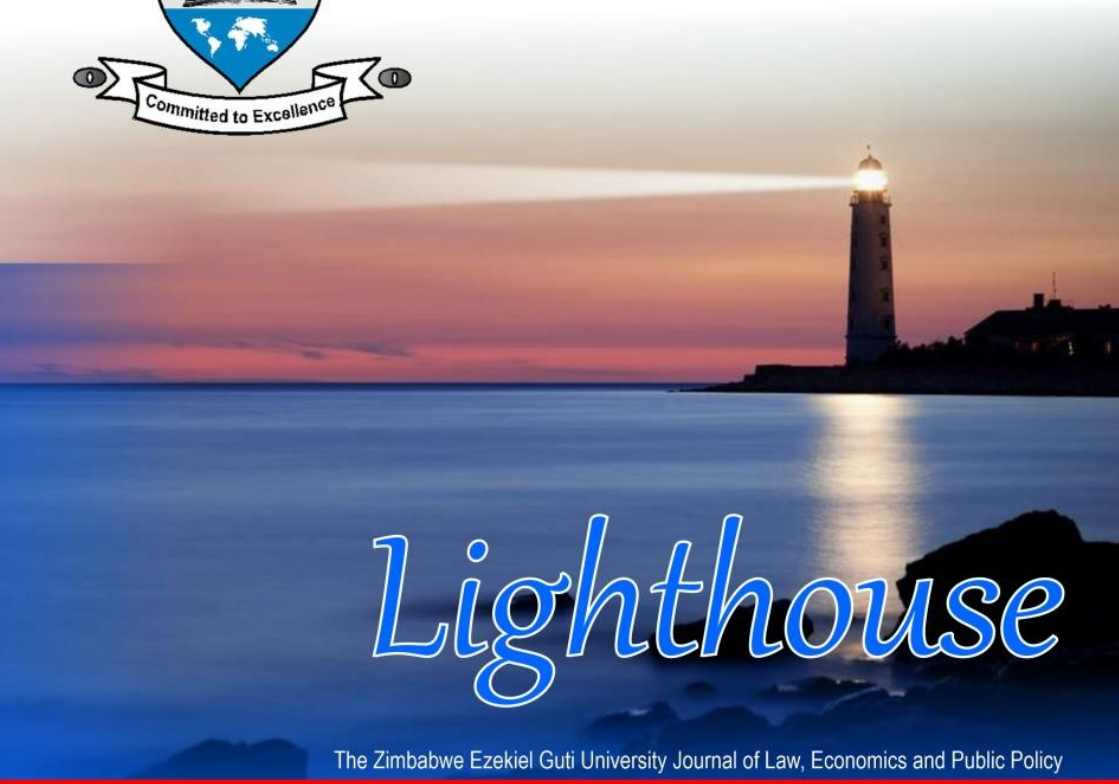
ZEGU
ZIMBABWE
EZEKIEL GUTI
UNIVERSITY

Committed to Excellence



Lighthouse

The Zimbabwe Ezekiel Guti University Journal of Law, Economics and Public Policy

ISSN 2957-8842 (Print)
ISSN 3007-2182 (Online)

Vol. 4 (Issues 1&2), 2025

Published by the Zimbabwe Ezekiel Guti University Press
Stand No. 1901 Barrassie Road,
Off Shamva Road
P.O. Box 350
Bindura, Zimbabwe

Typeset by Divine Graphics

Printed by Divine Graphics

SUBSCRIPTION AND RATES
Zimbabwe Ezekiel Guti University Press Office
Stand No. 1901 Barrassie Rd,
Off Shamva Road
P.O. Box 350
Bindura, Zimbabwe
Telephone: ++263 8 677 006 136 | +263 779 279 912
E-mail: zegupress@zegu.ac.zw
http://www.zegu.ac.zw/press

About the Journal

JOURNAL PURPOSE

The purpose of the *Lighthouse: The Zimbabwe Ezekiel Guti University Journal of Law, Economics and Public Policy Journal* is to provide a forum for urban solutions based on a systems approach and thinking as the bedrock of intervention.

CONTRIBUTION AND READERSHIP

Lawyers, criminologists, economists, public policy experts, bureaucrats, students, researchers and many other experts located in both the private and public spheres.

JOURNAL SPECIFICATIONS

Lighthouse: The Zimbabwe Ezekiel Guti University Journal of Law, Economics and Public Policy

ISSN 2957-884 2(Print)
ISSN 3007-2182 (Electronic)

SCOPE AND FOCUS

The journal is a forum for the discussion of ideas, scholarly opinions and case studies on law and policy, statutes, constitutions, general rules of the game (institutional mechanisms) and policy pronouncements or declared positions that are put to scrutiny, weighed, interpreted and evaluated. In all these matters, the intention and context usually define the outcomes and impact. The journal is produced bi-annually.

Guidelines for Authors for the *Lighthouse* Journal

Articles must be original contributions, not previously published and should not be under consideration for publishing elsewhere.

Manuscript Submission: Articles submitted to *Lighthouse: The Zimbabwe Ezekiel Guti University Journal of Law, Economics and Public Policy* are reviewed using the double-blind peer review system. The name(s) of author(s) must not be included in the main text or running heads and footers.

Total number of words: 5000-7000 words and set in 12-point font size with 1.5 line spacing.
Language: British/UK English
Title: must capture the gist and scope of the article and must be succinct
Names of authors: beginning with the first name and ending with the surname
Affiliation of authors: must be footnoted, showing the department and institution or organisation.
Abstract: must be 200 words
Keywords: must be five or six containing words **that are not in the title**
Body: Where the authors are more than three, use *et al*.
Italicise *et al., ibid.* and all words that are not English, not names of people or organisations, etc. When you use several authors confirming the same point, state the point and put them in one bracket in ascending order of dates and alphabetically, separated by semi-colon e.g. (Falkenmark, 1989, 1990; Reddy (2002; Dagdeviren and Robertson, 2011; Jacobsen *et al.,* 2012).

Referencing Style: Please follow the Harvard referencing style in that:
— In-text, citations should state the author, date and sometimes the page numbers.
— The reference list, entered alphabetically, must include all the works cited in the article.

In the reference list, use the following guidelines, religiously:

Source from a Journal

Anim, D.O. and Ofori-Asenso, R (2020). Water Scarcity and COVID-19 in Sub-Saharan Africa. *The Journal of Infection*, *81*(2), 108-09.

Banana, E, Chitekwe-Biti, B. and Walnycki, A. (2015). Co-Producing Inclusive City-Wide Sanitation Strategies: Lessons from Chinhoyi, Zimbabwe. *Environment and Urbanisation*, *27*(1), 35-54.

Neal, M.J. (2020). COVID-19 and Water Resources Management: Reframing our Priorities as a Water Sector. *Water International*, *45*(5), 435-440.

Source from an Online Link

Armitage, N., Fisher-Jeffes, L., Carden, K., Winter, K. (2014). Water Research Commission: Water-sensitive Urban Design (WSUD) for South Africa: Framework and Guidelines. Available online:https://www.greencape.co.za/assets/Water-Sector-Desk-Content/WRC-Water-sensitive-urban-design-WSUD-for-South-Africa-framework-and-guidelines-2014.pdf. Accessed on 23 July 2020.

Source from a Published Book

Max-Neef, M. (1991). *Human Scale Development: Concepts, Applications and Further Reflections*, London: Apex Press.

Source from a Government Department (Reports or Plans)

National Water Commission (2004). Intergovernmental Agreement on a National Water Initiative. Commonwealth of Australia and the Governments of New South Wales, Victoria, Queensland, South Australia, the Australian Capital Territory and the Northern Territory. Available online: https://www.pc.gov.au/inquiries/completed/water-reform/national-water-initiative-agreement-2004.pdf. Accessed on 27 June 2020.

The Source being an Online Newspaper Article

The Herald (2020). Harare City Could Have Used Lockdown to Clean Mbare Market. *The Herald*, 14 April 2020. Available online: https://www.herald.co.zw/harare-city-could-have-used-lockdown-to-clean-mbare-market/. Accessed on 24 June 2020.

Geospatial Intelligence: A Panacea to the Mozambique-Zimbabwe Border Insecurity?

VENGAI TABINGA[1] AND PFUNGWA MABLE MHLANGA[2]

Abstract

The study critically examines the efficacy of geospatial intelligence (GEOINT) on bilateral cross-border governance, focusing primarily on the Nyamapanda Border, a border separating Mozambique and Zimbabwe to the North-Eastern, as a case study grounding the study. The central thrust informing the study stems from the background that, despite an Integrated Border management (IBM) framework involving many security details and other organisations, the proliferation of unwanted goods, substances and humans has exposed the porosity of the border. The missing nexus or link is the critical role that GEOINT could play in the improved securitisation of the border. The main thread of argument that informs and grounds the study is premised on the following inquiry to the effect that since GEOINT has been employed in other regions such as the Mexico-USA border with significant success, could it also be adopted in the existing local IBM for improved securitisation of the border? The study contemplates a perspective of what constitutes an effective and efficient model of border management. In constructing and conceptualising the tropes of the article, a mixed research paradigm or approach was employed, where data were first gleaned through in-depth interviews, followed by questionnaire responses in line with the sequential exploratory design of mixed methods. The study brought to the fore the fact that insignificant progress had been made to implement GEOINT at the Nyamapanda Border. The

[1] Department of Community and Social Development, University of Zimbabwe, Harare, Zimbabwe, ORCID; https://orcid.org/0009-0004-1876-011X vtabinga@gmail.com
[2] Department of History, Heritage and International Studies. Zimbabwe Midlands State University, https://orcid.org/0009-0006-0374-6168 mpfungwa@gmail.com

perceived benefits of GEOINT implementation were realised to revolve around reduced border management costs and improved securitisation intelligence. The pivotal recommendation arising from the study is that, to effectively implement GEOINT, there is need for the government to align its border management policies with those from the region and at bilateral level and there is also need for harmonisation of such with Mozambique. The training and resourcing of border agencies and the co-optation of the border communities are a priority that and enhance the efficacy of GEOINT.

Keywords: Geographical Information Systems (GIS), Integrated Border Management (IBM)

INTRODUCTION

It is a general argument posited by most scholars that the use of GEOINT in surveillance is perceived as the panacea to effective border management. In the USA, Martins (2018) perceives GEOINT as having achieved tremendous securitisation results along the US-Mexico border.

In Ghana, Kobe (2022) argues how the adoption of GEOINT improves and enhances border security efficacy due to thorough surveillance and improved intelligence. These aforementioned countries believe that the use of technology such as drones and integrated computerised systems between bordering nations, improves border securitisation. However, what has been lacking in the Zimbabwean context and constituting a research lacuna which this research strives to fill, is a thorough examination grounded in robust research of the extent to which GEOINT has been implemented as a securitisation tool and the plausibility thereof. In addition, the efficacy of the tool in relation to the Zimbabwean-Mozambique context is yet to be researched, given the nature of the border and the interrelations that exist between the border communities of the two countries. A study by Chimanikire *et al*. (2019) focused on border management

systems in Zimbabwe with a view to ease congestion and improve the flow of goods and human beings across the borders, but did not look at GEOINT as a securitisation tool and its associated benefits. Likewise, a study by the Zimbabwe Environmental Law Association ((ZELA) (2021) pointed to many loopholes in border security that were contributing to the pilferage of minerals to bordering nations, but did not discuss how the implementation of GEOINT would curb such activities.

Given the foregoing, the central thread undergirding the study seeks to evaluate the role of GEOINT on the management of the Nyamapanda Border. As derived from the perceived benefits, the adoption of GEOINT at Nyamapanda is poised to eradicate the proliferation of unwanted goods and regulate the movement of humans and other cargo between the two countries. If the *status quo* remains, the proliferation of such would continue to the detriment of the economies and security of the two countries. This article is aimed at addressing three research objectives: the benefits of GEOINT on the Nyamapanda Border management; the factors militating against the adoption of GEOINT at the border; and the strategies which can be employed so that GEOINT becomes part of a holistic model of IBM at this border.

THEORISING GEOSPATIAL INTELLIGENCE

The term "geospatial intelligence" has remained complex and misinterpreted since it was coined in 2005 by the US Director of National Intelligence (DNI), James Clapper, because it is supple, a concept which lends itself to a panorama of interpretation and conceptions. Before this, the most commonly used term within the geospatial community was Imagery Intelligence (IMINT) (GEOINT Symposium 2015).

Martins (2018, p.58) argues how GEOINT is:

> The exploitation and analysis of imagery and geospatial information to describe, assess and visually depict physical features and geographically referenced activities on the earth. Geospatial intelligence consists of imagery, imagery intelligence and geospatial information. Broken down, imagery refers to images that provide a visual depiction of a place, thing, or an activity. Imagery intelligence differs from imagery in that imagery refers to raw intelligence (unexploited, unanalysed imagery), whereas imagery intelligence refers to imagery that has specifically been analysed by an individual trained to conduct imagery analysis.

THEORETICAL FRAMEWORK

In this section of this article, the theoretical strands underpinning and grounding the study with a view to ascertaining their nodal points and how they 'speak' to the subject at hand are mapped. The study is informed by the Panic Theory as the overarching theoretical lens, while the mutual benefits and the segmentation theories became supporting and subsidiary theories. The theories speak to the need for securitisation of the border because of panic shocks that may include security, economic or socially related shocks. The securitisation of the border must be done for mutual benefit between the bordering countries. The theoretical framework also looks at the efficacy of border management as being dependent on whether asserts and personnel are employed in their segmented areas of specialisation.

THE PANIC THEORY

The study is informed by the Panic Theory of border control as the overarching theory with the mutual benefits and segmentation theories coming in as subsidiaries to support the main theory. Central to the Panic Theory is that border management is caught between two panics: security failure and economic crisis (Webber, 2015). The orientation and government's perceived threat determines its ultimate response to border management. These perceptions generate the importance of having a secure border to avoid the price of a porous border and this is in sync with the objective of the study

that seeks to establish the benefits of having GEOINT as part of an IBM at Nyamapanda. In the context of Okumu and Ikelegbe, (2010), the response and measures to border security by the government reflects its fears and comfort. The attack on the New York World Trade Centre on 11 September 2001, the 2015 Paris attack and the London Bridge attack, among other security events, have made the world aware of the potential dimensions of a terrorist attack in the most dramatic way possible because of border porosity. These events have necessitated countries and regional blocs to embark on measures to control the movements of goods and persons through the employment of IBM and GEOINT. Security breaches have led to fear among customs, immigration and trade experts that wrong persons and goods may find entry into countries and cities to the detriment of national security (UNICEF, 2017). Different approaches are being adopted by border security agencies to ensure security at the frontiers, while at the same time facilitating trade among countries. The implementation of GEOINT as part of IBM is one of those initiatives that have been put in place to enhance border management by the developed and the developing world, Zimbabwe included. However, government panic in itself does not mean that the measures that are put in place are holistic enough to have an effectively and efficiently managed border, thus there are challenges that militate against these approaches, thus strategies must be found to build a holistic model of border management. The preceding tenet of the Panic Theory is in sync with the other two objectives of the study that seek to look at the challenges and strategies towards the connoisseurship of border management

While the Panic Theory focuses on the necessity for border control as emanating from the two levels of panic that are failed security and economic crisis, the Mutual Benefit Theory seeks to bring to light the central argument that GEOINT has got mutual benefits to those that integrate their border systems and employ GEOINT (Polner, 2011). The complementary point or area of convergence between the

theories underpinning and informing this research output is that both are concerned with economic and security benefits. However, both theories are proactive and do not articulate reactive measures in case there is a breach of the installed GEOINT, thus in this regard, both theories present a conceptual gap that requires the complement of another theory. Thomas (2010) avers that GEOINT is premised on the fact that agencies need to work together from the different countries to achieve common aims that benefit both countries. It focuses on a virtual border that is technologically monitored to complement the human effort. Goods and passengers are cleared in advance after being assessed for admissibility before arriving at the border post.

Grillot *et al*. (2010) observe how GEOINT, as part of IBM, becomes increasingly effective as the countries' agencies gather, collate and share more data relevant to curb illegal crossing of goods or persons. This can be used to create a complete view of risks and opportunities, encouraging a knowledge sharing culture and a border management strategy built on proactive decision-making. So whatever contribution that the parties to border control make, should be of benefit to both parties in terms of security, economic and social development. Through a combination and integration of 'customer segmentation' and 'intelligence-driven risk management', the clearance, that is, admissibility processing of goods and passengers, can be carried out electronically in advance of physically reaching the border. This may check under declaration and misrepresentation of goods to the benefit of all integrated countries. The overall link of the theory to the study is that it is in tandem with the objective that seeks to address the benefits of GEOINT in border management.

The segmentation theoretical framework seeks to bring to the fore the argument that the best practice to border management is best

achieved when parties to the security architecture are segmented to focus on their areas of specialisation (Fletcher, 2007). Risk management powered by the intelligence enables border agencies to implement accurately the pre-arrival/departure identity and qualification guarantees and to perform targeted interventions of others by trusted traders or passengers. While the preceding theories left a conceptual lacuna with respect to interventions in case the GEOINT is breached, the said vacuum is then filled by this theory that talks of intervention measures. One area of converge in the three theories is that they advocate for a technology-driven border anchored on GEOINT security where there is pre-arrival clearance processing by identity management systems or third party's compliance information verification systems.

CONCEPTUAL FRAMEWORK

The theories canvassed thus far do not articulate the inputs and outputs of an effective IBM, neither do they provide the projected efficiency of outputs that come through an IBM which has GEOINT as one of its core components. To fill these theoretical lacunae, the conceptual framework provides such information as guidelines for the study. In the framework, the three theories inform the concept of GEOINT. Panic, because of fear of economic crises and the security failures, pushes many states into GEOINT to enhance their border management and so do the benefits. According to Doyle (2011), GEOINT in the realm of IBM, is premised on five tenets, which are: the policy, the information communication technologies (ICTs), the infrastructure, the people and the processes. The state must show willingness to integrate its border management agencies with other states within the region. The process must be inclusive and consultative. Border management agencies must be well-trained and resourced. The use of information technology is very crucial in GEOINT because information needs to be easily shared among border

management agencies. The infrastructure and facilities at the entry points should be updated to meet contemporary demands.

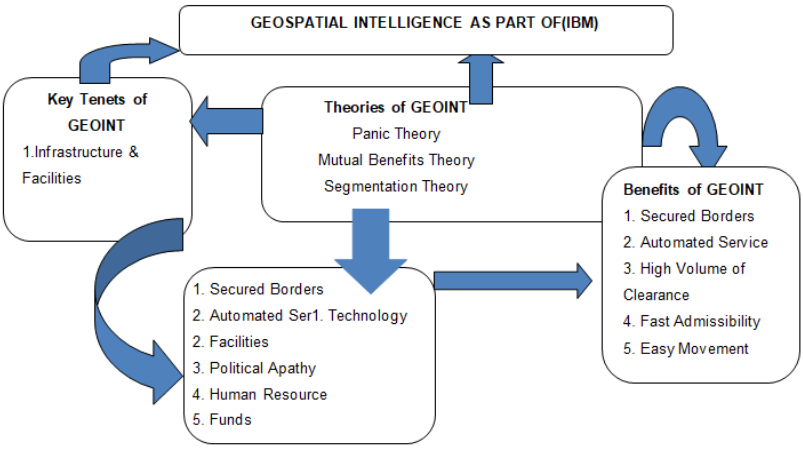


Figure 1: Author's Construct informed by Kobe (2020)'s IBM Model

Atemoller (2011) highlights some of the challenges associated with the implementation of GEOINT. The state might lack the willpower to employ GEOINT and remain comfortable with the traditional border surveillance methods and in most cases, it has been ascertained that the political leadership maybe benefiting from border porosity. In certain instances, the state has cited security concerns if GEOINT becomes integrated between the bordering states. Lack of adequate training of personnel and under-resourcing of the human resource and material necessary for GEOINT implementation has been observed to be another challenge. Facilities at the entry point may be outdated or lack the capacity to accommodate contemporary trades. GEOINT requires special knowledge of information technology. This may constitute a problem to developing countries where ICT is still yet to find its way through many institutions. The funds required to set up the GEOINT systems may be too huge for some developing countries like Zimbabwe and Mozambique.

However, if these challenges are adequately addressed, GEOINT may bring about huge benefits, such as the rapid increase in the admissibility of goods that come from other countries, thereby facilitating international trade and high volume of clearance per day (Lux, 2010). This would, in turn, reduce the frustration importers go through at the border to clear their goods. The movement of legitimate people across the borders will also be made easier with the adoption of GEOINT (UNICEF, 2017). Countries that experience these benefits are more likely to reinforce the adoption and implementation of the GEOINT system across their regions.

REVIEW OF RELATED LITERATURE

In this section, the study proffers a nuanced critical review of pertinent literature in the research canon in the obtaining of field of securitisation with a view to ascertain the research gap that this research therefore aims to fill.

The benefits of GEOINT in the realm of IBM should not only focus on the security benefits, but should be seen from the cost-benefit analysis system. Its employment lowers border management costs through more efficient and effective asset deployment (Kobe, 2020). In this context, the confidence, accountability of traders and customers are strengthened. Wilson (2004, cited in Kobe, 2022), observed that GEOINT enhances security with improved intelligence and more effective enforcement. Goita (2010) notes that countries where GEOINT is implemented are more efficient, because it promotes legal trade and travel and clearance procedures are more reliable and secure. Given the articulated benefits, Zimbabwe is poised to benefit from such but the benefits that have been highlighted above relate to the developed world where the mechanisation of such GEOINT is advanced as compared to sub-Saharan Africa. This geographical, economic and contextual disparity, therefore, presents a geographical gap, an economic and contextual gap that necessitated the research to be geographically delimited to

sub-Saharan Africa and, in particular, the Nyamapanda Border in Zimbabwe. While the above benefits are general and informed from a developed world view, the context of Zimbabwe needs to be looked through a different lens, thus bringing to the fore the need to address this contextual gap.

GEOINT in the realm of IBM has the potential to change the way of conducting intergovernmental networking and inter-agency networking agreements and collaborations with its clients. Network arrangements allow for efficient collaboration between border control agencies to follow a set of common and agreed norms because both parties to border control need to benefit as discussed in the Mutual Benefits Theory. In support of this, Pugliatti (2011, cited in Kobe ,2020) asserts that in bilateral border management, both countries, as outlined in the Panic Theory, do not want security failures, neither do they want economic crises emanating from the indiscriminate and uncontrolled movement of persons and materiel. To ensure that there is avoidance of such poor governance of the border, Kobe (2020) argues that GEOINT helps border departments to work closely in an inter-agency approach.

In Altemöller (2011), GEOINT can be done under the expertise of a single border management agency that does not only focus on trade, but on all aspects related to border management. With this view, the establishment of the Chirundu One Stop Border Post is a step towards the implementation of the inter-agency approach but falls short of the dictates of GEOINT in that it is not coordinated in all facets to do with intelligence, security of the border beyond the legal entrance and exit. Apart from intelligence sharing for the purposes of enhancing security, Doyle (2021) notes that GEOINT is a distinguishing border management strategy that can make real impact for people, the business community and the country as a whole when properly implemented. Hobbing (2020) also agrees when he notes that the process offers an atmosphere that is more customer-friendly and

sensitive and that realistic performance measures can be developed for all the main outcome areas.

In Africa, the absence of comprehensive and functioning border management frameworks and models bring about delays, harassment, violation of rights and corruption. Academics and policy think-tanks suggest the implementation of GEOINT as a remedy. In West and Central Africa, GEOINT is being implemented but this remains largely at the domestic levels (Azure, 2020) where there is cooperation among border security agencies such as customs, immigration officers and Border Police, but not with the agencies of the bordering country. In Ghana, for instance, the Ghana Immigration Service and the customs division of the Ghana Revenue Authority have been integrated, making it possible for the two agencies to share vital data on cross-border movement of goods and services (GIS, 2016). However, the bilateral aspect has not been implemented, thus confirming GEOINT to the services of one nation, which is not in line with the Panic Theory. It is also important to note that the implementation of GEOINT in this context has not been so advanced to include satellite imagery, GIS) and use of drone technology, thus remains in the lower peripheries as compared to the developed world such as the use of GEOINT along the Mexico-US border.

To keep abreast with contemporary border management systems, Zimbabwe has put in place systems that are meant to improve the effectiveness of its borders. These include the Automated System for Customs Data (ASYCUDA) and IBM systems. These were put in place to complement human efforts through police patrols, the intelligence services and other agencies involved in border management (Muqayi and Manyeruke, 2019). However, as noted by Daimon (2019), the implementation of these systems in border management have not significantly reduced congestion at the border, neither have they sealed the porous points, nor improved border security. What has been glaringly missing is the use of the GISs in the continuum of

border management, thus the introduction of such in the IBM has been perceived to be the panacea to effective border management.

The role of GEOINT, as the panacea to effective border management, is seen in the continued porosity of the border despite automated systems such as the ASYCUDA. To this end, Carciotto, (2016) in his study articulates the influx of illegal immigrants from the Horn of Africa, through Chirundu Border Post and Nyamapanda en route to South Africa via Beitbridge Border Post and has blamed this on the lack of a coordinated approach and effective monitoring by both bordering countries. In the context of Marongwe and Muguti (2017), ASYCUDA and other automations on the ports of entry, have been very pivotal to hasten clearance at borders but have done very little to curb smuggling and entry by evasion. Again, these authors bring to the fore the gap of GEOINT given that all other methods to border management are being implemented but without much success.

While Kobe (2020) argues quite critically that about 35 borders in West Africa are very porous, the situation at home has not been one of the best, with the Zimbabwe-Mozambique border being one of the most porous. This has made these countries extremely vulnerable to risks, such as human trafficking, drug trafficking, small arms and light weapons and terrorist attacks (World Bank, 2020). Border security challenges are nevertheless not always rooted in national security and economic policies and borders organisations are usually poorly equipped, ill-trained and poorly resourced (Flynn, 2018). There are certain boundary points in the sub-region that do not always have sufficient infrastructures such as detection equipment and scanners. In the different countries of the region, customs administrations do not typically have national bases of criminals, their networks, forms and amounts of illegal goods seizures (Goita, 2011).

The above situation obtaining in West Africa relates well to the situation in Zimbabwe where border management is poorly resourced

to the detriment of national security and development. Due to the absence of drone technology, satellite imagery or GIS, the Zimbabwe-Mozambique border has remained one of the most porous with much criminal activities happening along the border where there are no ports of entry and even at the port of entry. The situation has been further exacerbated by the fact that there is no barrier that defines the border between the two countries.

One of the militating factors related to policy has been the exclusion of border communities in border management (Carciotto, 2016; Beck, 2019). The inclusion of border communities in border management to complement the digital space monitoring was described by De Andres (2008) as an important factor for border management. Most border control programmes at local level do not help border communities. The local community usually knows the area, the criminal trade unions, the venues and other security matters intimately. The communities along the border are also a problem to effective border management because they also act as criminal hubs and share historical interrelations that can act to the detriment of intelligence gathering in terms of movement of contraband between the two countries.

Lamptey (2013) argues that the porosity of a border as a result of uncoordinated border management has been witnessed in the Mali conflict during which weapons and contraband found their way from Libya into Mali in a very short space of time, thereby ssustaining the war effort. This clearly showed the lack of concrete mechanisms to facilitate the security of borders. Globalisation and the increasing number of terrorist threats and cross-border criminal activities have, over the years, made border management problems a matter of economic and national security. However, given the recognition of threats or benefits to successful border control in Southern African countries, including Zimbabwe, the implementation of comprehensive border management strategies was not a common

strategy or systematic initiative at national and sub-regional levels (Muguti and Marongwe, 2017).

In the context of Mleya (2016), the problem militating against the implementation of GEOINT has been the absence of willpower or political will by most governments. He notes that the porosity of Zimbabwean borders has been due to the absence of GIS to have real-time monitoring, poor remuneration, outdated equipment that does not allow for digitalisation of the border management systems. This argument is supported by Okumu and Ikelegbe (2021) who argue how workers at border posts are poorly equipped and poorly motivated in West Africa as compared to the agencies that police and manage European borders. The convergence of these arguments is a testimony of the homogenous problems associated with border management in sub-Saharan Africa.

The ideal against the obtaining situation as observed by Okumu and Ikelegbe brings to the fore the role of economics between the 'Global North' and the 'Global South'. The poor economies cannot implement GEOINT because of the funding that is required. The preceding argument is made stronger by Murton (2017) and Nichols (2019), who weigh in with the assertation that the implementation of GEOINT is derailed by poor economies that do have other pressing obligations like the provision of basic amenities to their people and do not have adequate budgets to prioritise border management. One other problem has been the scarcity of office space, border monitoring and control personnel facilities and unsatisfactory means of communication that have also seriously challenged the capacity of border officials to efficiently conduct their work.

Border management today needs certain skills and aptitudes and the delicate balance between tighter cross-border controls and cross-border flow facilitation (Lamptey, 2012). One first step to this is to develop and align national and sub-regional policies that can be

implemented across the region in a regional integrated border management approach (Okumu and Ikelegbe, 2020). A strong border control strategy on national and sub-regional levels must be emphasised to enhance the protection of the frontiers in Africa. Second, the ability of law enforcement authorities and their related organisations in the sub-region must be further enhanced.

Wilson (2004) is of the view that border societies also need to be engaged as a sanctuary of all forms of criminal activities in border management processes. In Sierra Leone, for example, police have community committees that allow them to communicate with the locals, have a human face and at the same time gain confidence. They are, therefore, able to receive data about any safety problem in the area. Drawing from the use of GEOINT on the US-Mexico border in reaction to the 9/11 attacks, an effective border management should, in all sundry and purpose, have an IBM whose constituents must include GEOINT (Martins, 2018), because there quite a number of details and activities that skip the border management official and other traditional automations such as the ASYCUDA.

STUDY DESIGN AND METHODOLOGY

The study is informed by pragmatism and adopts a mixed paradigm research modus, embedded in an abductive approach. The sequential exploratory design is adopted in that a quali-quanti pattern of data collection and analysis is followed. In this regard, a purpose sample of 15 (n=15) key staff from immigration officials at the Nyamapanda Border post consisting of both Zimbabwean and Mozambican staff, is used. In line with the sequential exploratory design, quantitative data were gleaned from 80 respondents (n=80) drawn from the border staff and community at Nyamapanda. Qualitative data were analysed thematically and through Qualitative Comparative Analysis (QCA), while quantitative data were analysed through SPSS and the 13 steps of mixed analysis as developed by Onweugbuzie and Combs (2011).

FINDINGS

The interpretation from the gleaned data is that, if well implemented, GEOINT has the potential to become the panacea for effective border management in Zimbabwe. The government of Zimbabwe has so far automated Nyamapanda Border but the technology there is too far short of constituting GEOINT, thus there is still need for the use of satellite imagery, GIS, drones and cameras along the border, among a host of other facets that constitute GEOINT. The study found out that some of the benefits of GEOINT in the realm of IBM include lowering employment and border management costs through more efficient and effective asset deployment. This is supported by Kobe, (2020) in the context of IBM in Ghana. There is also the aspect of confidence-building, accountability of traders and their goods and human movement in terms of migration. It also promotes legal trade and travel and clearance procedures are more reliable and secure.

GEOINT in the realm of IBM has the potential to change the way of conducting intergovernmental networking and inter-agency networking agreements and collaborations with its clients. Network arrangements allow for efficient collaboration between border control agencies to follow a set of common and agreed norms because both parties to border control need to benefit. In bilateral border management, both countries, as outlined in the Panic Theory, do not desire security failures, neither do they want economic crises emanating from the indiscriminate and uncontrolled movement of persons and materiel. To ensure that there is avoidance of such poor governance of the border, GEOINT helps border departments to work closely in an inter-agency approach, manipulating data and processes that can evade the physical patrols.

The data point to progress being made in the implementation of GEOINT at Nyamapanda Border. However, there is need to have the two countries harmonising their technology and information sharing

platforms in a Bilateral IBM (BIMB). This argument is in sync with Kobe (2020) who asserts that in most parts of Africa where there has been partial implementation of GEOINT, such as in Ghana, what has been lacking is the bilateral coordination to have the border managed using the same platforms of surveillance. In the same context, Canon (2016) reflects on the same argument, citing the Ghana context and he asserts that regional and bilateral coordination have been lacking despite African efforts to embrace GEOINT. The launch of ZIMSAT 1 has been seen as a positive step by the government to ensure a positive step to ensure real-time satellite imagery of the border. This is in sync with Martins (2018), who argues that while the use of GEOINT along the US-Mexican border has existed in form of full-motion video cameras, the 9/11 attacks led to adoption of advanced technologies in the form of space-borne, airborne and ground GEOINT sensors.

Despite the headway at Nyamapanda, challenges have remained on the lack of resources to have modern monitoring equipment, lack of adequate personnel, uncoordinated border management operations and corruption by the security officials and other border management agencies. The argument of corruption, lack of resources and coordination as derived from the participants and respondents is in sync with Kobe (2020) and Goita (2011) who argue that despite Ghana implementing IBM, corruption, poor economy and the inability to have all the agencies operating as one, has negatively affected border management. The argument is further corroborated by Lamptey (2013) and Flynn (2018) who argue that the porosity of borders as a result of uncoordinated border management, has been witnessed in the Mali conflict during which weapons and contraband found their way from Libya into Mali in a very short space of time, thereby sustaining the war effort.

It can be gleaned from the forgoing that the principal factor militating against the implementation of GEOINT at Nyamanda are

resources. The arguments furnished by the participants resonate well with Flynn (2018) who asserts that border organisations are usually poorly equipped, ill-trained and poorly resourced. There are certain boundary points in the sub-region that do not always have sufficient infrastructures such as detection equipment and scanners. In the different countries of the region, customs administrations do not typically have national bases of criminals, their networks, forms and amounts of illegal goods seizures (Goita, 2011). In the same vein, Lamptey (2015) notes that the insecurity issue is compounded by understaffed agencies and unmotivated staff who do not effectively collaborate and coordinate their activities nationally and regionally. The Zimbabwean economy has been seen to be too struggling to have a budget that prioritises the installation of GEOINT equipment along the Mozambican border. Likewise, the Mozambican government is also struggling in the provision of basic amenities and procuring sophisticated GEOINT material is the least priority. What the two governments have done is to increase the number of police, the military and other border management agencies to cover up for the lack of GEOINT. However, this has not improved the situation either but, instead, has exacerbated corruption and lack of coordination.

The aspect of resources as discussed by the participants brings to the fore the arguments discussed in the literature review where Okumu and Ikelegbe (2020) brings to the fore the role of economics between the 'Global North' and the 'Global South' as the difference that then cascades down to Africa and its ability to employ GEOINT. The poor economies cannot implement GEOINT because of the funding required. The preceding argument is made stronger by Murton (2017) and Nichols (2019) who weigh in with the assertation that the implementation of GEOINT is derailed by the scarcity of office space, border monitoring and control personnel facilities, because the initial design of the border infrastructure was never done with a view to embrace such technologies. The volume of goods and people have since increased at Nyamapanda and other Zimbabwean borders and

the infrastructure, in most cases, has been seen to be overwhelmed and to address this, the government has tended to increase more patrolling manpower instead of smart technology that include full complement of GEOINT.

The requirement for sophisticated resources and equipment in line with contemporary border management, as argued by the participants, validates Martins (2018)'s argument in that she argues how before the 9/11 attacks, the US-Mexico border relied more on the traditional border security arrangements such as heavy military and other security agencies presence. The aftermath of 9/11 led to the adoption and implementation of GEOINT through the implementation of platforms and equipment with quick reaction capabilities as Remotely Piloted Vehicles (RPVs), Unmanned Aerial Vehicles (UAVs), airborne and space-borne sensors and full motion cameras.

One of the stumbling blocks to the successful implementation of GEOINT, apart from the poor economy, has been noted to be the lack of willpower on the part of the authorities or misplaced priorities. In as much as the economy is struggling, the GEOINT equipment could be purchased piecemeal but there has been lack of commitment towards border management with the government still relying on the large numbers of security forces along the border who, in themselves, have become accomplices to the border crimes. The preceding findings corroborate the argument by Mleya (2016), who argues that the problem militating against the implementation of GEOINT has been the absence of willpower or political will by most governments. He notes that the porosity of Zimbabwean borders due to absence of GEOINT has been attributed to poor remuneration, outdated equipment that does not allow for digitalisation of the border management systems. This argument is supported by Okumu and Ikelegbe (2021), who argue how workers at border posts are

poorly equipped and poorly motivated in West Africa as compared to the agencies that police and manage European borders.

One aspect that emerged from the study is the role of local communities in the effectiveness of IBM. The locals are a key stakeholder in the IBM as providers of intelligence and as accomplices at the same time, thus they need to be co-opted even in the GEOINT era. In this context, Carciotto (2016) and Beck (2019) argue that one of the militating factors related to policy has been the exclusion of border communities in border management. Relatedly, the inclusion of border communities in border management to complement the digital space monitoring was described by De Andres (2008) as an important factor for border management. Most border control programmes at local level do not help border communities. The local community usually knows the area, the criminal hubs, the venues and other security matters intimately. Therefore, border agencies must actively engage the local communities. The argument about the role of border communities brings about a convergence between existing literature and data gleaned thus leading to the conclusion that border communities along the Nyamapanda Border need to be included in border management even in the presence of GEOINT.

The data gathered under this theme, related to strategies that seek to address the challenges associated with the implementation of GEOINT in Zimbabwe. In this regard, participants lamented the lack of comprehensive policies and the political will from central government to implement such an ambitious project. Their submission is in sync with Lamptey (2012), who critically argues that Border management today needs certain skills and the delicate balance between tighter cross-border controls and cross-border flow facilitation. One first step to this is to develop and align national and sub-regional policies which can be implemented across the region in a regional integrated border management (RIBM) approach (Okumu and Ikelegbe, 2020).

In this same light, border societies also need to be engaged as sanctuaries of all forms of criminal activities in border management processes. In Sierra Leone, for example, police have community committees that allow them to communicate with the locals, have a human face and at the same time gain confidence. They are, therefore, able to receive data about any safety problem in the area (Wlson, 2014). This argument brings convergence with that by Keohane (2022), who asserts that the ability of law enforcement authorities and their related organisations in the sub-region must be further enhanced. The instability in most of Africa's regions has been compounded by the decline of law enforcement capabilities and operational limitations. To this end, the Zimbabwean government must capacitate its border management agencies. They also need to be well remunerated so that they do not get involved in border corruption.

From the foregoing, the conclusion as to what has to be done to circumvent the effects of militating factors is that there is need for government willpower, resourcing, training and remunerating staff. There is need for integrating regional and subregional policies in border management. At bilateral, level, Zimbabwe and Mozambique need to harmonise their policies, strategies and training.

CONCLUSION AND RECOMMENDATIONS

The study sought to evaluate the role of GEOINT in the IBM process along the Nyamapanda Border. This stemmed from the continued influx of contraband and unaccounted immigrants into Zimbabwe, to the detriment of national security and the economy. Though the Nyamapanda Border has been automated, the technology is too far short of being a full complement of GEOINT. The inhibitions to the implementation of GEOINT has been noted to be lack of resources from the two governments, reluctance and overreliance on security patrols. Given the benefits that are associated with the adoption of

GEOINT as a securitisation tool, it is recommended that the government prioritises the securitisation of its borders through the provision of GEOINT equipment and trained personnel. To complement GEOINT, the IBM must co-opt local communities along the border for intelligence sharing.

REFERENCES

Behr, A.W. (2018). Border, Identity and (In)security: The Kenya-Somalia Border 1963-2016. Unpublished Doctoral dissertation: United States International University-Africa (ASIU-A).

Carciotto, S. (2016). The Regularization of Zimbabwean Migrants: A Case of Permanent Temporariness. Scalabrini Institute for Human Mobility in Africa (SIHMA). Available online: https://www.sihma.org.za/journals/The-Regularization-of-Zimbabwean-Migrants.pdf

Hobbing, P. (2020). Integrated Border Management at the EU level, CEPS Dorking Document. Brussels: Centre for European Policy Studies. Available online: https://www.ceps.eu/ceps-publications/integrated-border-management-eu-level/

Kobe, B.D.E. (2022). An Assessment of the Challenges Associated with the implementation of Integrated Border Management (IBM) System. Unpublished Thesis, Kumasi: College of Humanities and Social Sciences, Kwame Nkrumah University of Science and Technology.

Martin, H.R (2018). The Effects of Geospatial-Intelligence on United States-Mexico Border Security. Unpublished Doctoral Dissertation, Mississipi: The University of Southern Mississippi.

Martins, F., da Cunha, J and Serra, F. (2018). Secondary Data in Research – Uses and Opportunities. *Iberoamerican Journal of Strategic Management (IJSM), 17*(4), 01-04.

McDonald, M. (2008). Securitisation and the Construction of Security. *European Journal of International Relations*, 14(4), 563-587.

Muguti, T. and Marongwe, N. (2017). *The Moral Economy of Border Transgression: Smuggling across The Beitbridge Border Post by Zimbabweans in the New Millennium*. Unpublished.

Muleya, T. (2016). Govt installs CCTVs at Beitbridge Border Post, *The Herald*. Available online: http://www.herald.co.zw/govt-installs-cctvs-at-beitbridge-border-post/

Muqayi, S and Manyeruke, C. (2019). *Dynamics of Contemporary Border Management in Zimbabwe, Challenges, Benefits and Prospects*. London: Adonis and Abbey Publishers Ltd.

Murton, G. (2017). Border Corridors: Mobility, Containment and Infrastructures of Development between Nepal and China. Unpublished Doctor of Philosophy Thesis: Department of Geography, University of Colorado at Boulder.

Mwangi, W.S. (2021). The Use of Intelligence Gathering and Sharing in the Management of Transnational Terrorism In Kenya; 1975–2018 , Nairobi: Unpublished Doctoral Dissertation, Kenyatta University.

Nichols, B. (2019). It's not sanctions, it's corruption, lack of reforms. *NewsDay*. Available online: https://www.newsday.co.zw/2019/10/its-not-sanctions-its-corruption-lack-ofreforms-2/

Okumu, W and Ikelegbe, A. (2010). *Militias Rebels and Islamist Militants: Human Insecurity and State Crises in Africa*. Pretoria: Institute for Security Studies.

Onwuegbuzie A. J., Combs J. P. (2011). Emergent Analysis Techniques in Mixed Methods Research: A Synthesis. In: Tashakkori A andTeddlie C. (eds.), *Handbook of Mixed Methods and Social and Behavioral Research (2nd ed.)397-430)*. London: Sage.

Pallagst, K *et al*. (2022). Theories of Cross-Border Cooperation: Explanatory Approaches From European Integration, Regionalism and Governance, In: Pallagst, K., Hartz, A., & Caesar, B. (Eds.). *Border Futures-Zukunft Grenze-Avenir Frontière: The future viability of cross-border cooperation* (Vol. 33). Available online: and Polner, M. (2011). Coordinated Border Management: From Theory to Practice. *World Customs Journal 5*(2), 49-64.

Zimano, F.R and Chilunjika, A. Border Management Systems' Intelligence and Annotations on Existing Transit Challenges in Zimbabwe'. In: Muqayi, S and Manyeruke, C. (eds). *Dynamics of Contemporary Border Management in Zimbabwe, Challenges, Benefits and Prospects*. London: Adonis and Abbey Publishers Ltd.