Traffic Police Corruption, Vehicular Emissions and Disease: The Case of Kenyan Smoking Vehicle

Karari, P.

Karatina University
Email: pkarari@karu.ac.ke

ABSTRACT

In its Global Corruption Barometer of 2010/2011 and in a study of ten countries of the world, Transparency International (TI) describes corruption as an overwhelming tragedy that has infiltrated the global society. However, most worrying and unresearched is the role played by the traffic police in Kenya, purported to be custodians of traffic laws and order, in the perpetuation of the vice. This article explores; the link between traffic police corruption, air pollution, and disease. In this study, the author examines how the traffic police, through corruption, allows unroadworthy "smoking vehicles" on Kenyan roads leading to emissions of hydrocarbons, oxides of nitrogen, lead aerosols, carbon dioxide, and other toxic and poisonous gases that are hazardous to the health of innocent Kenyan citizens. Despite being the most efficient means of transport, motor vehicles constitute among the top sources of urban and peri-urban air pollution. However, instead of advancing and embracing emission control rules and technologies, smoking vehicles have infiltrated Kenyan roads unabated as the owners continue stuffing the police wallets to remain on the roads. Traffic police corruption has therefore compromised measures to mitigate the adverse effects of air pollution arising from uncontrolled motor vehicle emissions. Studies have linked air pollution emanating from motor vehicles emission to a variety of sicknesses including chronic obstructive pulmonary disease or chronic bronchitis, asthma, pneumonia, diabetes, cardiovascular disease, lung cancer, emphysema, among others. The objectives of this article are to examine: the relationship between vehicular emissions and health hazards; the link between traffic police corruption and vehicular emissions; ways in which police corruption and hence air pollution and related sicknesses can be mitigated, thereby facilitating transport mechanisms that are environmentally friendly. Documentary review is the main methodology in this study. Data was analyzed manually. The results of this study will be disseminated through journals.

Key words: *Traffic Police, Police Corruption, Vehicular Emissions, Pollution, Disease.*

INTRODUCTION

Corruption constitutes a form of unethical conduct, dishonesty, or illegitimate use of a position of authority to acquire personal gains (World Bank, 2012).The vice has become not only a global disaster but also a threat to international security, economy, and welfare of millions of global citizens (World Bank, 2015).The Perception Index of Corruption of 2015 indicates that over six billion global citizens are directly or indirectly affected by corruption. This global epidemic has impacted heavily on all spheres of humanity, therefore, adversely affecting the normal way of life of the affected populations (Transparency International, 2016). Corruption has compromised democracy and the rule of law and hence the legitimacy of public institutions (Hamilton, 2013). While corruption has numerous diverse effects, its link to traffic police, vehicular emissions, and disease has never been studied. Despite having established the Prevention of Corruption Act in 1956, Kenya is still struggling with extensive corruption within the police force. The formation of the Kenya Anti-Corruption Authority (KACA) in 1997 and the Kenya Anti-Corruption Commission (KACC) in 2003 did not help to end the vice either (Republic of Kenya, 2012; Kenya Anti-Corruption and Economic Crimes Act:

2003). The promulgation of the Constitution of Kenya 2010 and the establishment of the 2011 Ethics and Anti-Corruption Commission (EACC) Act have also not achieved much in the fight against corruption.

With the establishment of EACC, the fight against corruption in the police force was enforced through reforms but with limited success. Kenyan Police has remained the most corrupt in the East African region with traffic police being at the helm (Nyamori, 2009; TI, 2012). Due to increased corruption within the traffic police force, unroadworthy vehicles are let loose to infiltrate Kenyan roads resulting to massive amounts of hazardous emissions that are harmful to human health. While the police should act to ensure that such vehicles are removed from the road, they have instead turned them into cash cows amassing millions of shillings daily throughout the country. The corruption in traffic police force should therefore be addressed in order remove unroadworthy vehicles from Kenyan roads, reduce vehicular emissions, facilitate a pollution-free environment, and hence a healthy population.

This article focuses on the link between police corruption, vehicular emissions, and disease. The article argues that police corruption in Kenya has maintained and sustained unroadworthy vehicles on the roads which have heavily contributed to air pollution from vehicular emissions and the proliferation of pollution-related diseases. The article also assesses ways in which police corruption in Kenya can be addressed to maintain road-worthy vehicles therefore mitigating vehicular emissions and related diseases. The implementation of the recommendations of this study by the Government of Kenya and other stakeholders is key in nurturing a healthy and disease-free environment.

Study Objectives

The main objective of this study was to investigate the relationship between traffic police corruption in Kenya, vehicular air pollution and disease. The specific objectives of the study were: i) To examine the types of human hazards that emanate from vehicular emissions; ii) To establish the relationship between traffic police corruption and vehicular emissions; iii) To suggest ways of addressing traffic police corruption.

METHODOLOGY

The methodology of the study involved a review of secondary data and was done using literature resources such as books, journals, and the internet. The following section constitutes the review of literature related to vehicular emissions and human health, causes of vehicular emissions, traffic police corruption, and ways of addressing police corruption in Kenya.

Vehicular Emissions and Human Health

Vehicular emissions have reached high levels and constitute a devastating environmental and health concern in Kenya. According to African Population Health Research Centre (APHRC), vehicular emissions have heavily affected Kenyan urban centres and their peripherals (Kenduiwo, 2014). Despite having instituted environment regulations, Kenya has failed to mitigate the ever-increasing menace of air pollution and more so vehicular emissions. This section discusses various forms of vehicular emissions and their effect on the environment and human health.

Kenduiwo further posits that millions of kilogrammes of hazardous vehicular pollutants are emitted to the air every year causing environmental damage and ill-health to millions of people worldwide. As world population grows and the demand for transportation increases, vehicular emissions has become a global concern and a challenge that requires urgent address (Wargo, et al., 2006). In Nairobi, the capital city of Kenya, the air residents breathe in is described as poisonous and capable of causing cardiovascular and respiratory diseases (Kenduiwo, 2014). According to Kenduiwo, studies indicate that carcinogenic elements in the city's space has reached 105 microgrammes per cubic meter way beyond the threshold of World Health Organization's (WHO) 20 micrograms per cubic metre. A study by the University of Nairobi's Institute of Nuclear Science and Technology in collaboration with Gothenburg University of Sweden, and Columbia University's Earth Institute indicates that cardiovascular and respiratory illnesses linked to vehicular emissions affects more than a third of the Kenyan population (Kenduiwo, 2014).

Studies indicate that increased exposure to vehicular emissions causes a variety of diseases including pneumonia, emphysema, heart disease, chronic bronchitis, and asthma (Wargo et al., 2006; Faiz et al., 1996). For example, nitrogen oxides (NO_x) produced during motor vehicle engine combustion causes irritation of the respiratory system and complications in the lungs and airways. There are also carbon monoxide (CO) chemicals, which emanate from partially unburned vehicle fuel. CO limits the flow of oxygen in the blood therefore resulting to difficulties in breathing and other respiratory problems. Vehicular emissions also produce toxic and volatile organic compounds (VOCs) such as formaldehyde, 1, 3-butadiene, acrolein, and benzene (Faiz et al., 1996). VOCs, which emanate from unburned or partially unburned fuel, are linked to cancer in human beings. There is also fine particulate matter ($PM_{2.5}$) which forms during engine combustion. $PM_{2.5}$ constitutes polycyclic aromatic hydrocarbons (PAH), carbon, metals, and acids. It infiltrates human lungs and heart thereby affecting especially those afflicted by diabetes and asthma (ibid).$PM_{2.5}$is also linked to human carcinogen, cardiovascular and respiratory diseases and a variety of premature deaths (Kenduiwo, 2015).

In addition, there is ground-level ozone (O_3), a product of the reactions of NO_x and VOCs. This compound is a key irritant of airways and can especially be hazardous to people with asthmatic conditions. Persons most vulnerable to vehicular emissions include the children, the elderly, and people living with asthma, diabetes, chronic obstructive pulmonary disease (COPD), chronic bronchitis, cardiac failure, myocardial infarction, cardiac arrhythmia, and cardiac attack (Wargo et al., 2006). Other vulnerable categories of people are those living along major and busy highways, and those living in the cities and their peripherals. Studies indicate that vehicular emissions to approximately 50% of cancers arising from air pollution (Faiz et al., 1996). This article demonstrates that vehicular emissions are a real threat to human health not only in Kenya but also in the world.

Causes of Vehicular Emissions

With the increased global warming, the causes and effects of pollution have become key concerns around the world. Vehicular emissions constitute one of the leading causes of air pollution, climate change, and disease. When the gasoline is burnt in the engine, harmful gases such as carbon dioxide, nitrogen oxide, and other hydrocarbons are emitted into the atmosphere causing acid water, air pollution, and global warming. It is, therefore, important to explore the causes of vehicular emissions that pollute our environment and cause ill-health to human beings. Vehicular emissions result from lack of routine servicing and maintenance of vehicles — and this is where the traffic police come in, to identify unroadworthy vehicles and remove them from the road. According to the The NSW Environment Protection Authority (EPA) (EPA, 2017), driving vehicles is one of the most polluting activity in many parts of the world.

EPA points out five key causes of high vehicular emissions. First, the vehicle may have a fuel injection problem (EPA, 2017). An auto engine regulates the fuel injector whose purpose is to inject the fuel into the internal combustion chamber. However, any breakdown of the engine control unit, the fuel injector or both, causes irregular flow of air and fuel causing hazardous emissions. The engine system should regularly be serviced to ensure optimum functioning of the carburettor, fuel jets, automatic choke, and engine sensors (OARDS, 2018). While servicing the fuel injector, attention should be directed to nozzle leakage, opening pressure, and whether the injector is the correct one for the make or model of the vehicle. Regular engine servicing also ensures timely discovery of worn out or dysfunctional rings, crank ventilation valve, valve guides, rotor seals, pistons, valve stem seals, brake-booster, auto transmission, carburettor among others (EPA, 2017). In the case of diesel engines, various factors may cause harmful emissions. These include: contaminated fuel, faulty speed governors, worn-out spark plugs, air filter's blockage, worn-out cam shafts, faulty exhaust system, broken fuel injectors, and faulty fuel pump timing and cylinder compression (OARDS, 2018). In 2-stroke engines, vehicular emissions may be as a result of carbon build up, faulty mufflers, exhaust, and ports. Use of quack services may intensify or sustain vehicular emissions. Therefore, qualified personnel using recommended factory specifications should always be used to service vehicles.

Secondly, vehicular emissions may be caused by dysfunctional oxygen sensor (EPA, 2017).The function of the oxygen sensor is to gauge the amount of oxygen in a vehicle's exhaust. If an oxygen sensor fails, harmful emissions goes undetected.

Thirdly, a malfunctioning evaporative emission control system (EVAP) which constitutes vacuum hoses, the vents, and the gas cap, may lead to leakage of harmful gases (EPA, 2017) The function of EVAP is to prevent the release of vehicular emissions into the atmosphere.

Fourthly, high vehicular emissions may also be caused by a malfunction of the Manifold Absolute Pressure Sensor (MAPS), (EPA, 2017). The MAPS feed the engine control unit with data about the functioning of the manifold pressure. If the MAPS is malfunctional, then it would not detect any leakage from gaskets or vacuum lines thus causing high engine emissions (OARDS, 2018). Vehicular emissions therefore mean that the engine is damaged, worn out, or there is an imbalance in the fuel mixture resulting from a faulty oxygen sensor.

Fifthly, the Mass Air Flow Sensor (MAFS) may be malfunctional (EPA, 2017). The function of MAFS is to feed the engine control unit with data about the amount of air entering the internal combustion engine. The breakdown of MAFS means irregular and uncontrolled flow of air into the internal combustion engine. This flow results to massive burning of fuel and hence increased vehicular emissions of carbon dioxide.

Other causes of vehicular emissions are due to lack of attention or failure to observe simple precautions (OARDS, 2018) For example, excessive fuelling or faulty fuel settings. While buying a new or a used car, one should be careful to match the engine size to the kind of work intended. Lugging or overworking the engine may lead to harmful vehicular emissions. Tyres should have the correct air pressure. Having incorrect air pressure causes a car to labour more and the engine to work harder leading to more vehicular emissions. Vehicular emissions can also result from increased build-up of oil and dust on the air cleaner. The air filter should be replaced or serviced occasionally. A modern option to help curb vehicular emissions is to upgrade to hybrid cars which are mostly rated zero or close to zero in emissions.

FINDINGS AND DISCUSSION

Police Corruption

Vehicular emissions constitute a global disaster and a health hazard that have affected millions of people in the world. This menace therefore should be addressed urgently. However, addressing this menace requires focusing on its causes (Quah, 2007) defines corruption as "any type of proscribed behaviour engaged in by a law enforcement officer who receives or expects to receive, by virtue of his official position, an actual or potential unauthorized material reward or gain". Transparency International defines corruption as "the abuse of entrusted power for private gain" Corruption is a global menace (Transparency International, 2011, 2012).

Studies by Ivkovic (2003, 2005) have classified corrupt police individuals into three categories: the "grass-eaters" or opportunists who will freely and willingly accept or receive offers of bribes; the "meat-eaters", who actively participate or get involved in corrupt activities for personal or cooperate gains; and the "birds" who fly and shelter in high places to camouflage their corrupt deals. The study indicates that while corrupt police start as low profile grass-eaters and later graduate into meat-eaters, not all grass-eaters move into the high-profile meat-eaters.

In Kenya, the act of police receiving bribes from the owners of private and public vehicles has maintained unroadworthy vehicles on the roads (Gerber & Mendelson, 2008). These vehicles emit tons of poisonous gases in the Kenyan highways, urban, and peri-urban areas everyday affecting millions of innocent citizens (Kenduiwo, 2014; Loree, 2006). Traffic corruption in Kenya constitutes a systemic problem or an institutional failure and must holistically be addressed in order to mitigate the vice. The following section focuses on ways and means in which traffic corruption can be addressed in Kenya.

Addressing Traffic Police Corruption in Kenya

The mitigation of vehicular emissions that have compromised the life of millions of people in the world requires efforts to curb the causes of such emissions. One means of mitigating such emissions is to fight against traffic corruption, coupled with the change of attitude and the adoption of best practices in the conservation of the environment (Committee on the Office of the Ombudsman and the Police Integrity Commission, 2002). Prevention of traffic corruption may best be addressed by focusing on its roots—the "grass-eaters" who eventually graduate to "meat-eaters" (Mustapha, 2012; Miller, 1999). Extensive and holistic interventionism in terms of sensitization, awareness creation, and education must be implemented and maintained as per the Ethics and Anti-Corruption Commission Act (EACC) of 2011. This awareness process should constitute participatory forums such as workshops in which all stakeholders including the citizens, the police, and the courts are actively involved.

Addressing corruption within the traffic police may also require formation and streamlining of anti-corruption bodies. Non-performing anti-corruption bodies should be reformed and run by reputable civil servants chosen by the civil society groups (Kenya Anti-Corruption and Economic Crimes Act , 2003). Reforms of police institutions should be holistic involving not only the clean-up of the perceived "rotten apples" but the whole "orchid" (Mustapha, 2012). The anti-corruption bodies should be well resourced and equipped in order to facilitate and sustain focused and desired reforms. Targeted or focused reforms discourage generalization and prevents unwarranted fear and demoralization across the police force (Blanco, Guillén & Suggett, 2009; Human Rights Watch, 2010).

Various theoretical models explain the motivation towards policing and therefore help to link corruption and the institution (Geber & Mendelson, 2008). The functionalists link policing to ethical and moral professionalism as witnessed in modern democracies where the interest of the general citizenry is the foundation of the motivation for policing. The divided society model argues that the interests of the ruling elites form the basis for policing in which the minorities and the opposition are suppressed and coerced into silence. According to the predatory policing model, policing is motivated by personal enrichment, interests, and self-preservation at the expense of subordination and suppression of the public (Geber & Mendelson, 2008). Predatory policing compromises the trust and the security of the general citizenry in which the police are seen as enemies rather than friends of the people.

Studies indicate that corruption is a complex phenomenon that requires a holistic interventionism and that no single solution may address it entirely (Newburn, 1999; Pfeifer & Owens, 2002). However, targeted interventionism may help mitigate corruption. Key to such interventionism is institutional reforms. In addition, institutional reforms require political will and responsibility of all the stakeholders in the administration of policing (United States Institute of Peace Special Report, 2011). For example, in Kenya, such stakeholders may include the Police Commissioner, the County Governors, Members of Parliament, and Members of the County Assembly. Key to police reforms is to focus on: targeted change, dismantling of hierarchies, freedom in voicing opinions, open dialogue, honest communication, and integration of ethical standards (Ivkovic, 2003, 2005). Police reforms also require active involvement and participation of police officers at all levels in anti-corruption campaigns (Mustapha, 2012; Blanco, Guillén & Suggett, 2009). Focused dialogues based on best practices, case studies, ethical dilemmas and practical experiences of police officers in the field may help address corruption in a more realistic and sustainable way.

Another way of preventing police corruption is the investment in the mapping and prediction of the vice (Heald, 2007; Pyman, 2012). Anti-corruption bodies should focus their energies in the hot spots of corruption such as key highway traffic police stations, road blocks, the cells, the courts, and the most vulnerable vehicles in Kenya such as the lorries and the Probox. The traffic police officers should also be interchanged or rotated without much warning in the most vulnerable corruption hot-spots (Mustapha, 2012). The devolved county governments in Kenya should invest in monitoring and evaluation of key indicators of corruption, the success achieved, the challenges identified, and ways of bridging the gaps in the future. Such monitoring procedures ensure transparency and accountability in the daily routines of traffic police officers (Kurian, 2006; Tankebe, 2010).

The reforms in the Kenyan police force cannot be effective without addressing their basic and expressed needs such as harmonized salaries, housing, and insurance, among others (Republic of Kenya, 2012). For many years most of the Kenyan police officers live in impoverished and unsanitary conditions often sharing little spaces among themselves and their families. Provision of basic and expressed needs can help raise the morale of traffic police officers and mitigate the need for getting involved in corruption (Mobekk, 2003; Matei & Bruneau, 2011).

Community policing can also play a role in preventing and addressing corruption among the traffic police (Nyamori, 2009; Ruteere & Pommerolle, 2003). Such policing could engage the community and the police to work together towards the realization of common goals such as the fight against corruption. For example, the passengers in public transport can protest against a traffic police officer soliciting for bribes from the driver or the tout. Alternatively, such passengers can disembark or strike against public transport condoning bribery. However, community policing should be a contextualized, educative, participatory, and sustainable initiative, engaging both the police and the community in actively addressing corruption as a vice (Mustapha, 2012; Mobekk, 2003). The meaning, goal, and value of community policing should be embraced by all stakeholders involved in the process. Community policing should also be built on commitment, responsibility, transparency, and accountability of all involved parties (Transparency International UK, 2011).

Addressing corruption among traffic police officers can also be mobilized through the civil society organizations (CSOs) (Weitzer, 1995; United States Institute of Peace, Special Report, 2011). CSOs enjoy political freedom and independence and can actively engage and petition police officers involved in corrupt activities (Interpol, 2011; KACECA, 2003; Transparency International, 2011, 2012; HRW, 2010). Such organizations can also represent the affected public members or groups in law courts and other forums in which corruption cases are addressed. CSOs are also important in community education, legal advice, sensitization, and awareness creation including mobilization of affected individuals and groups in social actions to protest against corruption. Several CSOs, for instance Transparency International, Human Rights Watch, Kenya Human Rights Commission, and the Ethics and Anti-corruption Commission, play a significant role in advocacy, dialogue, investigative journalism, research, and reforms pertaining to corruption and justice in the community.

Police reforms have been central to the fight against police corruption in Kenya despite the effect of political and bureaucratic intrigues (Ruteere & Pommerolle, 2003; *Daily Nation*, 2009; Transparency International, 2011, 2012). In 2009, the government-commissioned investigation into police corruption in Kenya headed by Justice Philip Ransley. The investigation recommended the vetting of all police officers ranked from Assistant Police Commissioner and above (COOPIC, 2002; EACC, 2011; Mustapha, 2012; Daily Nation, 2009). The Ransley Report decried the abuse of the Kenya Police Service by political and state machineries and proposed separation of powers to avoid overlapping and duplication of efforts by police departments and hence limiting spaces for corruption. The Inspector General of Police was also directed to report to three organs namely the National Police Service Commission (NPSC), the Independent Policing Oversight Authority (IPOA) and the National Policing Council (NPC).

Most important in Kenyan police reforms should be the incorporation and active involvement of the grass-eaters in open dialogue, deliberations, and consultative workshops at all hierarchies in a bid to curb their graduation into meat-eating category (Mustapha, 2012). The training curriculum for the police force should be derived from the expressed needs and practical experiences from the field while higher level of education should be considered for new recruits into the police force (Mustapha, 2012).

CONCLUSION

This study indicates that the traffic police corruption in the transport sector has maintained unroadworthy vehicles on the Kenyan roads. Consequently, vehicular emissions continue to pollute the Kenyan airspace inflicting innocent Kenyans with a variety of respiratory and heart related diseases. Despite the efforts to arrest corruption among the Kenyan police force, political unwillingness and intrigues continue to hamper the process. For example, the Kenyan Government dismantled the Kenya Anti-Corruption Commission

(KACC) and fired its senior staff in 2011. KACC was replaced by the Ethics and Anti-Corruption Commission (EACC).This study indicates that transparency, integrity, and accountability must be cultivated maintained, and sustained as foundational elements of the Kenyan Police Force in the fight against corruption police corruption nurtures mistrust between the police and the community.

The restoration of trust and confidence between the community and the police requires reforms in the police force that nurtures unreserved community service rather than self-interests (Pyman, 2012). Sustainable reforms in the police force must accommodate opinions and facilitate active involvement of low level officers (William, 2002). This ensures that both the low-ranking and high-ranking officers jointly participate in the fight against corruption. Retrenchment and punishment of corrupt police officers must be sustainable and targeted on the culprits rather than being generalized to avoid demoralization of the entire force.

Sustainable reforms in the police force require a divorce from political influence and intrigues (Mustapha, 2012). This study indicates that corruption control and prevention must be contextualized in order to effectively meet and address the expressed needs of the target police force and community. Borrowing from best practices is key in effective and sustainable reforms in the Kenya police force. Studies indicate that police reforms must involve all stakeholders in order to nurture credibility, ownership, and sustainability (William, 2002). Reforms in the police force should not be a quick fix but should entail a comprehensive and sustainable change of structures. This study observes that since all corruption in the police force start from the "grass-eating" or low-level locus, the interventionism must invest in preventive reforms to curb its institutionalization into higher level of corruption (Ivkovic, 2003, 2005).

Anti-corruption agencies investigating corruption in the police force must be independent, transparent, and accountable in the execution of duties and responsibilities. Key to police reforms is transparency and accountability in the service to the general public rather than vested interests in the protection and surveillance of political elites (Human Rights Watch, , 2010).In this study, CSOs have been cited as being key in the lobbying and advocacy of the rights, expressed needs, and interests of the general public (Pyman, 2012). Training, sensitization, civic education, monitoring, and evaluation are key in tracking of the progress of anti-corruption initiatives, identifying the existing gaps, and finding ways and means of bridging such gaps. Most importantly, community policing that embraces active collaboration and engagement between the police and public is fundamental in curbing corruption in the police force (Mustapha, 2012; HRW, 2010). The population should be educated about proper services and maintenance of their vehicles, harmful effects of vehicular emissions, and zero tolerance to corruption. In summary, mitigations against vehicular emissions should be a holistic approach actively involving all stakeholders towards nurturing a healthy and disease-free environment.

REFERENCES

Anon (2001). *Principles for Promoting Police Integrity.* Washington: US Department of Justice.

Baylay, D.& Perito, R. (2011). *Police Corruption: What Past Scandals Teach about Current Challenges. Special report.* Washington, DC: United States Institute of Peace.

Blanco, F. P., Guillén, M., & Suggett, J. (2009). *Human rights and police reform in Venezuela: A Venezuelan Perspective.* Retrieved 15th October 2017.

Committee on the Office of the Ombudsman and the Police Integrity Commission (2002). *Research Report on Trends in Police Corruption,* New South Wales, Australia.

Commonwealth Human Rights Initiative (2006). *The Police, the People, the Politics: Police Accountability in Kenya.* Nairobi: The Commonwealth Human Rights Initiative.

Daily Nation (2009). "Ransley team proposes 200 ways to make police better", retrieved 25th October 2017, http://www.nation.co.ke/News/-/1056/682078/-/uolplu/-/index.html.

Ethics and Anti-Corruption Commission Act. (2011).

Faiz, A., Weaver, C., & Walsh, P. (1996). *Air Pollution from Motor Vehicles: Standards and Technologies for Controlling Emissions.* Washington D.C: World Bank.

Gerber, T.P., & Mendelson, S.E. (2008). Public experiences of police violence and corruption in contemporary Russia: A case of predatory policing? *Law & Society Review,* 42 (1), 1-44.

Heald, S. (2007). Controlling crime and corruption from below: *Sungu sungu in Kenya. International Relations,* 21(2), 183-199.

Human Rights Watch (2010, August 17). *Everyone's in on the game.* Retrieved September 2017 from http://www.hrw.org/reports/2010/08/17/everyone-s-game-0

Irny, S.I. & Rose, A.A. (2005). Designing a strategic information system planning methodology for Malaysian institutes of higher learning. *Issues in Information System,* Volume VI, No. 1, pp. 325-331

Interpol (2011). *Global Standards to Combat Corruption in Police Forces/Services,* retrieved 17th September 2017.

Ivkovic, S.K. (2003). To serve and collect – Measuring police corruption. *The Journal of Criminal Law & Criminology,* 93,2-3.

Ivkovic, S.K. (2005). Police (mis) behaviour: A cross-cultural study of corruption seriousness in policing. *International Journal of Police Strategies & Management,* 28 (3), 546-566.

Kenduiwo J.K. (2014).*Consulting Services on the Pilot Project of the Global Fuel Economy Initiative.* Nairobi: University of Nairobi Enterprises and Services Ltd.

Kenya Anti-Corruption and Economic Crimes Act (2003) retrieved June 2012, http://marsgroupkenya.org/Reports/LawsandConventions/Kenya_Anti-Corruption_and_

Economic_Crimes_Act_2003.pdf.

Kenya, Republic of. (2012). War on corruption', retrieved September, http://republicofkenya.org/reform/war-on-corruption/.

Kurian, G. (2006). The Policing Principles of the Metropolitan Police, retrieved October 2017, http://law-journalsbooks.

Loree, D. (2006). Corruption in Policing: Causes and Consequences. Retrieved September 2017.

Miller, B. (1999). Police leadership in the 21st Century: Achieving and sustaining executive success. International Associations of police chief, Global leadership in policing.

Mobekk, E. (2003). Police reform in South East Europe' in Eden C., Timothy D., and Philipp H. F. (eds) *Defence and Security Sector Governance and Reform in South East Europe Self-assessment Studies: Regional Perspective* (155-168). Geneva: Geneva Centre for the Democratic Control of Armed Forces (DCAF).

Matei, F.C., & Bruneau, T. (2011). *Intelligence Reform in New Democracies: Factors Supporting or Arresting Progress, Democratization.* Center for Civil-Military Relations (CCMR), Naval Postgraduate School, Monterey, CA, USA. 18:3, 602-630, DOI: 10.1080/13510347.2011.586257

Mustapha S. (Ed.) (2012). *Arresting Corruption in the Police: The Global Experience of Police Corruption Reform Efforts.* London: Transparency International UK.

Newburn, T. (1999). *Understanding and Preventing Police Corruption: Lessons from the Literature.* London: Home Office RDS. Police Research Series, Article 110.

Nyamori, V. (2009). Police Reforms in Kenya. Retrieved September 2017, http://www.docstoc.com/docs/7788045/POLICE-REFORMS-IN-KENYA-BY-NYAMORI.

OARDS.COM. (2018). 5 Causes of cars emissions and tips to identify: https://oards.com/causes-of-high-car-emissions/. Retrieved December 14, 2018.

Pfeifer, J., & Owens, K. M. B. (2002). Police leadership and ethics: Training and police recommendations. *The Canadian Journal of Police and Security Services,* 1(2), 124- 135.

Pyman, M., Cohen, J., Boardman, M., Webster, B., Seymour, N. (2012). *Arresting Corruption in the Police: The Global Experience of Police Corruption Reform Efforts.* London: Transparency International UK

Quah, J. S.T. (2007). Preventing police corruption in Singapore: The role of recruitment, training and socialization. *The Asia Pacific Journal of Administration,* 28, 59-75

Ruteere, M.,& Pommerolle, M. (2003). Democratizing security or decentralizing repression? The ambiguities of community policing in Kenya. *African Affairs, 102,*587-604.

Tankebe, J. (2010). Public confidence in the police: Testing the effects of public experiences of police corruption in Ghana. *British Journal of Criminology,* 50, 296-319.

The NSW Environment Protection Authority (2017). https://www.epa.nsw.gov.au/your-environment/air/reducing-motor-vehicle-emissions/causes-smoky-vehicles. Retrieved December 14, 2018.

Transparency International (2013). Corruption perception index results http://www.transparency.org/policy_research/surveys_indices/cpi/2013/resultshttp://www.transparency.org/cpi2013/results. Retrieved September 2017

Transparency International. (2012). "Report corruption", *Advocacy and Legal.* Retrieved September 2017, http://www.transparency.org/getinvolved/report.

Transparency International Kenya (2012). *East African Bribery Index,* retrieved August 2012,http://www.tikenya.org/index.php?option=com_docman&task=doc_download&gid=134&Itemid=146.

Transparency International UK. (2011). *Corruption in the UK,* retrieved September 2017, http://www.transparency.org.uk/our-work/corruption-in-the-uk.

Transparency International UK. (2011). *Codes of Conduct in Defence Ministries and Armed Forces.*

Transparency International UK (2011). *Building Integrity and Countering Corruption in Defense and Security.* London: Transparency International UK.

Transparency International (2001). *The National Integrity System: Concept and Practice Report for the Global Forum II on Fighting Corruption and Safeguarding Integrity.* London: Transparency International.

United States Institute of Peace, Special Report (2011).https://www.usip.org/sites/default/files/SR286_The_Economics_of_Peace.pdf

Wargo, J., Wargo, L., Alderman, N.& Brown, D. (2006). *The harmful effects of vehicle exhaust: A case for policy change.* North Haven CT: Environment & Human Health, Inc.

Weitzer, R. (1995). Policing under Fire: Ethnic Conflict and Police-Community Relations in Northern Ireland, Albany: State University of New York Press.

William, H. (2002). Core factors of police corruption across the world. *Forum of Crime and Society,* 2, (1), 85-99.

World Bank (2012). World Bank Report.

World Bank (2015). World Bank Report.