Policy Recommendations

4.1 Adopt intelligence-led and proportionate security responses. Security agencies should strengthen intelligence-led policing through crime analysis, offender profiling, surveillance, hotspot mapping and inter-agency intelligence sharing. Priority should be given to dismantling organised criminal networks involved in robbery, motorcycle theft, extortion, smuggling, drug trafficking and other transnational criminal activities linked to the boda-boda sector, while avoiding indiscriminate operations that criminalise legitimate riders.

4.2 Introduce a GIS and hotspot-based monitoring system. Security and transport agencies at the county level, supported by the Ministry of Information, Communication and the Digital Economy, should maintain updated GIS maps of boda-boda crime hotspots, high-risk routes, stages, market centres, border corridors, nightlife areas, informal settlements and escape routes. Hotspot maps should guide patrol deployment, lighting improvements, stage audits, surveillance points and community safety interventions, prioritising remote roads, poorly lit areas, weakly regulated stages, border-linked routes, transport corridors, informal settlements, market hotspots and night-time activity zones.

4.3 Strengthen investigation, prosecution and victim support. Cases involving motorcycle theft, robbery, assault, extortion, smuggling and organised criminal activity should be tracked from reporting to prosecution. Witness protection and confidential reporting should be strengthened, and referral pathways should be established between law enforcement and health services. Victim support should include assistance to riders whose motorcycles are stolen, passengers who are attacked, traders who lose goods and residents affected by intimidation or violence.

4.4 Strengthen community policing and confidential reporting. Community policing initiatives should be strengthened to encourage confidential reporting and improve public confidence in law enforcement, building on the Nyeri and Busia models of stage-police engagement and the inclusion of boda-boda representatives in local security committees.

4.5 Strengthen cross-border security cooperation in border counties. In Busia and Marsabit, responses cannot be purely domestic. They require joint Kenya–Uganda and Kenya–Ethiopia security cooperation, cross-border information sharing and attention to the informal crossing points that enable escape and illicit movement.

5.0 Primary Implementation Pathway. The National Police Service and the Directorate of Criminal Investigations should lead operational implementation, supported by County Security Committees for coordination and by the Ministry of Information, Communication and the Digital Economy for the GIS and digitisation infrastructure. The Office of the Director of Public Prosecutions and the Judiciary should strengthen case tracking and prosecution outcomes, while health and victim-support actors establish referral pathways.

6.0 Conclusion

Boda-boda-related crime is spatially patterned, methodologically adaptive and unevenly prosecuted. A proportionate, intelligence-led approach supported by GIS hotspot monitoring and a justice response that extends beyond arrest is the most effective way to protect communities and legitimate riders simultaneously. The National Police Service, the Directorate of Criminal Investigations, the criminal justice system and the Ministry of Information, Communication and the Digital Economy can implement these measures in phases beginning immediately, with visible results in hotspot counties within the first year and a fully adaptive monitoring system within three years.

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