



Mineral Resource Extraction and Zimbabwe's National Security: Case of Artisanal Gold Mining in Mazowe

BY

Alex Mutseta

Great Zimbabwe University. Department of SocialScience. P. O. Box 1235 Masvingo



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Abstract

Artisanal gold mining (AGM) is a grave problem in Zimbabwe that threatens the country's national security for it effect environmental, economic, water, food, and physical insecurities. The ensuing study investigates the drivers of AGM, effects of AGM on the country's peace and security, and, suggest ways in which the AGM-induced security challenges can be mitigated. The findings made herein show that inasmuch as the economic motivation shapes the AGM, but there are a myriad of factors and actors active in shaping the sector. So, there is need for an integrated stratagem; pronouncing the entire range from grassroots poverty relief actions to "high level" political will, attending good governance and legal basis that consider AGMiners as citizens with rights and responsibilities. The physical environment that offers the basic life needs is wrecked by the AGM operations that destroy farmlands, polluting and silting water bodies serving as irrigation and potable water in the country, yet threatening food security. Economically, the government is losing lot revenue from AGM because gold is smuggled out of the country. Without revenue, the government cannot build the essential infrastructure, generate employment and capital to capacitate the military and other state security agencies. Zimbabwe's physical security is threatened as criminals and some AGMiners acquire firearms, machetes, and other dangerous weapons to defend their activities. Important to lessen AGM and guard the Zimbabwe's national security, is the pragmatic measures, needful of inclusive effort by government and its agencies, civil society, private sector, and the media to curb AGMiners' threats and education on the national security implications of their actions. The study is informed by Realism, Political Ecology, and Peacebuilding theoretical models. To meet the study objectives, the study adopts qualitative methodology utilizing Semi-Structured Interviews, Key Informant Interviews, Transect Walks and Focus Group Discussions amongst participants recruited using purposive sampling technique.

Keywords: Environment security, Food security, Insecurity, Physical security, Security, Threat.

Introduction

This study investigates the drivers of Artisanal Gold Mining (AGM) in Zimbabwe, effects of AGM on the country's peace and security, and, suggest ways or strategies in which the AGM-induced security challenges can be mitigated. Though AGM is a major income security activity in Zimbabwe, but it is a national security problematic. The informality of AGM obstructs crime reduction and promotes violence and various insecurities: *economic, environmental, water, food, and environmental*. The AGM's exploration, extraction, exploitation, and processing practices threaten the country's peace and security through generation of social conflicts and disruptions, human rights abuses, social displacement, forced and child labor, and prostitution. Economically, due to the

country's border porousness, a lot revenue is lost through outgoing gold smuggling. AGM has threatened environmental, food, and water securities through land degradation, farms destruction, the siltation and pollution of water bodies. Zimbabwe's physical security is under threat as illegal miners acquire 'firearms' to defend their activities. This research, however, highlights AGM's threats to Zimbabwe's national security. Besides realism security theory, the research integrates two academic approaches on environmental and natural resource conflicts: *Political ecology and; peace and conflict studies*. It is grounded within qualitative methodology utilizing Semi-Structured Interviews, Focus Group, Transect Walks, and Key Informant interviewing techniques with participants recruited through purposive sampling in Mazowe.

Background to the Study

Zimbabwe is a gold-rich country and gold mining is multi-dimensional (large-scale mining, artisanal and small-scale mining). Zimbabwe law does not discern between AGM and small-scale mining and; discrepancy between AGM and small-scale mining is mostly defined by public acuity. AGM has become a key livelihood source and economic security for many people; but it is a poorly regulated operational area employing inexpert labor and cheap mining techniques (Nyavaya 2021) and the AGMiners do not have mining licenses (UNIDO 2018). Hence, the sector is bedeviled with illegal miners generally known in Zimbabwean jargon as Makorokoza or Mageweja. Like most AGM sectors around the globe, the vast majority of AGM in Zimbabwe is illicit, hence informality undermine legal economy and cause significant environmental and social impacts that threatens the national peace and security. Zimbabwe's success and its national security is inherently linked to the gold mining (Nyavaya 2021) as AGM activities are widespread in Zimbabwe's regions. Violence and insecurities linked to AGM are increasing (SIT-REP 2021), and AGM risk sustainable peace in primary gold-producing countries across the Global South (Beevers 2015).

Different actors have deeply invested in AGM (SIT-REP 2021) however, the sector is destroying Zimbabwe for it triggers mining-related national security worries (CNRG 2020). AGM has proven not to be only a socio-economic topic as some researchers would submit. First, if a country is to be secure, its persons must be protected. In "*National Security Imperatives and Challenges*", Peleri (2008: 30-36) opines that the state security is inherently linked to the individual safety identified by Abraham Maslow's hierarchy of needs. Second, a nation's fiscal strength is one of the drivers for its peace, development, and security. Through AGM, Zimbabwe is losing lot revenue that could be attentive to national objectives. Third, the Government is required to fight internal instability linked to AGM or Chikorokoza/makorokoza/mageweja. This devours the national resources (human, financial, and equipment) that could be used otherwise. The AGM-induced pollution is threatening the Zimbabwe's food, economic, and environmental security. Due to AGM, Zimbabwe has high levels of mercury pollution and human exposure to toxic risks (PACT 2015). Mazowe is among the worst affected by the environmental degradation associated with AGM (ibid).

Due to periodic droughts and economic down turning in Zimbabwe, in seeking income security, individuals have diversified into AGM along rivers and in deserted mines (Zvarivadza 2018). Diversification into AGM pose challenges to peace and security in mining sites and surrounding areas. In the deviation course, the impoverished individuals are both the sufferers and mediators of conflict (ibid). Thus, skirmishes confront the government against criminal groups; criminals groups against themselves; AGMiners against farmers, and AGMiners against local communities (Muchemwa and Patel

2022). Accordingly, mining areas have become violence and conflicts centres due to the clash over the seizure and economic benefit of AGM. Reports of Zimbabwe's Machete wielding gangs known as Mashurugwi undermine peace and security in the AGM areas. These conflicts and the ecological ruin by AGM, obliged the Zimbabwean Government to deploy the Zimbabwe Republic Police Support Unity to halt chikorokoza activities in the country.

In AGM, there is no restraint to entry, no taxes paid and income is instant, compared to agriculture. The high-grade gold ore findings in Mazowe attracted AGMiners, jobless people, frantic fortune seekers, and criminals from across Zimbabwe. These influxes of varied groups marked the start of deepened violence and conflicts (Zvarivadza 2018) as it brought social dynamics non-exist before, like drugs and alcohol abuse, and prostitution. The aforesaid info proves AGM's likely implications for Zimbabwe's national security. Hence, a thorough study of AGM in Zimbabwe is thus key in lightening the nexus between AGM and Zimbabwe's national security threats.

LITERATURE REVIEW

Literature review is a logical process involving identifying, locating, analyzing, and evaluation of data related to the researcher's planned research problem (Yin 2011). To validate how the AGM threatens Zimbabwe's national security, this researcher focused on both theoretical and empirical review of related literature. The literature mostly utilized is from studies conducted in Zimbabwe; and other gold resource-endowed and politically unstable countries (UN 2019) and the present work feeds into, contributing much to the literature existent on AGM and security studies.

Realism, Political Ecology and Peace Building Theories and National Security, and AGM

Understanding security notion is vital to appreciate this study's parameters with respects to national security. Realism, similarly branded as political realism, classical realism, or realpolitik is the security theory dominating security studies (Bossman 2016). It is a transnational political theory related to topics threatening national security. Realists proclaim that states are the central players in the global milieu (ibid). For them, the transnational scheme is defined by anarchy due to the dearth of a central authority (Waltz 1979). Power is thus, crucial for states to protect themselves against threats to their survival. However, realists variously comprehend power counting military, economic, and diplomatic but eventually stresses the material capability as a factor in transnational politics (Mearsheimer 1995: 5-49). Realists undertake that states are rational actors (ibid), thus, act at best to exploit their survival possibility. Moreover, realists assume that politics determines economics and the nation's economic power is vital so long it augments military might and national interests (Bossman 2016: 35). From the self-interest perspective, nations make sundry conclusions on how best to protect themselves. However, realism is criticized for tagging people as contrary and greedy, ignoring the cooperativeness in human nature.

Contextualizing AGM in Zimbabwe, *realism* as a security theory provides an understanding on why Zimbabwe ensure national security with policies regulating economic activities like mining. While the government sees mining as a revenue generation way for Zimbabwe's economic security and survival, AGMiners see mining as an economic venture for their survival. Although realism does not stress the non-state actors' role in national security matters, the central themes of power struggle and survival at national level can explain why Zimbabweans engage in AGM. National security includes the country's physical security, military protection, and the citizens' mental and emotional safety (Snow 2017), addressing the mental perspective of security as safety from poverty that makes one feel insecure (Peleri 2008). Thus, national security is ability of the Zimbabwean government to cater for the safety and security of its citizenry. By merging multi-scalar political ecology lens, sensitive to power structures, attentive to environmental, livelihood, and other insecurities (Bryant 1998: 79), the study avows that national security is economic, environmental, personal, community, food, or political security. *Political ecology* stress how political facets and conflicts shape the degraded Mazowe's environmental conditions, and simultaneously, how these ecological conditions produce disputes and violent conflicts threatening Zimbabwe's security. Securitization ought not barely focus on observed threats to state security, but to include national security as a totality of a series of human socioeconomic dimensional needs (Schilling et al 2021), citizens' well-being against sociopsychological and physical threats.

National security is a cover term for topically diverse issues (Snow 2017) for people implicated in diverse security regimes and for whom security is differently experienced (King and Carnegie 2018). Thus, the understanding of Zimbabwe's national security goes past the military threats or disputes to state security or the invocation of threat. National security is rooted in the communities' lived experience (ibid), in Zimbabwe's AGM sites, and the daily presence of insecurity. Thus, securitization offers a ready-made and all-inclusive tool based on the notion that anything can become a referent object of national security as long as it is deemed a threat or risk. However, Environmental Peacebuilding is vital in understanding the relations amid AGM and Zimbabwe's national security threats in Mazowe as it only not focuses in analyzing how AGM relates to violent conflicts, but because it also submits that gold can enhance cooperation in conflict situations (Dresse et al 2019). Utilizing Snow's national security definitional paradigm shift from military security to include non-military aspects of security, this research stress on the non-military elements of national security that embrace environmental, food, and economic security, ensuring that Zimbabweans enjoy a living and social cohesion depressing violence and 'armed' conflicts.

Historical Overview of Gold Mining in Zimbabwe

Mining has long been a vital industry in Zimbabwe, both for people and the government. Traditional AGM operations prevailed before colonization in the time of Munhumutapa

Empire in the 15th century (Maponga and Ngorima 2003), as proved by the Portuguese and Shona people gold trade era (Mberengwa 2010). Zimbabwe was subjugated by Cecil John Rhodes' British South Africa Company (BSAC), looking for mineral reserves believed to be equal to the Witwatersrand gold ridges of South Africa (Chipangura 2017). Observing the archaeological Zimbabwe's mining trail, key gold works established as large-scale mining after 1890 were set up on precolonial gold mines formerly ran by the local Shona people (Mudenge 1988). Zimbabwe's modern mining started by re-examining some old mines of the BSAC (Chipangura 2017). AGM ordinarily flourish in areas with old mine workings (ibid). Makorokozas' (illegal miners) reworking of old abandoned gold ridges is a process birthed in colonial works, precursors to today's gold extraction forms (Chipangura 2017). AGM is also prevalent along rivers (alluvial mining) (ibid). Notwithstanding the massive evolution of AGM, the sector has remained subsistence (Gutu 2017).

The Zimbabwe's AGM sector covers unregistered gold excavators and panners (Zvarivadza 2018). AGM is very nomadic, save when the panners work on huge stakeouts dump or on rubble solid (ibid). Groups differ from organised permanent operations to impromptu coalitions of convenience, to clusters of nomadic miners moving from one gold rush to another (Gutu 2017). Mawowa (2013) estimates the number of ASGMiners in Kwekwe alone to be more than 1 million, but the informal nature of operations makes it hard to quantify. Like in another developing world, AGM in Zimbabwe is amorphous, rather elusive. To poverty-stricken, AGM is the panacea to their miseries. To individuals involved in gold deals, AGM signifies the fast way to amass riches. To the security intellectuals, AGM is an environmental time bomb and a national security threat.

Global Lens on Artisanal Gold Mining (AGM)

AGM is a worldwide phenomenon but is extensive in Africa, Asia, and South America (Machaack 2020). Globally, artisanal and small-scale mining is interchangeably used (Zvarivadza 2018) as the two are inseparable, both operate in small groups using artisanal tools (ibid). AGM is illegal and unregulated small-scale mining operation (Machaack 2020), extracting gold from alluvial, colluvial or eluvial material concentrated by gravity methods (Gutu 2017). AGM sector is rife with illegal miners commonly known as Magweja/makorokoza in Zimbabwean parlance (CNRG 2020), in Ghana as *galamsey*, a lingo derived from the English words "gather and sell" (Mantey et al. 2017: 12) and Colombia are known as *barequeros* (Gregory et al 2020). However, in Zimbabwe there has been upsurge in violence and killings in AGM areas by machete-wielding gangs, popularly known as *Mashurugwi* (CNRG 2020), and in Peru are known as 'assassins' as they are armed with satellite phones and automatic weapons (Addaney and Lubaale 2021). In 2017, police in Peru's Madre de Dios region uncovered a twenty-mass grave thought to be the bodies of laborers from AGM camps (ibid), hence a link between AGM and national security.

Furthermore, globally, AGM is related to negative environment and societal effects that threaten national security (Lezhnev 2021). In Latin America, DRC, Colombia, Ghana, Sudan, and other natural resource-endowed and politically unstable countries (World Bank 2019), AGM is undertaken by people in the illicit economic segment (ibid). Like most AGM worldwide, the majority of Zimbabwe's AGM is illicit (UNIDO 2018). The AGM uses modest technologies, carelessness is high and no rehabilitation after the mining process (Adeoye 2015), for AGMiners are unregistered and thus not liable (ibid). The AGM enablers are diverse and its pervasive informality is a major obstacle to reducing crime, violence, and insecurities.

THE DRIVERS OF ARTISANAL GOLD MINING

As in Africa and the world over, stakeholders linked to AGM tell a multifaceted, overlapping, and cyclic network of drivers and activity. Globally, in almost all the regions where AGM is conducted, a combination of the socio-economic-political causal factors exists (Bondah 2020). Varied factors active at proliferating the AGM include politicization of AGM by politicians or protection economies, corruption or policy framework, poverty, and unemployment.

Politicization of AGM Sector and the Role of Protection Economies

Politics enhance AGM. AGM has become part of a political establishment, driven by personal-political ambitions than national security (Garrett 2007). Politicians pity with AGMiners for votes (Abdulai 2017). Kpodo (2008) opines that in Africa's gold-producing countries, for fear of losing votes from AGMiners, in an election year, government pay a blind eye to the AGMiners. Kpodo (2008) cited the politicization of galamsey (AGMiners) by Ghana's political parties, the National Democratic Congress (NDC), and the New Patriotic Party (NPP) as a cause of AGM in the country. However, Andrews (2015) concentrate on the link between AGM and senior politicians citing that in 2012, Ghanaian parliamentarian Subreso was AGM operator. In Colombia, Peru, and DRC, politicians, chiefs, and high-ranking societal members are involved in AGM (Abdulai 2017), thus hindering efforts to fight it for national security's sake.

In Zimbabwe, some major political figures use political power to sustain AGM as they benefit a lot by buying gold from the sector at low price (UNIDO 2018). All the national security threatening activities of AGM are daylight done for law enforcement agencies do not dare disturb them for fear of victimization by politicians (ibid). However, Mawowa (2013) finds a linkage between AGM and protection economies, theorized as the usage of violence, bribery, and politics to secure illicit flows and incomes, that define who controls and profits from the AGM sector. Senior civil servants, politicians, and military figures play big in AGM protection economies (UNIDO 2018). Mawowa's 2013 article: *The Political Economy of Artisanal and Small-Scale Gold Mining in Central Zimbabwe* elucidates better on protection economies. Various government actors and the securocrats

exploit AGM operations for personal gain (UNIDO 2018) as ZRP and army collect bribes (ibid). The ZRP charge 'fees' for regulating gold extraction sites, especially in gold rushes areas (Gutu 2017), and payment are described as violation of the law fine (ibid). State has become a driver for private accrual, regulating accumulation that profit the ruling class and their cronies (UNIDO 2018) and the unforeseen consequence is the national security's threat. This work generate knowledge on the link between politics and AGM as they interlink with national security.

Unemployment, Poverty, and Legal or Policy Framework of the Mining Sector

Globally, economic inequity explains the link amid AGM and state security issues (Beever 2021). Aside from poverty and unemployment, worldwide, people engage in AGM to avoid social relegation linked with being unemployed (Andrews 2015). Unemployment rates in resource-endowed and politically instable countries is rising (WB 2019) and AGM is the panacea (Andrews 2015). Youth unemployment in Ghana increased from 11.2 percent in 2010 to 13.7 percent in 2018 (World Bank 2019) and in Zimbabwe was at 83,6 (UNIDO 2018). However, Bondah (2020) view AGM in Sub-Saharan Africa as a solely poverty-driven activity. In Ghana and Zimbabwe, AGM is lucrative than farming, and the poor unemployed people engage it for income security (WB 2019). This work contributes to the understanding of AGM, not only vis-à-vis unemployment or poverty but answering the degree of national security damage it posed.

In Zimbabwe, Mines and Minerals Act and the Gold Trade Act govern the gold sector. However, AGMiners are not recognised in these Acts. The 2016 bill defines a small-scale miner as a 'holder of a mining location who is not a large-scale miner' and it does not define an artisanal miner. The Gold Trade Act was invoked to criminalize AGM operations (UNIDO 2018) and section 3 (1) postulates that *no person shall either as principal or agent, deal in or possess gold unless he is the holder of a license or permit...* This led to the arrest and imprisonment for possessing gold illegally (ibid), and criminalizing AGM led to gold smuggling which threatens national security.

ARTISANAL GOLD MINING AND NATIONAL SECURITY THREATS

Though AGM profits the poor, its activities undermine national security. In "*Sustainable Exploitation of Natural Resources and National Security*", Constantinescu (2015) observed a link amid natural resources exploitation and conflicts that threaten national security. The environment is a livelihood exploitational source for people in mining societies and its ruin is a national security threat (ibid). Currently, the nations' security depends on the security of environment: natural resources like potable water, minerals, and arable lands (Parthemore 2010). Thus, Constantinescu and Parthemore's claims back this study that highlight the environmental, food, water, physical, and economic security threats that confront Zimbabwe due to AGM.

Environmental Security and Artisanal Gold Mining

The physical environment is vital for the survival of countries' economic security. The environment affords food, water, shelter, medicine, employment, and the vegetation that provide oxygen vital for the populace's existence (Constantinescu 2015). Regrettably, AGM activities threaten the basic survival needs for some societies (Machacek 2020). In Peru AGMiners ruined biodiverse areas like the Madre de Dios' Tambopata National Reserve and had deforested over 62,500 hectares of the Amazon rainforest (Addaney and Lubaale 2021). In Colombia, AGM stripped over 140,000 hectares of tropical forest (Bejaromo 2018), severely destructed in sub-Saharan Africa (Adeoye 2015). However, ZELA (2021) looked on the AGM effects and asserts that the destroyed forests are catalysts for climate change, erosion, and drought. Ghana's Offin Shelter Belt Forest Reserve lost part of its vegetation to AGM (Bondah 2020), polluting Ankobra, Bonsa, and Pra rivers, hence destroyed the production of cocoa, rubber, and oil palm which are vital crops for Ghana's economy (ibid). Nevertheless, many AGMiners are unaware of the national insecurities they pose. The ruin of arable lands by AGM activities diminish food production triggering national instability through foodstuffs price increase and high cost of living.

Zimbabwe's Environmental National Security Concerns and Artisanal Gold Mining

The national security of Zimbabwe is highly threatened by AGM activities concentrated mainly in Manicaland, Midlands, Mash West, and Central provinces (ZELA 2021). Zimbabwe's total land area is 39,6 million hectares and 200 500 sqm has been extensively destroyed by AGM activities (Min of Environmental and Natural Resource Management 2019). However, a research by Forest Commission (2021) established that due to AGM, Zimbabwe's land area covered by trees or plants has dropped, believed to be 330,000ha, equated to 70,000ha per year. The woodland area degenerated from 53.2% to 42.3% and the bushland and wooded grasslands declined from 12.7% to 10.8% and 3.1% to 2.3% respectively (Forestry Commission 2021). Contrary to the above researches' focus areas, CSIR (2017) concentrated on the relationship between AGM and soil properties and observed that AGM destroy vital soil properties and the topsoil in Zimbabwe's AGM communities have been contaminated with high mercury concentrations. Therefore, contaminated soil not only cause national food insecurity due to reduced food production but also health problems to the nation. Thus, the divergence of this work is its concern on the relationship between the AGM, food and water securities; and national security.

AGM versus Food and Water Security in Global parts and Zimbabwe

Globally, water and food security are vital for the nations' survival. AGM affected Africa's hydrology as it disturbs the surface and groundwater quantity and quality (Machacek

2020). Bondah (2020) established that 40 percent of Ghana's groundwater has been polluted by AGM operations. Ankobra, Pra, and Offin rivers serving as potable water sources in Ghana's Western and Ashanti Regions are polluted with mercury and cyanide from AGM activities (ibid). Hence, Ghana Water Company Ltd warned that the water pollution bodies by AGMiners risk the country importing drinkable water (Abdulai 2017). In *Trading Ghana's Water for Gold*, Srem (2014) notes that as farmlands and water bodies are destroyed by AGM, famine and drought risk is high. However, Zimbabwe is not immune to the above insecurities as the AGM activities have wrecked riverbeds, riverbanks and deviates water flow (ZELA 2021). In 2016, Mazowe River had 155.85 km of life wrecked by alluvial mining (Frost 2018), hence, impacting food sources (aquatic life, farming, and wildlife). This study argues that when water and food vital for individual and national survival are in short supply, persons are likely resorting to violent conflicts to meet their needs in the limited available water and food. Such conflicts threaten the nation's physical security.

Physical Security: Connection Between Artisanal Gold Mining and Group Conflicts

The link amid armed groups and AGM and, physical security is complex. US State Department sees Latin America's AGM as a threat to its national security. Venezuela, Peru, and Colombia have major security problems with AGM, a key factor of instability (Addaney and Lubaale 2021) due to clashes between the police and armed persons. On the link between AGM and national stability, Lezhnev (2021) avows that in East and Central Africa and, sub-Saharan Africa, AGM fund and prolong deadly armed conflicts. For case, Sudanese SPLM-IO and a rebel group National Salvation Front fund their war efforts in part from AGM (ibid). Again, in DRC, about 7.6 million people died due armed conflict and there are nearly 130 active armed groups (Bolton 2021). Also, Lezhnev (2021) opines that armed groups and army units profit from AGM, and profits are used to purchase or barter for weapons, ammunition, or supplies. However, USAID (2010) looked on AGM and governance and established that in Sudan, South Sudan, Central African Republic, and DRC, apart from insecurity concerns, AGM present corruption and serious governance challenges. Yet, UN (2019) looked into AGM and human rights abuse and found that in AGM sites controlled by armed groups in Mali, Burkina Faso, and Niger, civilians face severe consequences, like sexual and gender-based violence, dislocation, child soldier conscription, forced and child labor. Thus, AGM contribute to domestic and regional insecurity, hence, this paper interrogates the instabilities and insecurities in Zimbabwe due to AGM and gives recommendations towards promoting a safe and secure community in which citizens live in a peaceful environment.

Zimbabwe's Instability and Insecurity, and Artisanal Gold Mining

The Zimbabwe's physical security is under threat due to a complex of factors. Grave violence in artisanal mining was first witnessed in alluvial diamond mining in Chiadzwa Manicaland Province between 2005 and 2008 (CNRG 2020).

However, Muchemwa and Patel (2022) talk of an upsurge in violence in AGM areas by machete-wielding gangs, known as *Mashurugwi*. The term “*MaShurugwi*” was first used in reference to violent gangs that robbed, raped, and killed people in Marange during the 2005- 2008 Chiadzwa diamond rush (CNRG 2020). Nevertheless, Muchemwa and Patel (2022) looks on the link between AGM and criminal groups and notes that the involvement of criminal syndicates in AGM increased violence and murders in areas like Shurugwi, Kwekwe, Mashava, Bindura, Bubi, Gwanda and Zvishavane. Thus, Zimbabwe’s AGM communities are fear-living of terror gangs whose modus operandi originated in the Midlands Province (CNRG 2020), a place where Shurugwi is found. For case, prominent gangs in Kwekwe include the *Al Shabaab* (Muchemwa and Patel 2022; CNRG 2020) believed to be strongly connected to some senior ruling party ZANU PF officials (Gutu 2017; CNRG 2020). Other criminal gangs are *Mbimbos*, *Magombiro*, and *Mabhudhi*, who mostly specialize in raiding gold ore or demanding rents from AGMMiners using machetes and firearms (ibid). Thus, the attacks by Mashurugwi raises the question of how AGM is implicated within the current national insecurity. Hence, this paper offers a better understanding of the relationship between AGM, armed groups, and the state so as to provide effective solutions to enhance sustainable national security.

In April 2019, Gender and Extractives symposium called on the Zimbabwean government to ensure that the Home Affairs Ministry made a national ban on machetes possession and support the #Stopthemachete campaign (CNRG2020). However, the machete horror groups continue to hurt, rape, steal and kill people. Machete violence points to a quiet terrorist situation in Zimbabwe’s AGM sites (Muchemwa and Patel 2022), which, if not urgently attended to, will lead to an emergency of war-lords in AGM communities as individuals seek to fight and protect their terrains, and gang clashes will turn bloodier. Though the police do not give statistics on the lives lost due to MaShurugwi, people continue dying in Zimbabwe’s AGM communities (CNRG 2020). Some mashurugwi are now having unregistered firearms (ibid). Thus, the illicit firearms influx and mashurugwi questions the porousness of the country’s borders and its physical security threat. “Gold is a political object that entices political struggle and conflict in its exploration and extraction between various groups” (Bejaromo 2018). Hence, the proliferation of illegal weapons into the country can lead to armed violence which compromise the country’s economic security.

Economic Security and, AGM and Armed Groups in the Global Arena

The armed groups or organizations profiting from AGM trade undermine the nations’ economic security. USAID (2010) look on the profits from AGM and established that transnational criminal organizations and insurgent groups in South America reap billions from AGM that strengthen them. In 2017, Colombia’s Controller General stated that 80 percent of gold mining in Colombia was AGM (Bejaromo 2018) and criminal groups earn above \$2.4 billion from AGM (UN 2019). In DRC, a lot of gold is lost to the informal market as

only 20% are officially mined while 80% is AGM (Armstrong 2007). The armed groups in Jebel Amir-Darfur made about \$54 million yearly from the AGM (UN 2019) and the Sudan Liberation Army/Abdul Wahid (SLA/AW) in Darfur trade gold for weapons and ammo (ibid). The DRC militia, the Nduma défense du Congo-Rénové (NDC-R), make profits by trading gold to Uganda and Burundi, got arms and ammo from the DRC army (UN 2019). However, UN Group Experts (2020) looked on gold smuggling and established that AGM in Kapoeta-Sudan enhances gold smuggling. About 10 to 20 tons of gold, worth \$300 to \$600 million, is smuggled out of the DRC annually (ibid). Irrespective of the economic benefits of AGM in Subreso Ghana and worldwide, AGM has become a dangerous activity as most of the AGMMiners have acquired firearms to secure their operations (Andrews 2015). However, the focus of this study is on AGM as a threat to Zimbabwe’s economic and, national security.

Zimbabwe Economic Security and AGM

A physically secured environment enables economic security as it promotes economic viability of a state and national development (Ronis 2011). Revenue from gold production is vital to Zimbabwe’s economy, but due to AGM, gold is leaving the country through porous borders, and no fiscal benefit to the country. About US\$1.5 billion gold worth is smuggled annually out of the country (UNIDO 2018). In 2020, AGMMiners produced 9.35 tonnes of gold compared to 17.48 tonnes in 2019, witnessing national gold production decline to 31% in 2020 due to smuggling (ibid). Gold trafficking is exhibited by the Zimbabwe Miners Federation chairperson Henrietta Rushwaya who got arrested in October 2021 at Robert Mugabe International Airport with about 6kgs of pure gold waying to Dubai (Muchemwa and Patel 2022). Thus, smuggling robs the government of much-needed income and foreign exchange, yet the government earmarked gold production as a key sector towards Vision 2030. However, Mawowa (2013) looked on the AGMMiners activities and concluded that so extensive and unordered are the AGMMiners that trenches have been dug through national roads and railway lines. Hence affect the transportation of goods and other economic communications. Thus, AGM activities affect the economic security of Zimbabwe. Without economic security, nation become politically and socially unstable (Ronis 2011), hence, robust intervention efforts are needed to safeguard the country’s national security.

GLOBAL INTERVENTIONS OR EFFORTS TO CURB ARTISANAL GOLD MINING

The messy state in AGM sector poses a security threat to any country, and systems to fight AGM have been made. Respectively, in 2017 and 2018 the United States signed a MOU with the governments of Peru and Colombia, aimed to combat AGM and its deleterious effects (Addaney and Lubaale 2021). However, the Colombian government independently made task forces that disrupted numerous AGM operations, and in 2017 Task Force Titan removed a huge AGM process in Chocó (Bejaromo 2018). Similarly, to

evict about 6000 AGMiners from AGM epicenter of La Pampa-Madre de Dios, in 2019 the Peruvian government launched Operation Mercury led by 1,200 Peruvian police, 300 soldiers, and 70 prosecutors (Lezhnev 2021). The operation led to subsequent interdictions around the country. In 2016 the FBI and Chilean police conducted Operation Diez Condores that upset a net responsible for smuggling \$80 million in illicit gold (Gregory et al 2020). In 2017, the European Union made rules to stop the importation of conflict minerals in Europe (ibid). In 2017, in Ashanti, Eastern and Western Ghana a military and police operation against AGM activities seized 30 unregistered assault rifles from illegal miners (Bondah 2020). The joint task force also arrested 442 illegal miners including 377 Ghanaians, 61 Chinese, 2 Togolese, a Burkinabe, and a Nigerian (ibid). The above elucidates how AGM compromise states' national security and picture what can happen if Zimbabwe does not effort to curb AGM.

Zimbabwe's Effort to Control the AGM

Having identified AGM/ chikorokoza as problematic, the government has over the years, instigated crackdowns against AGM activities nationwide. UNIDO (2018) talks of the 2003's Operation Mariyawanda ('too much money') and two years later, Chikorokoza Chapera Operation (Gutu 2017). However, ZELA (2021) concentrated on the effects of these operations asserting that with Chikorokoza Chapera Operation, twenty-six thousand people were arrested, and in May 2007 ten people died in police raids. Some miners were imprisoned for illegal possession of gold (ibid). A major justification for the crackdown was environmental damage. Under the Environmental Management Act (2002), all miners have to submit environmental impact assessment (EIA) reports. With Operation Chikorokoza Chapera and subsequent anti-AGM operations, apart from massive arrests, mining equipment like generators, hummer mills, and water pumps were also confiscated by the police (Gutu 2017) and some people got arrested for having illegal firearms (CNRG 2020). In 2019, the Police launched an operation code-named 'No to Anarchy by Artisanal Miners', and 3,471 people were arrested for possessing firearms and machetes, and 1,549 AGMiners were also arrested countrywide (ibid). Aside some success, AGM still prevails in Zimbabwe due to the dearth of political will to fight the peril and corruption by government and state security officials (UNIDO 2020; Mawowa 2013). Despite that AGM serves as a vital economic gamble sustaining many Zimbabweans, it is a national security threat.

Despite government's intervention to stop AGM activities, the sector continues thriving due to political interests- protection economies, corruption-policy framework, unemployment, and poverty (UNIDO 2020). The Zimbabwean literature show that the increasing activities of AGMiners and the government's inability to control the chikorokoza has become a national security threat. So, because of the environmental destruction that cause water and food insecurities, economic revenue loss that threaten physical and economic security of Zimbabwe.

RESEARCH METHODOLOGY: QUALITATIVE

The study objectives called for qualitative methodology utilizing Semi-Structured Interviews, Focus Group Discussions, Transect Walks/observations, and Key Informant interviewing techniques with participants recruited through purposive sampling, as the method accommodated AGMiners' narratives. The research tool pluralism is a gap filler as one study instrument leaves a gap that needs to be filled; for weaknesses of a research tool are the strengths of another. Qualitative study offers a full comprehension of daily events and social processes, to appreciate how everyday life is driven by social structure (Berg 2007). However, qualitative methodology relies much on the researcher skills (Yin 2011), so is attacked for failing to meet high-reliability standards. The case study approach offered in-depth understanding of the AGM (in its actuality) and national security concerns in Mazowe. By capturing AGM variables, the design identified complex circumstances making AGM a national security threat. However, the design is particularistic and contextual, making generalisations terrible for Mazowe cannot give the universal understanding of AGM. Conversely, generalizability is not a researcher's issue who is studying a specific situation but a readers' issue wanting to know whether the described case is sufficiently representative or similar to their own local situation (Hancock 1998).

Gaining Entry, Sample and Sampling Procedure

Sometime in 2021, when I was taking a drink at Concession-Dandamera shopping centre, two men discussed the AGM and I joined them. During the discussion, the men hinted that they were AGMiners in Mazowe, whose mining sites were once preyed by the Mashurugwi. I befriended the men. During the fieldwork, as I had prior interactions with individuals who meet the inclusion criteria, purposively these were my initial respondents. As there is no sampling frame for AGMiners, non-probabilistic sampling procedures were used in this study. A sample is party of the study population selected to participate in a research representing the whole study population (Berg 2007). The study recruited participants conveniently through purposive sampling technique. Sampling is collecting part of a population in order to represent the entire population (Yin 2011). This non-probability sampling approach increased the richness of the data.

Purposive Sampling

Purposive sampling is a non-random sampling method and the sample was selected subjectively as was considered vital for this study. Purposive sampling is selecting a sample based on one's own knowledge of the population, its distinct position, familiarity, and the nature of one's research aims (Babbie 1990), so judged good information source. This technique enabled me to use personal judgement in selecting respondents who could answer the study questions and met the objectives. The power of purposive sampling lies in selecting informants rich in information to be analysed, related to the issue being studied. Thus, Berg (2007) considers purposive sampling the most important kind of non-

probability sampling to identify the primary research participants.

Data saturation was reached at fifteen participants. Groenewald (2004:11) regards two to fifteen study subjects as adequate to reach saturation, and Cresswell (1998: 65) recommends lengthy interviews with up to fifteen people for a qualitative study. The study captured narratives of three group leaders who had vast knowledge on AGM activities and encounters. From the farmers, buyers, and AGM victims, two each were interviewed, and the other six respondents were drawn from the mine sites and other AGM miners who had a long time AGM experience in Mazowe. One FGD of eight participants was also conducted. Inasmuch as a larger sample was desirable, it was unlikely to select a larger sample owing to the nature and the sensitiveness of the research topic as individuals consider AGM issues illegal and too personal. Again, it was unwelcomed to have a larger sample than this as in qualitative research, perceptions cannot be quantified.

Repeat Interviews and Data Collection Procedure

Readers value the number of participants interviewed in a study (Kvale 1996), but hardly consider how many times each interviewee was interviewed. Despite fairly the short fieldwork period, some concerns led to a repeat-interview design as single interviews, though useful, provided a snapshot of real experience and not robust account essential for the holistic understanding of AGM complexities. Crucial was a notion that interview is interpersonal where parties reciprocally influence each other and meanings co-constructed, thus repeat interview design improved the interviewer-interviewee relationship, trust, leading to noble study results as the second or third interviews allowed the follow-up or 'helpful feedback', or clarity on previously discussed topics.

The data collection procedure was based on Creswell's (2007) framework of phenomenological study procedural steps. First, the researcher determined the AGM problem, understood it as a national security threat. Secondly, broad philosophical assumptions were specified, recognized that qualitatively case study best explained the social and subjective reality of AGM drivers and nation's security threats. The study adopted Marcus' (1995) multi-sited 'ethnography', with data collected from different AGM geographical locations of Mazowe, yielding transverse comparisons that exposed connections, behaviour, and activities between AGM participants located in one area but distinct geographical locations separated by a degree of national security threat.

Carrying Out Interviews

As interviews are like a conversation among acquaintances, AGM participants broadly expressed their views on the practice; freely develop on the topic giving their personal opinions, explaining and elaborating using examples of their own individual experiences. A good research question arouses memories of events that have been lived through rather than thoughts about the phenomenon (Becker 1992:38). The interviews were organised around a set of general topic questions. For clarity, a series of follow-up cross-referencing

questions and prompts to structure and focus the interview conversation followed each interview. This was done to make sure that the interviewee's understanding of what was said was the intended meaning, checking that study aspect's clarities, ensuring interviewing rigour and clarification of the experiences recounted. In each interview, I sake deep probe, drawing out the personal story of each participant's AGM familiarities and ascertaining the meaning and security dimensional threats of AGM.

To ensure that participants narrated all their experiences using a language they were comfortable with, data collection was done in Shona, the first language of the participants. For freedom of expression and privacy, interviews were held confidentially and pseudonym names used. This scenery allowed engaging the actors in more in-depth conversation on AGM issues. On the second and third meeting, sensitive questions were addressed. In qualitative interview, 'it is an interchange of views between two persons conversing about a theme of mutual interest, where investigator tries to apprehend the world from the subjects' viewpoint (Kvale 1996: 1-2). Thus, the focus was on 'what goes on within' the participants and got them describe their feelings, capabilities, and convictions in a language as free as from the constructs of the intellect and society as possible.

Repeat interview style provided 'thick' descriptions (Geertz 1973) and holistic understandings of AGM. Five participants were interviewed three times over a 5-month period, seven were interviewed twice, yet three were interviewed once. On the first interviews as a stranger participants talked more freely because the researcher did not know them, but, being a stranger, somehow led to protected replies. First, I was a stranger and over the fieldwork period, I became less of a stranger. Thus, the second interviews were very dissimilar from initial ones as we were more comfortable and trusting each other and the respondents offered more and I probed less. The personal and possibly sensitive topics I wanted to present made repeat interviews a must as it was impossible talking about AGM without speaking about governance and national security issues, and I wished not to exclude certain topics from the discussions. Without repeat interviews, the research findings and analysis would indeed have been different.

Data Analysis Procedure

"Qualitative data analysis is making and organizing data for scrutiny, reducing data into themes and present it" (Creswell 2007: 148). This study used thematic data analysis on AGM literature in Zimbabwe and the world over. The researcher goes through the data collected from the study questions, stressing significant statements and quotes (Babbie 2010), then, "clusters of meaning" (Creswell 2007) were developed into themes. Thematic data analysis was chosen because it averted unnecessary repetition in the recording of findings; and for Burgess (1982), this is common in many case approaches. Thus, based on the presented literature data, main thematic variables for data presentation, was based on socioeconomic-political AGM enablers, and environmental, food, water, physical, and economic security threats of AGM

to Zimbabwe's national security. The thematic variables resulted from the literature pieces (ibid) and were key to this research for they afforded the proper outline that replied the study questions. To analyse the national security threats posed by AGM in Zimbabwe; environmental, economic, food and water, and physical securities provided wide themes fit for examining the physiological and psychological national security facets espoused by Peleri (2008) and Snow (2017). Hence, I employed textural description of participants' narratives on their AGM experiences, whose advantage, for Berg (2007) is to bring a better understanding of lived experiences. Overall, this was done through the systematic organization of the findings from the said research methods, writing responses into topics identified from the recurring data.

PRESENTATION OF THE RESEARCH FINDINGS

As the findings of this study show, there are a myriad of socioeconomic and political factors that account for the AGM in Mazowe. Findings show that AGM variously threaten Zimbabwe's national security as environmental, physical, water and food, and economic securities of the country are threatened by the AGM sector. The findings allude that AGM is complex and requires innovative responses and interventions to enhance sustainable peace and security in Zimbabwe. Linked to the research objectives, the research findings are presented in thematic form and a collection of selected respondents' quotes are offered. Themes were derived from the most fundamental and pressing emerging issues raised by participants during fieldwork.

HISTORIC ENABLER OF ARTISANAL GOLD MINING IN MAZOWE DISTRICT

The study established that the neglect of Metallon's mines in Mazowe led to an entry of AGMiners to these mines and other district places. Through the in-depth semi-structured interviews with former mine workers, it was established that Mazowe Mine widely known as Jumbo mine closed in 2018 after the elections, and it was the second time closure. Stopper had this to say:

You know what Alex, in 2007-2008 economic downturn, the mine closed and reopened in 2009 pahurumende yemubatanidzwa... patakashandisa mari yekunze (during the GNU and after the adoption of the multi-currency system). Things are tough before the 2018 closure, we went for months and later forced to work two weeks per month without pay.

Asked on the link between Jumbo mine and AGM, respondents concurred that the closure of the Jumbo mine necessitated the AGM in Mazowe. The respondents tinted that when the mine closed, former mine workers were only left with the houses that they stayed in, and with no other income source. Respondents were also in tandem that, first were the mine workers who improperly started improper mining activities before AGMiners from the nearby areas joined in, and at first the AGMiners paid bribes to the mine security

guards for entry into the mine shaft. Asked to comment on how the AGM came into being in Mazowe Jumbo mine, Boxer said:

Taking advantage of their familiarity with the mine, former mine workers were the first people to invade the mine. My brother, even though the mine was supposedly protected by Police Support Unit and mine security guards under the provisions of care and maintenance, the police in cahoots with mine guards started collecting bribes from the AGMiners on entering and exiting the main shaft.

The study unearthed that these entry and collection points were called Mbuzhu. The study also established that later on, it was not only the local AGMiners and the mine workers who carried out mining but anyone from anywhere capable of paying bribes. The AGMiners influx led the mine workers who were uninterested in mining activities to rent out their houses to the AGMiners who wanted lodging close to the mining site and the rent was paid in US dollars.

SOCIO-ECONOMIC AND POLITICAL DRIVERS OF ARTISANAL GOLD MINING

The study established that there are a myriad of illicit activities and actors active in driving AGM activities, including social capital, gold buyers/sponsors of AGM operations, and unemployment.

The Influence of the Socioeconomic-Political Elites and the Securocrats

The researcher observed the ever and increased presence of security agents from all security sector departments (in and out of uniforms) in the mining and mill sites as an enabler of AGM in Mazowe. In most interviews, ZRP was said to have incessant visits in Mazowe AGM sites and these visits translated to permanence when abundant gold belt was discovered. Bhijola a gold panner opined:

Once wasvika pabhande (get to the gold belt) many government actors come here for personal gains. Kungwavha uku (it's hassling), police officers, soldiers, and members from the President's Office frequent here and we give them money or sacks of unprocessed gold ores. You see, for being granted to operate, the police collect USD 10 from each mine hole.

Bhijola's sentiments were buttressed by Faya who had this to say:

If paita gomba raita chuma (gold rush site), the ZPR charge a certain fee and regulate the mining activities, allowing mining shifts to take turns which they (police officers) will equally share the unprocessed ore (50% to the police and the 50% to the mining shift).

In the eyes of this researcher, police officers arrested some people who were immediately released after payment of some cash. However, the researcher established that the presence of security agents was not always unwelcome. Some gold

panners and millers reported that, to some degree, there are benefits in engaging and making payments. Creto opined:

On our side as panners, there are some paybacks in paying to the officers as in case of any national operation against chikorokoza, these officers inform us well before the operation and we vacate the place unhurt or without getting caught.

Never, a panner asserted:

At the gold rush site, instead of arrests, the police control access, allowing panners' mining shifts to take hourly or thirty minutes turns in the tunnels for a standardized fee or kumhura (equal sharing between the police officers and the mining shift). The police charge USD40 USD50 per hour spent in the tunnel. As such we are grateful to the police for managing access, creating order, and averting violent conflict.

Porisi a police officer of four years working experience emphasized that there was a mutually beneficial relationship between the police and the panners. Asked as to how their bosses benefit as they did not go out to control the mine holes themselves, he said:

Our bosses equally benefit as they collect and get proceeds from us junior officers,panoguriwa apa (a bribe) in seeking for 'deployment' in Mazowe mining areas.

More so, the study unearthed that political power and connection to both repressive and ideological state apparatus influenced the AGM in Mazowe and, one's closer to the aforesaid, the greater the protection from both police harassment and *mabhuru* (rival groups). Some panners were found to be linked to ZANU PF party and have had a direct communication with some senior politicians, army, and police staff, and these panners were called *vanorema* (untouchables) by other panners. Some of these panners were collectively named "Miners4ED", literally mean Miners for Economic Development, but in actuality meant Miners for Emerson Mnangagwa (Zimbabwe President). Miners4ED was an AGM association affiliated to ZANU PF.

The Composition and Organization at the Mine Site

At the mining site, the research unearthed a myriad of actors active in spearheading the AGM endeavor. Actors include shaft owners, shaft sponsor, shift bosses, and miners themselves. These people were either locals or individuals from other parts of the country. One interviewee said:

everyone is trying their luck on mining and as we operate here, there is a hierarchy or chain of shareholding and respective mining returns.

The number and role of actors significantly varied from mine site to mine site. In consultation with the shift sponsor, the shift boss organised miners into syndicates or shifts. A mining shift comprised a shift sponsor, shift boss, and a group of AGMiners working together in extracting gold ore and sharing the profits after processing. Labour agreements were based on profit-sharing, with mine laborers (after expenses and the 30% of the shaft or claim owner are deducted)

receiving a fifty percent of the profits rather than wages and the sponsor collecting the rest. In some instances, as the findings of this research show, miners received roughly a third or less of the profits where machinery was used and the profits splatted amongst a myriad of parties.

Sponsorship, Unemployment, and Processing

The study found out that sponsorship played a pivotal role on AGM activity. When questions about sponsorship were asked, it was reported that there were a large number of sponsors sponsoring the Gold Panners, including millers, buyers, security agents, and independent individuals who provided equipment and other support like food. The equipment provided included compressors, explosives, and tools like pickaxes, spades, hammers, and chisels. If panners were sponsored in any way, they were to sell the gold produce to the sponsor, or if sold somewhere, they still have to share the benefits and it is after the expenses have been deducted. Like buyers, sponsors were found to be greatly profiteering from the AGM. It was established that millers played an influential role in AGM as when a harmer mill owner sponsors a *gomba*, the panners must bring their ore to the mill to be processed and even selling their gold to that mill.

Unemployment was the most heavily cited reason for individuals entering into artisanal gold. There was a general agreement in respondents' response that employment was the greatest benefit of AGM activity to communities, as successive droughts have distressed farming. Phatos said:

If it were not for lack of employment opportunities in Zimbabwe, I would not be a korokoza. ...absolutely, it's difficult for me to see any other avenue I can earn a living besides mining.

The research further found out that processual nature of gold or technologies used to extract gold directly influence the AGM in Mazowe as most AGM consists of hard rock mining. Amongst the many known gold processing technologies, like the custom millers, ball mill, wheel grinders, and elution plants, the most prominently used in Mazowe is a stamp or hammer mill, known as *chigurukuru* by the panners. The researcher observed that the hammer mills owners (for they want silt for leaching), to crush ore rocks into finer powders to facilitate gold capture, they charge a processing fee of USD 6 per ore filling a 100-liter container, (very cheap compared to the registered ball mill users) and the local illicit gold buyers will then use mercury to purify gold.

Buyers, Middlemen, Gold Barons and Pricing

The study found out that the actors active at buying gold and influencing AGM were highly many and varied. Despite the official buyers, buyers included individuals, local buyers, gold barons, and the agents that work for them. The research also established that licensed buyers engaged in illegal buying practices, and, or subcontracting other type-buyers; and the middlemen not only purchased gold but also sold mercury. There was a strong link between licensed buyers and illegal ASMiners, with the former purchasing and processing gold from the latter. From observations, the volume of gold buyers was alarming, and based on the interviews held, gold buyers

earned windfall profits and profiteer the most from the AGM activities. As one interviewee Bhijola stated:

Based on their lifestyles, people buying gold appear making a huge killing. Shamwari, vazhinji ava vane dzimba, mota dzakanaka kubva muchikorokoza (My friend, from the AGM, most gold buyers own houses and luxury items like cars).

One unlicensed gold buyer and, or a middle man reported that having cash, he could buy up to 3kgs of gold (valued at USD 120 000 as at December 2022) in one week and tainted out that the panners engaged more frequently with them than formal ones. The researcher also observed that the bond between the panners and middlemen was quite strong as the illicit buyers were strongly integrated into the everyday life of the panners community. One panner declared:

whether they are doing it goodly or otherwise, they're an essential part of our systemthey are like family to me.....kana wakatsva vanokupa kamari (loaned) then you pay later wachera (having extracted gold)you see, we are one thing.

However, the researcher observed a panner who was made to bath with clothes and later was beaten by a gold buyer for failing to return gold after he was loaned a USD 10.

The research established that the 'gold barons' operated outside the formal market and were mainly based outside the Mazowe area. The 'gold barons' paid lucrative money to the AGMiners and to their agents. An agent interviewed highlighted that the money gotten from the gold baron enables a descend living and not a survival one. He further highlighted that the one gold baron can have many agents and that 'gold barons' or illegal buyers determined gold price by comparing it to what the Fidelity Printers and Refineries (FPR) offered. One interviewed runner Matiyo revealed that he bought gold at USD 58 whereas FPR was buying at USD 54.

THE NATIONAL SECURITY THREATS OF ARTISANAL GOLD MINING

The AGM's national security threats in Mazowe are presented linked to environmental, food and water, physical, and economic insecurities. The study identified AGM threatening Zimbabwe's national security as the environment, economic, food, water, and physical security are in danger.

Environmental Dilapidation and the Artisanal Gold Mining

The transect walks and mine site visits indicated the destructive methods of gold extraction and processing. Some of the notable typical environmental impacts of AGM include not only deforestation and massive tracts of vegetation loss but also landscape degradation. When fallen ill or got injured, it was observed that the AGMiners did not prioritize visiting the medical centers, yet preferred using herbs and some of which were reported extinct due to over-exploitation. One key informant interviewee highlighted that the species richness of keystone tree and shrub species have declined and are continuing declining. One degreed interviewee opined that:

.... You see what Alex, cutting down of trees following artisanal gold mining is one of the most significant environmental consequences, and artisanal gold mining disrupted and still disrupts the arrangement of vegetation over space scale.

The study found out that AGMiners were usually nomadic and whenever they discovered a lucrative panning area, they constructed makeshift homes from pole and dagga, using local trees and, almost 100% of their fuel were from wood. Moreover, it was discovered that plant growth was inhibited in the wasteland (where silt was heaped) at various hammer mill points. The cutting down of trees was also necessitated by the need for underground support props, what the AGMiners called *timbering*. Asked on the dangers of AGM to the country, Bhijola said:

Though people need money, it is important for AGM operations to be regulated before they cause more damage to the environment.

Artisanal Gold Mining as a Threat to Water and Food Securities

Aside from the environmental security risk, water and food security were found to be threatened in Mazowe due to AGM. In some AGM sites, it was observed that the "dig-carry-wash on rivers" was a main practice to get gold. Site observations showed that the river channels were dug during the gold mining or panning process. Some informants cited muddiness of water downriver and river bank instability resulted in flow changes as observed negative impacts of AGM. The study also established that AGM activities have polluted several water bodies including Mazowe River and Mazowe Dam which are sources of potable water in Mazowe district. John opined:

Mvura yemuna Mazowe river haichamwiki (water from Mazowe River is now unconsumable) and people are now buying water for consumption.

Also, the study established that food production has been reduced in some Mazowe's AGM sites as farming portions have been invaded by AGMiners and transformed them into AGMining sites. This scenario was especially in Hermiston and Rosa areas. With interviews with the local farmers and transect walks, the researcher found that AGM had affected some cultivable land in Mazowe. The study further established that the unsecured AGM pits posed a major risk to the farmers and livestock. On the dangers of AGM on farming, an Agritex extension worker had this to say:

AGM really affects crop production as topsoil is contaminated with cyanide and mercury residues from makorokoza activities, so making them risky for animal and crop production.

Moreover, the study found that the miners who use gold detectors were blamed for starting veld fires which in some occasions result in loss of farm produce, vegetation, and livestock. For food, the AGMiners were found to be stealing the maize cobs from the farmers' fields. A farmer said:

The miners have no regard whatsoever for one's property. Makorokoza stole our maize from the fields and half of my harvest got lost to makorokoza. Chikorokoza resulted in destroying our farms and whenever we try to engage them, they become very aggressive.

Physical Security and Types of Disputes and Conflicts in Artisanal Gold Mining

The study established that the main actors and types of disputes or conflicts in the AGM in Mazowe range from miner to miner; farmer to miner, community to miner, and criminals to miners. From interviews with AGMiners, it was observed that in miner-to-miner, disputes arose from the underground encroachment into other miner's mining pits and this results in violent conflicts. It was also established that in some AGM sites, disputes arose among AGMiners fighting over the same productive mining pits, seeking to dislocate one another and this occasionally resulted in violent-bloody conflict and under such circumstances, machete gangs take advantage to usurp and control such mining sites. Criminals terrorized miners, like the machete terror gangs specialize in seizing gold ore from AGMiners. It was also established that same mining syndicate members could turn against each other in disputes over the sharing of recovered gold. At Jumbo Mine, machete gangs led by one identified as Baba Fombo terrorized miners. One said:

Mashurugwi approach those people on their way out and forcibly grab the ore for processing. Clashes break out as people try to resist and defend their pickings.

It was established that conflicts pitted miners against farmers in land disputes. Looking for gold, the miners invaded farms and in some cases the farmers bid to claim a gold share, but their efforts were sometimes snubbed by the AGMiners. The study also found out that other drivers of farmer-miner conflict included competition for resources such as water, firewood, and food. A farmer said:

I am tired of the pits left by makorokozas uncovered. To make matters worse these makorokoza do not recognize me, let alone consult despite some of them literally mining on our agricultural land, polluting our water, taking our wood, and stealing our maize.

Again, the study established that AGMiners threatened Mazowe community not only on leaving a trail of environmental damage and degradation, but their "disgusting" behaviors had filtered into peoples' homes. The AGMiners were blamed for the surge in unwanted teenage pregnancies, school dropouts, increased substance abuse by youth, and the high levels of Sexually Transmitted infections. Some community leaders tinted that in some cases, AGMiners did not cooperate with them for AGMiners argued that it was not the local leadership that brought them in Mazowe. This was found to be violating the traditional culture. Some AGMiners in Jumbo were found not adhering to *Chisi* (a day set aside for rest and to honor Zimbabwean culture and traditions).

Consequences of the Conflicts Pitting the above Groups of People

The study established that robberies were common in mining areas and homes of known people keeping gold and large monies. The study also known that the chaos in AGM was also fueled by the partaking of law enforcement agents in AGM activities. A police source avowed that the weak response by state security actors to AGM is due to their participation in AGM. In the study area, police officers, soldiers, central intelligence organization officers, and prison guards were found to be involved in AGM. These securocrats were reported to have brought a new dimension of violence in AGM as they sometimes went underground with service weapons. Creto said:

Some mashurugwis were killed underground during clashes with state security officials. These CIOs and police officers, because they know how dangerous mashurugwi are, they also go underground with service pistols to protect themselves and most cases of underground violence go unreported because no one is willing to testify.

The study also established that AGM created a disordered and violent atmosphere in Mazowe as some AGMiners have formed defence syndicates to protect themselves from attacks by criminal gangs by also arming themselves with machetes and guns. Some criminal groups were known as *Mabhuru* and *Mashurugwi* attentive in looting gold ore and money from AGMiners. Other gangs entered the mining tunnels to raid the AGMiners or force them at gunpoint to extract ore for them. Some of the former Jumbo mine workers were found sheltering in and protecting the 'MaShurugwi'. Bhijola expressed his fears and anger as follows:

We work in fear for our lives and families. Mashurugwi can do whatever. After working hard and investing a lot to mining, they come when you have found gold and demand that you give it to them. In some cases, they follow you home and violently demand it or money.

The study also established that in other cases, AGMiners mobilized and use violence against the police. It was reported that a Support Unit Police officer was broken off his tooth in the clashes between the police and the AGMiners. Asked why the AGM went as far as fighting the police, respondents highlighted that some police officers were working in cahoots with criminals to rob miners of their gold and, that when one goes to report a crime or a dispute, the police use that as an opportunity to harvest information on fruitful gold locations and share the information with their colleagues on the ground who then go and raid or displace the AGMiners violently.

Artisanal Gold Mining Undermining Economic Security

The study established that most of the gold produced by the AGMiners was smuggled out of the country. The AGMiners were found not to smuggle out gold themselves, but the buyers and other influential players in AGM were found to be the externalizers of gold. Again, it was established that in AGM areas or communities, the medium of economic exchange was the USD and the RTGS or Ecocash mode of payment was not tolerant. Where it was tolerated, the exchange rates were very much ridiculous. The AGMiners were found digging along national roads and railway lines.

THE WAY FORWARD: STRATEGIC NEEDS AND PRIORITIES

This section presents a look-forward and a bit of analysis. The study established that AGM is complex a sector needful innovative retorts, investments, structural reforms, and interventions.

Conduct Further Research to Tackle Drivers of AGM Activity

This scholar noted a need for studies on AGM focusing on actors or factors thought to heavily influence the activity. Research ought to identify the degree of control exercised by these 'influential' actors/factors and how they can be controlled as well. Without detailed knowledge on how these actors operate, the AGM will be there to stay. Having thorough knowledge of these actors, it is then imperative to engage them as attempts to abruptly cut out them as a solution may risk shunning not only them, but also the communities that benefit from them and the activity. This directed research will enable shareholders in understanding better how these actors may act as barriers to or be the champions of sustainable AGM, peace and security efforts. Hence, without this type of research, there is an enduring danger of the sector's threat to national security.

Technical Training and Education

The researcher noted with great concern that lack of knowledge and information is the greatest reason to some AGMiners to willy-nilly destroy the environment. Therefore, AGMiners should be educated either through public address or distribution of necessary training and educative material to undertake AGM activities safely to minimize the adverse environmental impacts. Mining authorities and EMA should design training programmes suiting the requirements for Mazowe AGM. Environmental education, awareness programs or training workshops can be undertaken where AGMiners operate, gather together, and share work experiences. Therefore, on-site training on proper gold mining practices for AGMiners help to improve sustainable utilization of natural resources thereby ensuring benefits of environmental stewardship. Thus, there is need for mining authorities to build grassroots structures in the AGM sites fitting into existing mining communities to cooperate with the miners. With this, the panners would have been made aware of the effects of their activities and the need for healthy ecosystems. This will not only help in promoting environmentally friendly panning but contributes to sustainable development, peace, and security.

Political Will and a Policy Change

The government has to exercise the utmost political will in order to protect the country from security threats linked to AGM. To curb violence, the government should commission a thorough inquiry on the violence surge in the AGM sector and impose tough sentences on those found guilty of machete violence or robberies. Government should also decriminalize AGM and at low cost, issue AGMining licenses, allow AGMiners to secure enforced property rights at mining pits. The Mines and Minerals Act and the Environmental

Management Act should be amended to have a clear policy defining AGMining according to the realities on the ground, to bridge the drivers of corruption and violence among other wrongdoings; and to ensure thorough land rehabilitation after mine closure respectively. It needs to be ensured that the sector is properly regulated for the safety, security, and benefit of the country. The peaceful and productive resolution of conflicts in the AGM sector is thus a vital foundation for sustainable peace, security, and development.

Need for Stakeholder Collaboration and Co-ordination

The study discovered that the complexity of the AGM requires innovative collaboration, responses, and interventions from various concerned stakeholders. Hence, there is need for an improved cooperation between various institutions so as to have an integrated solution to the causes of, and national security effects of AGM. Thus, land restoration or combined rehabilitation efforts are required to overcome the challenges of AGM on sustainable land management in Mazowe.

AGM is complex and demanding, and like any othereconomic endeavour, it has mixed outcomes to different participants in terms of successes, happenstances, and problems as power relations are inherent. All these have a security implication to the country. Despite AGM's national security risk, for the participants AGM makes sense.

DISCUSSION OF THE RESEARCH FINDINGS

This part of the paper discusses the study findings through triangulation of Realism (Mearsheimer 1995), Political Ecology (Bryant 1998); and Environmental Peacebuilding (Dresse et al 2019) theoretical models. Utilizing the citizenry physiological and psychological national security facets espoused by Peleri (2008) and Snow (2017), and political ecology, the paper stress how political facets and conflicts enhance degraded Mazowe's environmental conditions, and simultaneously, how these ecological conditions produce economic, water and food insecurities; disputes and violent conflicts that threaten Zimbabwe's peace and national security. However, environmental peacebuilding not only focusses in analyzing how AGM is intricate to violent conflicts and national security threats in Mazowe, but also submits that gold can enhance cooperation.

Citizenry Physiological and Psychological Wellbeing and National Security

The AGM activity is driven by a myriad of socioeconomic and political factors. The many people in AGM activities attest to unemployment and poverty. Hence, responses like Phatso's that he had no other income source taint that unemployment and poverty are key causes and effects of AGM in Zimbabwe. National security is the country's physical security, military protection, and the citizens' mental and emotional safety (Snow 2017), addressing the socioeconomic-mental perspective of security as safety from poverty that makes one feel insecure (Peleri 2008: 58). Thus, AGM is a panacea to poverty and unemployment. However, AGM offers short-term socioeconomic-political benefits to Mazowe people, as it has dire long-term national security

costs. Hence, for AGM to enhance national peace and security, it needs an integrated tactic; pronouncing the entire range from grassroots poverty relief actions to “high level” political will, attending good governance and legal bases that consider AGMiners as citizens with rights and responsibilities (UNIDO 2018). So long poverty exists in Zimbabwe, AGM flourish, thus the government’s provision of other survival means can reduce the number of people in AGM. Yet, Zimbabwean government is incapable of making alternate jobs for all the people in AGM, and this taints a vivid reality that AGM will persist in Mazowe and is there to stay. National security is ability of the government to cater for the safety and security of its citizenry (Snow 2017; Mearsheimer 1995). Thus, government’s validation of AGM not only improve the circumstances of communities afflicted by insecurity, instability, and illegality but is also a step in reformation to yield helpful multiplier effects to attain national security and Vision 2030.

The AGM threatens the Zimbabwe’s national security as it causes the physical environmental damage, river and dam siltation, water, and food insecurity. Coupled with deforestation due the cutting down of large amounts of trees either for firewood or timber, and the Mazowe River and Mazowe dam pollution which are sources of potable and irrigation water in Mazowe by AGM acts, agriculture, and or food security is affected. The UN Special Rapporteur Elver (2019), back then projected that about 8 million Zimbabweans badly need food aid, tainting that Zimbabwe is among the main food insecure countries. AGM led to grave national environmental and water security problems (Zvarivadza 2020), thus, posing a major risk to the Mazowe people and livestock. The government will finally be pushed to spending large sums of money treating or desilting these water bodies for people and livestock consumption, and it’s a drain on the already strained country’s fiscus. Hence, AGM is an ecological time bomb in Mazowe as its negative environmental impacts outweigh the socioeconomic benefits (ibid). Therefore, the above translate to the idea that AGM is an environmental, water, and food security threat affecting the Zimbabwe’s peace and national security as espoused by Snow (2017) that if people’s physiological well-being is threatened, then the national security is endangered.

Moreover, the fiscal flows from AGM can subsidize to a self-reinforcing cycle of informality and illegality, that can be hard to disrupt. The farmland destruction reduces the production of cash crops in Mazowe and reduce government revenue from the exported agricultural products. Also, smuggling is not done by the AGMiners per se, but by middle or major illegal gold traders who starve the government of much-needed revenue. Hence, without revenue, the government cannot build the essential infrastructure, generate employment and capital to capacitate the military (Ronis 2011), and other state security agencies. However, with AGM activity, the government requires a lot of money to reduce it through various anti-AGM police operations or deployment of the Support Unit or military on the country’s borders on anti-gold smuggling operations. These government expenses amount to

financial losses to Zimbabwe because they could have been avoided if protection economy is avoided (Mawowa 2013). Therefore, the consequences of government revenue loss like incapacitation of its security agencies, high unemployment rate, and lack of infrastructure development pose a national security problem.

Understanding the Gold Resource Complex in a Politicized Environment

The power dynamics associated with AGM has led Mazowe to be a violent conflict center. Conflict cause gross human rights abuses, undermines national peace and security, deter development efforts, and weakens gold preservation. There is a correlation between human rights abuses and gold exploitation (UN 2019). Thus, the support and participation of powerful politicians and people in authority encourages AGM environmental degradation activities. Therefore, “politics and environment are everywhere thoroughly interconnected” (Bryant, 1998: 82). Governments are hesitant to fight AGM for fear of being shunned and lose votes from AGMiners during elections (Kpodo 2008), thus with the Miners4ED outfit, politics indorses AGM in Zimbabwe. However, regardless of power, political, economic, and social benefits of AGM, the activity causes environmental, economic, food, water, and physical security threats to Zimbabwe’s national security. Thus, politicians and government have a duty on the safety and well-being of Zimbabweans with regards to AGM or mashurugwi and other insecurities.

Additionally, with AGM, the complex and unhealthy relationship amid crime, business, and politics has blurred the lines between the legitimate and illegitimate. If not taken into account, political-economic elites heavily invested in the AGM sector block efforts to lower the activity. Here, political economy analysis can explain better for it is concerned with the interaction of political and economic processes (Mearsheimer 1995): the distribution of power and gold between different groups and individuals in Mazowe, and the processes that create, sustain, and transform these relationships over time. Violence against Mazowe community manifests itself directly through mashurugwi, Support Unit operations against AGMiners, and directly or structurally through stigmatization, illegalization, and the lack of an integrated AGM policy. Thus, gold in Mazowe is a conflict resource linked to environmental degradation, violence, criminality, and human rights violations. Consequently, more effort to overcome this problem have been focused on repressive and not considering the complexity of the local realities. In Mazowe, gold is a resource in dispute. Therefore, Mazowe community and the organization processes developed by them must be considered as actors involved in the conflict. Thus, national security is rooted in the communities’ lived experience (Peleri 2008), in Mazowe’s AGM sites, and the daily presence of insecurity.

“Politics should be put first to understand how human-environment interaction is linked to environmental degradation” (Bryant 1998: 80). Power is mirrored in the ability of Mashurugwi or government to control the Mazowe AGM sites over AGMiners. In Mazowe’s AGM sites, political

control is exercised through the Support Unit deployment that also promote 'violence'. However, the uncooperating nature of AGMiners or fights between them and against the police may be an expression of resistance to such power and control. Therefore, the unequal power relations in Mazowe's AGM sites are also expressed through the government's sermons against AGMiners, where the activity is criminalized and linking it with violence and pollution, while gold mining carried out by powerful individuals is viewed as environmentally friendly. Thus, political-ecological conflicts are struggles over meaning as they are battles over material practices (Bryant 1998). The connection between the "untouchables" gold panners, Miners4ED, and the politicians entail that senior politicians provide shield for some criminal groups. However, there is a threat that some gangs can be armed by their political godfathers to venture into nationwide organized crime. Bhijola's sentiments that people are living in fear of mashurugwi tells that criminal bands and the situation in Mazowe are a security threat demanding an urgent intervention to avert an increase into firearm fights. The brawl amid the AGMiners and Support Unit also suggest that AGM workers as in the DRC (UN 2019) can mutate into fire-armed groups who use proceeds from AGM to get small arms to protect their economic interest against government actions stopping their activities. Such a scenario further threatens the Zimbabwe's national security because it results in vicious armed conflicts over the control of AGM sites.

Fights between the same syndicate miners tells that gold can subsidize to conflict eruption due to unequal resource sharing and environmental ruin. The catch and release by the police of the mashurugwi as opined by respondent John tells that gold finance and sustain conflict in Mazowe where gold has been exploited to promote corruption. Creto and Faya's views that a mutually useful relationship among the police and AGMiners exists; and a link amid the police and criminals in AGM tells that, where police must deter the criminal elements causing conflicts, some rowdy security agents work in consortia with mashurugwi in Mazowe. Therefore, the national security threat is exacerbated by the rowdy police officers that led to the rising perception by AGMiners that police are enemies meant to amass wealth through working in cahoots with criminals, and by disrupting AGM work or solicit for bribes. Hence, gold in Mazowe can be measured as a "conflict resource" financing and sustaining a myriad of conflicts pitting various groups or people. So, because the gold exploitation and trade in a conflict-ridden community result in human rights abuses or causing crimes (UNEP 2009: 7). This situation deters peacebuilding making gold a resource that can undermine the peacemaking and Zimbabwe's national security.

Environmental Peacebuilding, Achieving Peace Through Environmental Cooperation Despite that gold in Mazowe is measured as a "conflict resource" generating violence, it is a resource for cooperation, as it supports livelihoods for thousands of families facing high vulnerability conditions in Mazowe and Zimbabwe at large. Environment and gold can subsidize to peacebuilding by developing sustainable

livelihoods realized by minimizing vulnerability to diverse hazards through managing of key natural resources, introduction of apt skills, and technical support (UNEP 2009). Thus, the state's denial of AGMiners as a valid actor in Mazowe's gold mining solutions contradicts the community peace objectives, which is the participation of communities in the identification and overcoming the problems affecting their communities. So, energies seeking to get rid of AGM sector, rather than formalize it, are likely to further push the sector into dark/ the black market than peacemaking. Hence, if AGM is formalized, Mazowe's gold and the environment can contribute to dialogue, cooperation, and confidence-building amongst various actors in AGM. Thus, with a good strategy, Mazowe's environmental issues can be a starter point to resolve the flop of social cohesion between various groups in Mazowe that breeds violent conflicts. Thus, the likely environmental peacebuilding results can be the reduction of environmental damage, the improvement of cooperation and trust, conflict reduction, and creation of peace amid contesting groups (Dresse et al 2019).

CONCLUSION

The study concludes that there is a nexus between AGM and threats to Zimbabwe's national security. Despite being an income source for many various people who see AGM as an employment source and a chance to escape from poverty; unemployment, poverty, protection economies and the backing from powerful politicians for AGM contribute to its sustenance and posturing many and varied Zimbabwe's national security threats. Zimbabwe's environmental, economic, physical, food, and water security are under threat due to AGM. The physical environment that offers the basic life needs is intoxicated by the AGM operations that destroy farmlands, polluting and silting water bodies serving as irrigation and potable water in the country. This is worrisome as it causes food scarcities and waterborne ailments; which are a national security threat. National security includes physical security, military protection, and the citizens' mental and emotional safety (Snow 2017), addressing the socioeconomic-mental perspective of security as safety from poverty that makes one feel insecure (Peleri 2008). Hence, the government need to exercise the utmost political will to reduce AGM activities and protect the nation from security threats related to AGM. For AGM to enhance national peace and security, the government needs a unified tactic; from grassroots poverty relief actions to "high level" political will, acknowledge that AGMiners are people with rights and responsibilities (UNIDO 2019). The government can instigate studies focusing on actors/factors thought to heavily influence the AGM and, sector formalization can contribute to dialogue and cooperation amongst various stakeholders.

AGM offers socioeconomic-political paybacks to the people involved in it. However, the activity severely costs the Zimbabwe's environmental, economic, food, water and physical security. Thus, AGM is argued to be a flawless storm of criminality and corruption, a serious threat to national security, governance, human rights, health, and Zimbabwe's ecology. The farmland destruction reduces the cash crop

production in Mazowe and reduce government revenue from the exported agricultural products. Again, AGM starve government revenue by gold smuggling and it promotes the use of illegal firearms in its operations. Hence, without revenue, the government cannot build the essential infrastructure, generate employment and capital to capacitate the military and various state security agencies, thus, a national security threat. These vagaries are national security concerns as they threaten the physiological and psychological well-being of Zimbabweans and the country's stability. Henceforth, this calls for the government's pragmatic measures, needful of inclusive effort by government and its agencies, civil society, private sector, and the media to curb associated AGM threats to the nation. Important amongst the intervention efforts is the necessity for alternate livelihood sources for the AGMiners and education on the national security implications of their actions. These intervention measures amid others need urgent implementation, else in the foreseeable future, people will feel unsafe living in Mazowe.

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