



Use of Information Technology in Minimizing Insurgency Activities by Boko Haram in Borno State Nigeria

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Abstract: *This paper aims at discussing the use of information technology in minimizing insurgency activities in Borno state Nigeria. The security challenges and insurgency activities include: suicide bombing of soft target people and places, kidnappings, killings, torturing among others. The paper also highlight the causes of these insurgency activities by Boko Haram in Borno State such as Unemployment, Poverty, weak government policy, lack of sound education, corrupt Judicial system among others. Solutions were given on how to tackle the problems by the use of modern IT enable solutions, services and tools. The techniques were CCTV surveillance, biometrics, DNA, data mining and profiling. If Borno State would adopt these modern techniques and fully implement IT services in all sectors, the challenges of killings soft targets, kidnapping, insurgency, suicide bombing, armed robbery, unemployment would soon become a history. Finally, conclusion and recommendation for lasting solution were given consideration.*

Key words: *Boko Haram, Borno State, Crime, Information technology, Insurgency,*

I. INTRODUCTION

Borno State is one of the 36 states in Nigeria formed in 1976 from the split of the North-Eastern state of Nigeria, with population of 4,151,193 according to the 2006 census. The state mainly dominated by the Kanuri tribe. Other smaller ethnic groups such as Babur and Marghi are also found in the southern part of the state. Shuwa Arabs are mainly the descendants of Arab people and is an example of the endurance of traditional political institutions in some areas of Africa [16].

The state of security in Borno State starts falling apart in 2009 with the emergent of Boko Haram (also known as Jama'at Ahl as-Sunnah lid-Da'wah wal Jihad) insurgency group. All business activities such as rural and urban markets, public and private sectors, schools as well as financial institutions became disrupted by the insurgency mischievous actions. From 2009 to 2014, the group killed 20,000 people and displaced 2.3 million from their homes of different areas within and outside the state as well as other countries such as Cameroon, Chad and Niger [16]. This led to other criminal activities such as robbery, innocent killing, suicide bombing, vandalization of public and private properties as well as kidnapping 275 Chibok girls from their school in Chibok local government area of Borno State [3].

In September 2010, the group intensified their attack against security agencies and government establishment in order to destabilize the economic activities and take control of the affairs of the government. However, their tactics were changed in 2011 to include suicide bombings of police buildings and the United Nations office in Abuja (Federal Capital Territory) as well as government establishment of a state of emergency in 2012 [16]. However, according to some scholar, this may be the result of some factors which led to these bad consequences such as: poverty, poor government policies, weak judiciary system, corruption, unemployment among others, as mentioned by [3].

However, President Muhammad Buhari pledged to do all he can to restore peace and order in the state when he was sworn in on May 29 2015. He started by relocating Military head office from Abuja to Borno State, made visit to Chad, Niger, Cameroun among others in order to discuss and find the lasting solution to insurgency in the sub regions. The governor of Borno State Kashim Shettima said during a conference on Democracy and Security in the Northeast as posted on [5] and I code:

"As we are gather here, more than three million innocent Nigerians from Borno, Yobe, Adamawa and some parts of Nigeria, live in deep agony having lost sons, daughters, fathers, mothers, brothers, sisters, relations and neighbours after they were brutally attacked by members of the Boko Haram insurgents on different days and at various times, sacking these innocent citizens from their communities, making many of them not only orphans, widows, widowers and childless parents but also turning them into refugees in neighbouring countries or internally displaced persons living in government established camps or with relations in their respective states and in other parts of Nigeria". He also said "Crisis is mobile. If we don't stop it where it is, it can spread fast to other areas we assume to be beyond the reach of trouble-makers".

This indicates that, despite all efforts of security agencies, the governments of the state in support of the federal government of Nigeria are still looking for other ways to combat insurgency challenges and that is Information Technology (IT).

Information technologies have answers to these incessant security issues, since it can help security agencies identified hidden areas where insurgency ambush security agencies(such as police, military and JFT) or where security agencies cannot penetrate and also offer jobs opportunities to our teaming unemployed populace there by relieving them of poverty and malnutrition. Also, Information technology (IT) enables tools and services can be used to secure lives and properties of the citizenry and reduce dreadful corruption that has deepened our bionetwork [8].

II. LITERATURE REVIEW

Information technology is an excellent tool that can be used to monitor unlawful activities, nab criminals or impede them on their pathway [9]. It can be use to solve security problems facing Borno State. With the aid of forensic detective tools, when an individual perpetrate crime, the security analyst and law enforcement agencies will come together using detective information technology tools to know who perpetrated a crime when, where and how.

CCTV surveillance is one the tools that could be placed at strategic street junctions, public places such as shopping mall, mosques, churches, rural markets, viewing centers, schools, hospitals, public houses and even recreational centers. Even the abduction of Chibok girls would never have occurred had it been this technology has been in place.

The protection of lives and properties is the major functions and responsibilities of any government all over the world [13]. Information technology when properly deployed and adopted can provide solutions to the incessant security challenges of kidnapping, militancy, armed robbery, suicide bombing, pervasive corruptions and destruction of properties.

Also study has shown that act of terrorism and other vices are perpetrated mainly among youths [2]. Therefore, these teaming youths need to be engaged with employment opportunities offered by Information Technology services, so that the situation can be better managed.

According to [2] . “Let us build IT parks around the nation where youths can be engaged, empower them with IT skills and knowledge which will go a long way in preparing them for the job market opportunities”.

Besides, e-government is the application of information technology to strengthen governance the use of information technology in the operations and performance improvement of all public sectors.

When carefully designed and thoroughly implemented, e-government would tackle the problems of poverty, corruptions, unemployment, weak policies and hunger and hence a fully implemented e-government services sectors that efficiently work to facilitate both public and private sector developments and encourage foreign investment in the state.

According to [14]. the ICT industry can help establish criminal database with exiting agency-specific graphical user interfaces (GUI) for use by law enforcement agencies and security forces. With IT, the law enforcement agencies can locate criminal callers within the cellular networks using mobile tracker. And every mobile number in use within and outside Borno State must be uniquely identified as belonging to an identified person in Nigeria and keep repository and database of their subscribers.

III. CAUSES OF INSECURITY IN BORNO STATE

Major sources of information revealed that most of these causes of violence in Borno State were due to lack poverty, illiteracy, unemployment, corruptions especially in public administrations, weak policy lack of implementation of existing policy, corrupt judicial system, and bad governance among other reasons. However, some believed that Boko-Haram insurgency and terrorist activities were alleged to have been attributed to some factors among which is bad leadership, corruption, illiteracy and many more are all responsible for the state of the country, where leadership has contributed so much to the insecurity in Nigeria today[3].

The key element among the causes is the weak judiciary system in the state in particular and Nigeria in general. They (Boko Haram) believed that Nigerian system of government is based on western education and not on Sharia Law despite our constitution of 1999 allowed any state that wants to practice Sharia Law in their state, in parallel with Judicial system in the country, which has been implemented by some states in Nigeria. Stand still, their main objectives is to fight against the former system by trying to overthrow the Borno state Government in order to create an Islamic state in Nigeria. They said: “*We are doing what we are doing to fight injustice, if they stop their satanic ways of doing things and the injustices; we would stop what we are doing*” [6]. In this statement, the group is referring to Borno State in particular and Nigeria in general.

However research shows that the overall cause of this violence was anger against western influence which had been inherited by Boko Haram from the insurgent man who said reading of any book except Quran is sinful. He migrated from Cameroun to Kano Nigeria and causes major riots in Kano between 1970 to 1980 which killed an estimated 4000 people including Maitatsine himself. His name was Marwa Known as Maitatsine who was considered by Boko Haram to be its inspiration in this regards[7].

IV. USE OF INFORMATION TECHNOLOGY IN MINIMIZING INSURGENCY ACTIVITIES IN BORNO STATE

Safeguarding the lives and properties of over 4 million people in Borno State Nigeria is imperative; information technology is a tool that can actually be use to save lives; although many do not realize its application in the state and national security.

By tradition, we rely on intelligence gathering by government agents (police, civil defense, soldier), strict physical security at vulnerable facilities by security guards, vigilance on the part of all citizens, however, modern

information technology revolution have brought about development of powerful and evolving security apparatus that played a vital role in protecting lives and properties, detect insurgents, kidnappers, suicide bombers, criminals and apprehend culprits, some of which were discussed as follows:

1. Digital Closed-Circuit Television (CCTV) Surveillance:

CCTV surveillance is a way of monitoring the behavior of people for the purpose of influencing, managing or protecting them [4]. It is very useful in maintaining social control, recognize or monitor violent or crime scene and assist in investigating criminals and insurgents activities. With digital video cameras technology, we can set up a large-scale network-enabled video surveillance system that allows security personnel to monitor high-quality video feeds and control multiple surveillance cameras in real time from a remote location.

Wireless video cameras serve both as a deterrent to crime and as a tool for detecting and investigating violent or crimes. Security agencies like mobile police, civil defense, soldiers of state securities can take advantage of the wireless cameras portability and easily move around the cameras to different locations to target insurgency hotspots.

In some of the state of the United State of America, such as Texas and Dallas, IP-based CCTV surveillance systems have been so impressive. Report from Dallas security department revealed that a twelve percent (12%) drop in crimes and a nine percent (9%) increase in arrest in the first year after implementation of the system[1].

2. Data Mining and Profiling:

The process of data mining and profiling is simply the collection of insurgency data into a single repository or data warehouse, where data mining algorithms are applied to discover trends and pattern of insurgency incidences.

The use of data mining and profiling techniques to collect and analyze insurgency data that would routinely generate security report would help to understand trends and gain better intelligence about crime and resource utilization [11].

The use of analytics tools such as TANAGRA, SIPINA, STATISTICA or RAPIDMINER can help implements and monitoring crimes hotspots and public places may stop further vandalism and escalation into more serious crimes [12].

Therefore, these techniques could assist security agencies, generates clear metrics and validate the effectiveness of enforcement tactics and rapidly respond to emerging crime trends like armed robbery, kidnapping or suicide bombing in soft targets places.

3. Biometrics and DNA Sampling:

Biometrics is a technology that stores, measure and analyses physiological and behavioral characteristics of human being for authentication, identification or screening purpose [10]. For example, information for uniquely recognizing human being based upon one or more intrinsic physical traits such as fingerprints, iris scan facial patterns and DNA.

Our security and law enforcement agencies such as: immigration, customs, police, soldiers etc. especially immigration on our borders to neighbouring countries where Boko Haram insurgencies were seriously affected, such as Chad, Niger, Cameroun etc can make use of biometric measurements such as fingerprints to identify illegal immigrants or suspects using evidence from a crime scene. With software application such as the Automated Fingerprints Identification System (AFIS), investigators can collect a set of finger prints at a crime scene electronically using a mobile device and then compare them against a database of millions of fingerprints within seconds.

Also biometric data such as fingerprints, facial patterns or iris scan can be collected by federal government agencies like national population commission or Nigerian immigration service when they issue birth certificates, National Identification Card, Electronic Passport or International Passport. Thus, government and security agencies now have citizens and immigrants databases of digital biometric data at their fingertips to search for and identify suspects wherever the need arises.

In some cases, DNA samples (body fluids such as blood) could be analyzed and used by investigators to track and identify criminals its more information rich, with better distinguishing characteristics than other biometric identifiers.

4. Micro Blogging:

Micro blogging is a broadcast medium that allows the subscriber to broadcast short messages (micro posts) to other subscribers of the service [15]. Micro post in case of any security incidents that may occur can be made public via micro blogging site or distributed to a group of subscribers.

Subscribers can read micro blog posts or request that updates be delivered in real time to their desktop as an instant message or sent or a mobile device as an SMS text messages it can be sent or received with a variety of computing devices, including cell phones, PDA, or tablets.

Therefore, micro blogging is another IT-enabled tool that help disseminate information during emergencies (eg bomb explosions, fire outbreak, kidnapping), sites that can provide micro blogging services include posterous, twitter or tumblr as twitter allow users to post text, pictures, video or audio of real-time security incident.

V. CONCLUSION

The major issue facing Borno State law enforcement agencies and security operatives is lack of modern IT enabled tools for data collection, intelligence gathering and analyzing the growing volumes of crime data. Advancement of information technologies with tools such as data mining analytics, CCTV surveillance, biometrics and DNA sampling tools are increasingly evolving and accessible to security operatives and the law enforcement agencies, installing and running these modern IT-enabled services often cost less than recruiting and training security personnel. Automated security systems are also less prone to errors than human investigators.

This research paper focus on discussing factors that causes security challenges in Borno State Nigeria, modern IT enabled techniques were also highlighted using micro blogging, biometrics and DNA sampling. Crime analytical tools using different analytics software tools which can assist law enforcement to easily analyze crime dataset identify actionable patterns and trends and hence efficiently handle crime investigation and security issues.

VI. RECOMMENDATIONS

The followings are the recommended solutions for consideration:

1. Improve educational sector by inserting IT subjects both in primary and secondary education in the state.
2. Build more schools in the rural areas where most of the youths engaged in the terrorist activities came from and also employ well qualified teachers for this purpose.
3. School dropouts should not be allowing without something doing in order to earn a living. Doing so would help them stay safe otherwise joining insurgencies.
4. Jobs should be created for primary, secondary school and tertiary institutions graduates so that those who have no means to proceed with their education would have something doing.
5. Religious preachers should be giving permission by the government before allow to preach and make close monitor of their preaching activities either in the mosque, open places or in the Church.
6. IT centers should be built all over the state where unemployed graduates can be engaged as mention above with modern business of developing computer programs and installation, mobile software configuration, repairs and maintenance of computer accessories and network installations. These are some of the employment opportunities offered by Information Technology Services.
7. Judicial system both in the should be enhance by examining their activities and cases before the courts.
8. Existing government policy should be strictly followed according to the constitution for its administrations.
9. A forum should be created by the government where people from different ethnic classes can talk face to face with government for policy implementation, suggestion and complains from all and sundry. This would go a long way to drastically minimized insurgency activities in Borno State.

REFERENCES

- [1] Abshire, R., & Eisner, T.(2008). *Surveillance Cameras in Dallas Area work to counter Crime*. Dallas: *Dallas Morning News*. Retrieve from <http://www.mobilitytechzone.com/news/2008/03/22/3341737.htm> . Accessed date: 22/12/2016.
- [2] Alademoko, D. (2013). *E-government and national security*. *Osun State: Information Nigeria*. Retrieve from: <http://www.informationng.com/2013/05/ict-can-be-used-in-tackling-insecurity-ncs.html>. Accessed date: 27/12/2016.
- [3] Charas Madu Tella (2015). *Insecurity in Northern Nigeria: Causes, Consequences and Resolutions*.
- [4] David L. (2007). *An Overview of Surveillance Studies*. Cambridge: Cambridge Polity Press
- [5] Dailytrust (2015). *The Challenges of Insecurity in Borno State*. Retrieved from <http://www.dailytrust.com.ng/sunday/index.php/news/9159-the-challenges-of-insecurity-in-borno-state> . Accessed date: 27/12/2016
- [6] Dailytrust (2015). *Democracy and Security in Northeast: The Borno Story - Gov Shettima* . Retrieved from <http://www.dailytrust.com.ng/sunday/index.php/politics/21436-democracy-and-security-in-northeast-the-borno-story-gov-shettima> . Accessed date: 27/12/2016
- [7] Genocide Watch (2014). *The Historical Background of Boko Haram*. Retrieved from <http://genocidewatch.net/2015/02/24/the-historical-background-of-boko-haram/>. Accessed date: 27/12/2016
- [8] Ibrahim Muhammad Ibrahim (2014). *The Application of Information Technology in Combating Contemporary National Security Challenges*.
- [9] Ikeogu, M. (2014). *Information Technology Can Solve Nigeria's Security Problems*.
- [10] Johnson, P., & Williams, R. (2007). *Internationalizing New Technologies of Crime Control*. *EU: Policing and Society*.
- [11] Jonson, S. (2004). *Philadelphia Police Department: COMPStat Process*. New York: *ppdonline*.
- [12] Kelling, G., & Coles, C. (1996). *Fixing Broken Windows: Restoring Order and Reducing Crime in Our Communities*. *The New York Times*.

- [13] Nadabo, S. (2013). *Insecurity in Nigeria: Causes and Resolutions:*
- [14] Oketola, D. (2010). *Tackle national insecurity with ICT. Lagos Nigerian best forum.* Retrieved from <http://www.nigerianbestforum.com/generaltopics/tackle-national-insecurity-with-ict-experts-tell-fg/>. Access Date 27/12/2016
- [15] Paulsen, K. (2007). *Firsthand Reports from California Wildfires Pour Through Twitter. California: Wired Blog Network.*
- [16] Wikipedia (2016). *Boko Haram.* Retrieve from https://en.wikipedia.org/wiki/Boko_Haram. Accessed date: 27/12/2016.