

Strengthening Science, Technology and Innovation (STI) Institutional Frameworks for Internal Security in Nigeria

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Abstract:- Nigeria as a country has been bedevilled with a myriad of security threats ranging from oil bunkering to farmer-herders' conflicts, kidnapping for ransom, armed robbery, Boko Haram conflicts among many others. These crimes continue to constitute significant threat to the country's internal security and stability. The growing challenge of security is of concern to all and every effort must be employed to combat this endemic challenge. The paper x-rays the different ways Science Technology and Innovation could be used to curb the internal security challenges. The issues interrogated are: can the available skills of the Nigeria Police Force which is the constitutional lead agency in Nigeria's security architecture guarantee the security of her citizens in view of the poor nature of the security infrastructure in place? Recommendations are made on the need to upgrade and strengthen the Science, Technology and Innovation infrastructure of the Nigeria Police, and the need for capacity building of the Force to be able to tackle the current insecurity bedevilling the country.

Keywords:- Internal Security and Science, Technology and Innovation.

I. INTRODUCTION

1.0 National Security Threats

Pertaining the incidence of mass killings across the country, particularly in Benue State by herdsmen, the Vice President, Prof Yemi Osinbajo lamented thus:

“Every killing diminishes us a people, every authority of the State...Every Nigerian is entitled to adequate security and welfare, but the government has failed” (The Nation, February, 15:2-3).

Nigeria's National Security Strategy (NSS) notes that the range of security risks in the country have increased parallel with the broader definitions of security. In addition to the traditional non-state actors, international organisations, transnational companies, as well as international criminal groups are now playing an ever

increasing role in security issues. Indeed, the new types of challenges and threats are multifold, less visible and less predictable. It is becoming extremely difficult to create a demarcation between external and internal risks factors. The National security threats identified by the NSS in Nigeria include: global challenges, terrorism, transnational organised crimes, crude oil theft/illegal bunkering, porous borders, climate change, communal and ethno-religious conflicts, pastoralists'/farmers' conflicts, politics and federalism governance issues, poverty, kidnapping, proliferation of small arms and light weapons, proliferation of weapons of mass destruction, illegal migration, economic challenges, financial crimes, information technology and cyber insecurity, national, manmade and medical-related threats, environmental security among others. One major purpose of government is the security of lives and property of the citizenry as enshrined in the Nigerian constitution.

According to the National Security Strategy (2014), the lead agency for the conduct of internal security is the Nigeria Police Force which has been empowered to carry out effective internal security predicated on law enforcement philosophies driven by seamless technology based intelligence. The NSS adds that in the event of a large scale breakdown in management of internal security challenges, the military would be called in through an invocation of statutory provisions. Thus, section 215 (3) and (4) of Nigeria's 1999 constitution (as Amended) states that the Nigeria Police Force (NPF) “shall maintain and secure public safety and public order as well as ensure public stability and prevent threats to national security”. Crime in the Nigerian society today has become more rampant both in frequency and sophistication. Indeed, the 21st century where advances offered by Science and Technology (S & T) and in particular Information and Communication Technology (ICT) are available for full deployment. Synergizing S and T may result in good or evil, as determined by how they are used in relation to social norms, ethics and laws. It is against this backdrop that the paper aims to examine available institutional STI security frameworks with a view to recommending how these can be strengthened in the light of contemporary security threats.

II. CONCEPTUAL CLARIFICATIONS

2.1 Science and Technology:

All systems and processes that produce better knowledge and understanding of the nature and natural events and the application of such knowledge and understanding to practiced problems in continuously novel ways that yields progressively better solutions. It is a complex semi-magical means to accomplish ends, with both symbolic and instrumental consequences (Manning (2008). Technology in this context is also viewed as scientific knowledge that involves the production of the use of advanced or sophisticated devices especially in the fields of electronics and computers. The generation and successful exploitation of new ideas is the ultimate goal of Science and Technology.

2.2 Internal Security:

Internal Security or IS is the act of keeping peace within the borders of a sovereign state or other self-governing territory generally by upholding the national law and defending against internal security threats. It is the state of law and order prevailing a nation. Similarly, IS is the process of keeping peace and maintaining safety within a state or nation. Imobighe (1990), conceptualized security as “the freedom from, or the absence of those tendencies which could undermine internal cohesion and the corporate existence of the nation and its ability to maintain its vital institutions for the promotion of its core values and socio-political and economic objectives as well as meet legitimate aspiration of the citizenry. It implies freedom from danger to life and property and the presence of a conducive atmosphere for the people to purpose their legitimate matters within the society.

III. THE ROLE OF SCIENCE AND TECHNOLOGY IN ENHANCING INTERNAL SECURITY

Science and Technology can strengthen crime control particularly policing work by: improving the ability of security officers to identify and monitor offenders as well as facilitation and identification of places and conditions that contribute disproportionately to crime. Science and Technology can strengthen crime control particularly policing work by: speeding the detection and response to crime; enhancing evidence collection; improving security personnel’s deployment and strategies; creating organizational efficiency; an enhancing communication between security personnel and citizens. Additionally, Science and Technology can strengthen crime control particularly policing work by: strengthening the ability of law enforcement to deal with technologically sophisticated forms of crime (e.g cybercrime and terrorism). Technological advancement in automobiles, protective gear, weapons, and surveillance capabilities can reduce injuries and deaths to officers, suspects and bystanders;

3.1 Key Technologies in Law Enforcement

Technologies central to everyday security work and successful practice include: Information Technologies (ITs) for collection, management and sharing of data; Analytical

technologies such as Geographic Information System (GIS) and crime analysis; Communication technologies including those related to dispatch (Computer-aided dispatch and Global Positioning System (GPS) tracking of patrol cars), and those for disseminating information to personnel in the field (e.g mobile computers and wireless access systems). Surveillance and sensory technologies (e.g Closed Circuit Televisions (CCTV) networks, license plate readers and patrol car cameras); as well as Identification technologies (e.g DNA testing and other forensic equipment). ICTs are intra and interagency systems for managing, sharing, and analysing data including mobile computers and wireless access systems. Security agencies’ wireless are important for exchange of information with community members (Community Policing). Crime analysis involves the use of large amounts of data and modern technology – along with a set of systematic methods and techniques that identify patterns and relationships between crime data and other information sources – to assist security personnel in criminal apprehension, crime and disorder reduction, crime prevention and evaluation. Similarly, License Plate Readers (LPRs) are high speed cameras and information systems that read vehicle license plates in real-time using optical character recognition technology. Plates are checked instantaneously against databases that may contain license plate information and stolen vehicles, vehicles linked to fugitives and criminal suspects. In addition, In-car Video Cameras (ICVs) are devices used to create video and audio records of selected events and encounters experienced by officers. The cameras are mounted within the patrol vehicle and officers wear a wireless microphone that transmits audio signals to the system. DNA Testing is another technology which involves the use of oxyribonuclei acid, commonly known as DNA. Tests identify unique individual genetic codes from DNA samples that are extracted from biological evidence such as blood, semen, hair and saliva. Other device includes video glasses, wrist phones, camera pens, use of drones etc. Crowd sourcing through social media together with GIS mapping can result in “crisis mapping” and “crime mapping”. This has been used extensively in Kenya and Liberia and to some extent Nigeria.

IV. CHALLENGES WITH THE USE OF STI IN INTERNAL SECURITY

Some of the challenges include high cost of acquisition/maintenance; vandalisation and sabotage as well as low level of infrastructure and low level capacity. There is also the problem of Science, Technology and Innovation and low level of GIS coverage of the country.

Efforts by the Nigeria Police Force

The Nigeria Police Force has deployed digital technologies through a Complaint Rapid Response Unit (PCRRU) which allows the public to connect with the police through dedicated phone numbers for calls and SMS and a round-the –clock presence on Twitter, Facebook and WhatsApp. There has also been the eestablishment of Training schools, and Staff Colleges all over the country, as well as a Computer Training School in Abeokuta. Of recent was the establishment of degree awarding Police Academy

in Wudil, Kano State. There is the NPF Crime and Incidence Database Centre in Abuja for the enhancement of smart policing as well as forensic facilities in Abuja and Lagos although poorly equipped and in bad shape. There has also been the deployment of CCTV in selected cities in Nigeria, especially Abuja and Lagos, although most have been vandalised. The Nigeria Police Force has also recruited Pathologists for the force's crime fighting. There has also been the purchase of helicopters for aerial patrol, although they face challenges of capacity for night patrols.

V. NATIONAL PERSPECTIVE IN CONTEMPORARY KEY SCIENCE TECHNOLOGY AND INNOVATION SECTORS

Successive Nigerian governments recognised STI as key drivers of growth and put in place various measures to enhance its application for national development. The major focus has been in the area of developing institutional capacity, infrastructure, human capital, as well as intensifying research activities. Thus as stated in the National Security Strategy, "the NSS envisions an STI system that will drive our national security goals for economic well-being, national development, physical security and external influence". Furthermore, successive governments have established various universities of technology and polytechnics, complemented by various research institutes. The National Policy on Science, Technology and Innovation (2012), was formulated to mainstream STI in economic planning and the development process. The process is also intended to strengthen structures for the coordination, promotion and management of interaction within the system. It also aims at enhancing collaboration in research agenda to national priorities and reduce the time-to-market of commercialisation of research outputs. The policy established the National Research and Innovation Council (NRIC) chaired by the President. The NRIC amongst other functions is to set national priorities and direction on Research and Development as well as facilitate fund raising activities to support needs and priorities. It is important to note that the National Policy on Science Technology and Innovation clearly outlines the areas of defence and security research and development, including emerging technologies such as ICT, Biotechnology, Energy, and Space Technology as specific areas of interest.

VI. CHALLENGES AND WAY FORWARD

One of the challenges in enhancing STI frameworks for combating security challenges in the country as elaborated in the policy is the dearth of research and development capacity for research. Institutions like the Police Training Schools and Police Colleges are poorly equipped, poorly funded with no requisite infrastructure to enable them adequately develop STI capacity to face contemporary challenges of combating crime and insecurity in the country. There is therefore, need for a total overhaul of the system. The curricular of local training institutions should be overhauled. The police Academy in particular should be properly positioned, funded, and equipped to

make it more STI-oriented. There is also the problem of funding. Policing does not come cheap. The NPSTI provides for research in the security sector. There are no statutory funds allocated for that purpose. The NPSTI however, provides some incentives to encourage development. These incentives include: Provision of tax relief/holidays as well as grants and endowments to individuals and institutions to actively engage in Research and Development activities. Security agencies should cash on this opportunity. It is sad to note that despite these provisions, the level of private sector participation in Defence and Security research and production in Nigeria is abysmal. In the case of Nigerian Police Force (NPF), it has been observed that a police formation receives approximately **N45,000** quarterly for expenses. In 2017, the Inspector General of Police requested **N200b** yearly for investigation alone, only N121m was released. There is therefore need to expedite action on the implementing the Police Reform Trust Fund. Some has been passed into law, it will address issues of institutional capacity, problems of equipment, ICT, forensic technology/scientific aids for investigation among others. We should take a cue from the Lagos State Security Trust fund which has been used extensively to develop the security sector, and help in reducing crime in the megacity to a barest minimum. There is however, need for people with integrity to be in-charge of the management and the disbursement of the funds. There should be more training and capacity building for security operatives at all levels especially in areas of STI. Recruitments should also be biased towards STI. Postings should reflect capabilities of staff, to ensure round pegs in round holes. A situation where a security officer read Chemistry, and is posted to general duties should be avoided. There should be more synergy and closer collaboration among research and development cells of security agencies. There should be inter-agency Research and Development collaborations vital for exchanging ideas and harnessing the abundant talents within the rank and file of security agencies. The yearly Research and Innovation Summit spearheaded by the Nigeria Army should be emulated by other security agencies. Similarly, there is need for more research collaboration between security agencies, Universities of Science and Technology, Polytechnics, and Science and Technology parastatals like Defence Industries Corporation of Nigeria (DICON), National Agency for Science and Engineering Infrastructure (NASeni), Project Development Institute (PRODA), National Information Technology Development Agency (NITDA), National Space Research Development Agency (NASRDA) etc especially in the use of indigenous technology to achieve Nigeria's national development as well as guarantee security. Military and civilian institutions should work in synergy to develop technology innovation that can be used in tracking Nigeria's Security. Nigeria needs to step up the educational system particularly Science and Technology education. The issues of sustained power supply is critical in running STI infrastructure. There is need for the country to fully harvest from the benefits of abundant solar power and other renewable sources of energy. The country should also intensify efforts towards adopting the concept of smart cities. The issues of sustained power supply is critical in running STI infrastructure. Finally, the need for a

comprehensive database for the country should be looked into.

VII. CONCLUSION

The impact of STI on security has continued to increase over the past few years with impressive advances in modern technologies. This has changed perceptions of what constitutes internal security for most nations of the world, Nigeria being inclusive. There is more inter-play between STI and matters of safety, security and stability worldwide. In this wise, it is imperative to put in place all measures necessary to take advantage of STI by the full implementation of the National Policy on STI. Security Chiefs must be fully involved as members of the NRIC, and fully operationalize the council to drive the STI process of national defence, security and development. There is strong need for improved funding, well-trained motivated, and committed personnel, security planning as well as organizational infrastructure in order for security operatives and institutions to be responsible in the discharge of their constitutional roles.

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