

# Science and Technology in Countering Terrorism in the Horn of Africa: A Case Study of Kenya and Somalia

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**Abstract:** The twenty-first century has brought to light the value of technology more than ever before, and this has come in the wake of the fact that science and technology have greatly contributed to the creation of new knowledge to boost the prosperity of human beings. Terrorism as a phenomenon is a tool that is often designed to create terror in some population. It should be acknowledged from the onset that no state can consider itself immune from the threat of terrorism. Violent extremism involves the use of violence to create a general atmosphere of chaos and fear in a given population and thereby to bring about a particular political, social, and/or religious objective. Therefore, early prevention of violent extremism and radicalisation is not achievable for the state and military services alone. Automation, big data, artificial intelligence, and extended reality are examples of science, technology, and innovation. Technology that comes from societies that are in themselves under threat from internal and external influences, and where alternate (and legal) means of expression are banned or methodically suppressed, will have the third terrorism neceal-Shabaabsity. There is a spillover attacks into Kenya saw the terror group establish training bases in the Boni Forest locality. In response, Kenya deployed multi-agency forces under the Operation Amani Boni. Yet use of technology in this area to counter violent extremism suffered a dearth of research. Despite the efforts by the county stakeholders, it was imperative to deploy security forces to flush out terror groups. This leads to the scholarly quest to know whether counterterrorism strategies put in place are effective or not and, to what extent, that technology is doing right to counter terrorism via defence force in Somalia..

**Keyword:** Cyber, Critical Infrastructure, Terrorism, Deterrence, Civil Society.

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## 1. INTRODUCTION

The term terrorism is usually complex and controversial to define, and because of the inherent cruelty and bloodshed, the word evokes strong sentiments of fear and repulsion. An act of terrorism is characterized by loss of life as also property damage further leading to the suffering of innocent people. Thus, there needs to be concerted effort among all stakeholders to invest in technology, research, and innovation in order to defeat terrorism and extremism.

Africa's Horn is a part of the world where terrorism has wreaked enormous destruction, and therefore it is critical to understand how to best use science and technology in the prevention and mitigation of violent extremism. More so, the case of Kenya and Somalia shows the need to

develop fresh ideas in dealing with the polycentric issues that terrorist groups like al-Shabaab create for their targets. Recent years have seen a surge in terror-related incidents in these countries, which not only pose a threat to national security but also destabilise the broader region (Ibeg 2014). Given that many countries are grappling with security, governance, and social instability, technology plays a crucial role in combating terrorism (Omenma and Hdricks, 2014).

In 2018, studies emphasised the use of data analytics, predictive policing, and cyber intelligence for advanced identification and disruption of terrorism activities and other crimes (Mogaka et al., 2021). These

technologies, in addition, allow security agencies to work smarter by processing high volumes of data to detect certain patterns and indications of threats. In addition, advancements in big data analytics and machine learning technologies have fundamentally changed the way intelligence is collected and processed, providing new avenues for informed policymaking in the fight against terrorism (Ibekwe, (2016).

Using mobile technology and monitoring social media is crucial for mapping the radicalisation process and interacting with populations in counterterrorism activities (Ashour, 2010). In this perspective, social media has been a primary battleground for extremist propaganda, and so creating ways and means to monitor these digital footprints can enable law enforcement agencies to act proactively. Also, technology-orientated community projects enable the active role of citizens in the security response and increase the feeling of ownership of the fight against terrorism (Hansen et al., 2019).

The international community is working with the region on a number of comprehensive CVE strategies. However, it is also important to look at how these technological applications can be used in Kenya and Somalia's unique social and political situations (Bashar I., 2017). The use of drone surveillance, biometric identification systems, and mobile intelligence sharing networks are just some of the instances through which technology can enhance not only the performance of security tasks but also the capacity of communities to withstand radicalisation (Ashour, 2010). You should be able to access all of the information needed to understand the relationship between science and technology in the fight against terrorism and other measures that are applicable in other regions, such as the Horn of Africa.

## 1.1 Background of the Study

According to Koehler (2019), the commitment to extreme violence is what distinguishes a terrorist from other extremists. Violent extremism refers to the beliefs and actions of people who support or use ideologically motivated violence to achieve radical ideological, religious, or political views. Violent extremist views can be exhibited along a range of issues, including politics, religion, and gender relations.

According to Koehler (2019), the subject regarding the effectiveness of counter-terrorism strategies has started receiving enhanced attention from developing states in Africa. Because violent extremism is becoming a bigger problem in sub-Saharan Africa (SSA), the goal of counterterrorism is to get rid of the things that lead to terrorism and stop it from happening in different ways.

The United Nations adds that counter-terrorism incorporates the practice, tactics, framework, and strategies that governments, militaries, police, and corporations adopt to attack terrorist threats and/or acts, both real and imputed. Terrorism serves as a tool to instill fear in certain populations. It creates a very human response that may include fear, dread, hate, disorientation, confusion, disillusionment, and finally apathy. It may also inspire in part of the population the desire and resolve for counteraction, retribution, and restitution.

It may be designed to create a cycle of hatred that will be self-perpetuating and will mimic the continual improvement concept of total quality management and human betterment with continual destruction and human degradation. When terrorism is at its worst, it can shake up infrastructure, make resources and infrastructure useless, hurt the economy and markets (often for a long time after the damage has been fixed), cause strategic dislocation (because resources are moved around and businesses and governments lose their way), and cause operational disorientation (like losing sight of a national, corporate, or organisational goal).

The events of September 11th, 2001, demonstrated how terrorism used technology and project management to achieve a significant outcome. The fact that some of the perpetrators of that attack were engineers or other technocrats shows how an understanding of technology, project management, and the psychology of fear and dread can be used together to create continued market instability and, in the case of the airline and tourism industries, ongoing disruption and losses. That technology partakes in terrorist action should not be surprising. In the definition of terrorism provided above, the combination of technology, project planning, and a socio/political cause includes two key areas in which engineers excel.

In East Africa, technology has a role in countering terrorism; their knowledge and skills in carrying out risk assessments and in applying risk management to countering the terrorism threat will be valuable. They will be able to advise on security-orientated infrastructure projects, as well as devise physical barriers to ward off terrorism from infrastructure in some cases. For threats to the environment, they will be able to devise prevention, control, and recovery strategies for many terrorist incidents. In the Kenyan context, as the immediate fear and loathing of terrorism becomes blunted for the vast majority of the community, engineers will have a role in providing wise counsel to the community on how to live with terrorism and the terrorist threat. They will be able to provide good, honest advice on how to avoid, mitigate, and recover from terrorism. They will also have a role in putting the terrorist threat

into perspective and help ensure that resources are not wasted on chasing phantoms.

According to Kimani (2024), evidently there are large contributions to be made by sciences and technology, ranging from the most basic research on information technology to the need to use technology to provide new understanding of social dynamics and personal motivators' towards violent extremism. Hence, debates about CVE and technology often focus on the potential use of technology by non-state actors and by states as forms of counterterrorism. The focused implementation of this policy and strategy is aimed at transforming these individual achievements into a dynamic system to enhance national benefits. It will also be aimed at establishing and sustaining Kenya's distinction in the generation and management of science, technology, and innovation.

The technological innovation approaches to counterterrorism have received scant attention; there has been modest scholarly inquiry into a soft power approach to counterterrorism. The impact of information technologies is considered particularly substantial because security agencies increasingly cannot complete their tasks without them. For instance, in Kenya, new technologies, new methods, and even emerging ideas advanced by technological innovation have brought significant change to law enforcement. Police and law enforcement agencies across the country are driving the change, pioneering creative ideas, adapting to changing technological contexts, and incorporating insights from officers and community partners.

## 1.2 Statement of the Problem

East Africa has had a lot of counterterrorism efforts because terrorism is a threat to the area. This is true even though the area has a shared intelligence service, military and security training, as well as logistical and financial support. Terrorist groups like Al Qaeda, Al Shabaab, and the Islamic State are still very violent in the area. A dynamic counterterrorism strategy is thus crucial. For instance, through the East African Counterterrorism Initiative, Combined Joint Task Force, and the National Counter Terrorism Centre, the Republic of Kenya continues to fight the war against terror on various fronts internationally, regionally, nationally, and locally, but setbacks still exist in as far as organisation and effective implementation of counterterrorism is concerned.

According to Silke, countering violent extremism is crucial to effectively fighting terrorism in East Africa. The Kenya Defence Forces launched operation 'LINDA NCHI' on 14th October 2011. According to Botha (2014), the concept of counter violent extremism has now been embraced, to a greater or lesser extent, by many of the

leading scholars in the field of terrorism studies. Yet the use of technology to counter violent extremism suffered a dearth of research. The United Nations found that in both Kenya and Somalia, the actions of al-Shabaab have left thousands of people maimed, dead, and displaced. In Kenya, the community has expressed concern that possible restrictions on the conduct or communication of research could be counterproductive to improving national security. For example, the County Government of Lamu continues to struggle with an upsurge of terrorism activities; some of the areas most affected include Mpeketoni, Manda Island, Ngongoro locality, and Dodori forest, among other areas. This leads to the scholarly quest to know whether counterterrorism strategies put in place are effective or not and, to what extent, that technology is doing right to counter terrorism in Kenya.

## 1.3 Objectives of the Study

The general objective of the study is to examine the role of science and technology in countering terrorism in the Horn of Africa using the case of Kenya and Somalia. The specific objectives include to;

- i. Examine the challenges of countering violent extremism and terrorism in Africa.
- ii. Establish the role of science and technology in countering terrorism in the Horn of Africa.
- iii. Determine the key actors and policy frameworks of using science and technology in countering terrorism in Kenya and Somalia.

## 1.4 Research Questions

This research was guided by the following research questions;

- i. What are the challenges of countering violent extremism and terrorism in Africa?
- ii. What is the role of science and technology in countering terrorism in the Horn of Africa?
- iii. Who are the key actors and policy framework of using science and technology in countering terrorism in Kenya and Somalia?

## 2. LITERATURE REVIEW

This literature review discusses published information in a particular subject area, and sometimes information in a particular subject area within a certain time period. A literature review can be just a simple summary of the sources, but it usually has an organizational pattern and combines both summary and synthesis.

## 2.1 Understanding Science, Technological and Innovation

The scientific and technological community, for its part, immediately responded to September 11 on many levels, from helping analyse the attacks to recommending improvements to national security. Scientists, engineers, and healthcare professionals continue to assess how they can best help identify, deter, and counter terrorist threats.

An underlying characteristic of terrorism is that individuals or groups, not acting on behalf of enemy nations, can threaten the lives of enormous numbers of people and profoundly alter the day-to-day functioning of a free society. Although it is not possible for these groups to exert control over that society, they can significantly disrupt the ability of established institutions to preserve a stable order. This disproportionate impact is due in part to the open nature of our society, the ability of enemies to live among us, their willingness to sacrifice their lives, and our reliance on complex and finely balanced systems of governance and commerce, which in turn depend on sophisticated technology to function much more efficiently.

Terrorism is disastrous; such acts are being perceived these days rather frequently, not narrowed to one particular region but across the globe, which was first devised in the 1970s during the French Revolution. The term "terrorism" today involves the use of violence and seeks to generate fear, not just among the direct victims but broadly in a society or community."

## 2.2 Justification of the Study

It should be acknowledged from the onset that no state can consider itself immune from the threat of terrorism. Therefore, early prevention of violent extremism and radicalisation is not achievable for the state and military services alone. As a result, this study aims to add to the body of research on how military forces in Africa fight violent extremism by giving new information to many different groups and stakeholders. It also aims to improve people's skills and knowledge of new information and methods for fighting terrorism in Kenya so that technology can be used more effectively in these efforts.

The conventional means of security are used in protecting citizens and states; they are insufficient to fight a war not only against the wanton destruction of innocent

key policy maker to develop relevant, up-to-date policies that will help enhance approaches to counterterrorism. In addition, this study aims to contribute to the development of new action-oriented strategies by stakeholders and other key agencies, actors, and individuals in Kenya.

## 2.3 Theoretical Framework

This study will employ contemporary deterrence theory. Silke (2013) posits that deterrence theory refers broadly to a body of academic work that came to dominate the security literature in the United States and Western Europe after World War II. Nye (2014) says that deterrence theory is the strategy in which one power uses the threat of retaliation to stop an enemy from attacking. Another coercive strategy is deterrence, which uses conditional threats to get an enemy to do or stop something.

Deterrence can be defined as the "persuasion of one's opponent that the costs and/or risks of a given course of action he might take outweigh its benefits." Deterrence involves both elements of control and power with an ultimate impact on the international sphere. The debate on deterrence gained prominence at the end of World War II, when military power went from being a means to defeat the adversary to being considered as a key piece of bargaining power employed to avoid wars by means of coercion and intimidation. It was this shift in the understanding of military power that made deterrence possible and a particularly valuable tool in avoiding nuclear conflicts. In Kenya, the National Strategy to Counter Violent Extremism (NSCVE) is the national document that guides different stakeholders to counter violent extremism. The strategy aims to unite all sectors of Kenya's social, religious, and economic life by emphatically and continuously rejecting radicalisation and violent extremist ideologies.

## 3. METHODOLOGY OF THE STUDY

The concept study adopted an exploratory research design. This is where a researcher has an idea or has observed something and seeks to understand more about it. An exploratory research approach is an attempt to lay the groundwork that will lead to future studies or to determine if what is being observed might be explained

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lives and property but also against the insidious spread of an ideology of evil. Thus, this study is aimed at key policymakers through multi-agencies in government, communities, civil society, the private sector, and international partners. For example, the findings will strengthen the National Security Advisory Council as a

by a currently existing theory. The study will focus on Kenya's most terrorist-affected areas and those that have added counterterrorism measures.

The main target population were key terrorism stakeholders and practitioners involved in countering

violent extremism in Africa (Kenya-Somali), such as the Kenya Police, the National Intelligence Service, civil societies, intelligence agents, terrorist victims, the Anti-Terrorism Police Unit, the United States Agency for International Development, United Nations agencies, the Kenya Defence Forces, and other security experts. The target sample frame will be based on the available (participants) population at the time of the study, and the study will strive to make them a true representative of the target group.

This study employed both qualitative and quantitative research approaches to examine the use of technology in countering violent extremism. This study critically examines counterterrorism through the lens of a case study in Kenya. Primary data collection will be done using the qualitative research approach. Primary data was collected using a key informant guide and questionnaire. Secondary data was collected through books, journals, articles, and periodicals. A questionnaire technique to collect primary data

The collected primary data will be sorted and analysed using document analysis and thematic analysis techniques, based on the emerging issues under study. Document analysis is a form of qualitative research in which documents are interpreted by the researcher to give voice and meaning around an assessment topic. Thematic analysis is a qualitative analytic method for identifying, analysing, and reporting patterns (themes) in data. The results obtained were presented in the form of frequency tables, narratives, bar graphs, and pie charts.

#### 4. FINDINGS

This chapter presents science and technology in countering violent extremism in Kenya. This study mixed qualitative and quantitative research approaches, relying on both primary and secondary data sources. This study acknowledges that primary data was captured through a structured questionnaire and secondary data sources.

The collected data was sorted and analysed using document analysis and thematic analysis techniques. The results of the study were presented in narrative form. This research finally found that a total of 90 participants successfully completed the questionnaires out of the original 100 that were initially administered for the study. This orientated a response rate of 90%, which is considered quite adequate for the analysis.

The sample size remained as close to the original intention as possible, and the viable participants were coded in serial numerical order: 1, 2, 3... 88, 89, and 90, respectively, to give the reader an idea of the representativeness and relevance of their feedback. Defence, engineering, technology, innovation, research and development, and changes in the forms and sources

of human security insecurity caused by the changing international environment were some of the ideas that the respondents were asked to explain. The respondents who participated in this research included professionals in engineering, mechanical engineering experts, academia, diplomas, IT institutions, and others.

The results of this research indicate that 9 percent of the respondents were executives, 28 percent were senior managers, 23 percent were junior managers, 14 percent were supervisors, 17 percent were technicians, and 9 percent were junior staff, as shown in Table 4.1. This shows fair representation across the management and supervisory levels of the institutions, suggesting that there is a link between defence, engineering, and human security.

The term technology in common parlance is derived from the Greek word *techne*, which denotes art or craft, and *logos*, which translates into word, speed, or knowledge. The twenty-first century has experienced a massive leap in technological developments in all aspects, hence the fourth industrial revolution. Technology has completely transformed the way humans live, eat, and even sleep; thus, it has inadvertently shaped history. For instance, mobile phones have expanded communication, the internet, and the engine has allowed people to move faster from one place to another, goods move quicker, and technology has also been significant in warfare.

The world's most industrialised countries have experienced various forms of insecurity that have had a far-reaching effect on their economies, resulting from terrorism, cyberattacks, piracy, money laundering, hijacking, and others. In the attempt to ensure a safe and secure environment, states have acquired the most advanced defence technology in the form of hardware and software for their armed forces by leveraging their security to maintain national security. It is possible to say that technology is the information that is needed to make something happen by combining or processing certain inputs in a certain way. Many technologies may generate the same outcome, but they may differ in terms of their efficiency. And a given technology may generate multiple outputs.

A technology may be quite specific, or it may encompass several sub-processes, such as producing intermediate inputs within an overall value chain. Technologies may include particular production processes, intra-firm organisational structures, management techniques, financial means, marketing methods, or any combination of these. All contribute to the productivity with which outputs are generated from inputs and to the market value of those outputs.

The need for defence and industrial technology has become a key element in the economic development of many countries around the world. Over the years, many

technologies and innovations have taken place in the global world, with defence technology as the most exciting and celebrated. The world today is confronted with the most rapidly changing market conditions characterised by competition. This has resulted in a global defence industry dominated by a few large defence investors, mostly from America, Europe, and Asia.

The Internet was designed to be collaborative and rapidly expandable and to have low barriers to technology, security, and identity management, which were lower priorities. It must also be recognised that the traditional Cold War deterrence models of assured retaliation do not apply to cyberspace, where it is difficult and time-consuming to identify an attack.

The forensic work necessary to identify an attacker may take months, if identification is possible at all. When the attacker is identified, a non-state actor like a terrorist group may not have assets the government can use to retaliate. Furthermore, what constitutes an attack is not always clear. In fact, many of today's intrusions are closer to espionage than to acts of war.

One person who took part in the research said that since the end of the Cold War, economic globalisation and the rapid growth of information, communication, and technology (ICT) have dominated political and business agendas. This is creating a new paradigm where societies and nations must balance competition and cooperation. This will necessitate the skilful diplomatic manipulation of various priorities in the future, which must be grounded in a comprehensive understanding of the role of science and technology (S&T) in international affairs. In many cases, the results of technology transfers differ significantly from the initial transfer goals or hopes.

The study found that the Kenya Defence Forces (KDF) has leveraged science and technology in several aspects of its operational activities. Notably, the surveillance of the international boundary using Unmanned Aerial Vehicles (UAVs), which is a force multiplier, makes monitoring much easier and cost-effective. Kenya Defence Forces has also applied ST to its human resource development and logistics planning, which has enhanced its operational and administrative effectiveness.

The impact of technology on warfare in the twenty-first century means that the nature of warfare is now largely determined by contemporary technology. In modern times, military strategic planners are already deeply engaged in these technologies. Technology in the 21st century changes the wholesome structure of defence forces as well as the strategy and tactics of warfare.

Science and technology make the development of knowledge not only relevant but also essential to livelihood security and critical to development objectives at the local, national, and international levels. An effective

science, technology, and innovation system is required for a country to harness the potential offered by modern science and technology to its social and economic advantage. This awareness has replaced an earlier belief that heavy investment in scientific and technological research and the purchase of technology from abroad were sufficient to achieve these goals.

Historical evidence abounds from the developed world concerning the role of scientific research and technological development in fostering unmet needs. Scientific research and technological development provide progress and opportunities for addressing pressing societal needs. Various uses have been made of S&T to meet societal needs, while many industries have been born out of science, for example, the semiconductor and biotechnology industries. These become less dependent on science but continue to rely on it for their innovation and growth. Sustainable economic development requires that a country does not remain, primarily, a provider of raw materials with an external dependency on hi-tech services.

In the Kenyan perspective, the impact of science and technology in the military and security environments will enhance training, as the cost will be reduced by the use of computers and modern simulators. This will also improve planning, logistics, human resources management, ICT, and surveillance using unmanned aerial vehicles, leading to an improvement in constant security. Further advances in the use of GIS and GPS will facilitate efficient troop movement and deployment. The continued installations of advanced surveillance equipment, such as CCTV, in all public places will enhance security. Criminal investigations will be improved by the application and use of forensic science, for example, DNA and ballistics. The likelihood of these sectors having their own scientific institutions, such as military and security organisations, for research and development purposes is high in the future.

## 5. CONCLUSION

It is prudent to appreciate that adopting ST&I in addressing human security issues in Kenya has been a significant challenge. For instance, Kenya faces a lot of security challenges ranging from runaway theft and destruction of property, robbery, terrorism, burglary, murder, cybercrimes, land and resource conflicts, terrorism, political violence, insurgency by armed militias, refugee influx, internal and inter-ethnic armed conflict, cattle rustling, nepotism, corruption, and drug and human trafficking, among others. Kenya has

encountered and persists in confronting the growing threat of violent extremism.

The steady growth of civilian industries has also led to competition with defence firms in developing new technologies, except for a few specific defense-related applications. The local demand for defence products usually depends on the country's perception of the threat from its enemies in the short and long term, while the economic conditions of the country serve as a constraint on this demand. Therefore, the effect of science and technology on a country's economy primarily depends on key factors, such as its defence needs, the overall economic situation, the size of the defence industry relative to the civilian industry, and the stage of technological development.

The appreciation and support of the diverse defence ST&I roles and strategic utility by defence organisations is dependent on their understanding of the 'added value' Their understanding of scientific research, their knowledge-oriented culture, and their ability to look beyond short-term operational pressures are crucial factors. The relevance, usability, and quality of delivered defence R&D solutions serve as the best arguments for appreciating the role and contribution of R&D. The military therefore needs to develop mechanisms to integrate R&D into their concept of development. KDF has also made significant contributions in terms of training and capacity-building for peace and security worldwide.

The military is said to have the full capability to monitor, attack, suppress, and ultimately eradicate international terrorist groups seeking to strike the state, its citizens, its interests, and its allies. In the case of the Kenya-Somalia expedition, the United States forces can strengthen the capabilities and will of host-government forces by providing training and equipment, disrupt terrorist activities, find and capture or kill terrorists, help to alienate terrorists from the populace, gather intelligence about terrorist networks and activities around the world, and protect friendly forces and bases.

## 6. RECOMMENDATIONS

Technology in our modern-day society has become pervasive and ubiquitous. It has come with its own advantages and disadvantages. Security agents will usually argue how technology is a beneficial thing and will help keep citizens safe, but this is as long as the citizen doesn't have complete privacy of his data, as was witnessed when the US government got into a war of words with the company Apple about Apple refusing to give them access to the backdoors of their firewalls.

This paper recommends that VE incidences have been on the rise in European countries and even here in

Kenya, and oftentimes they are underestimated for the potential they have to radicalise small pockets of minorities within their communities. Within this context, it should be noted that political radicalisation is mainly due to identity politics, whereas religious radicalisation is usually due to marginalisation and humiliation. It should also be appreciated that terror organisations have their own blend of cultural, psychological, and structural characteristics, all of which have been bred by a mix of historical, political, ethnic, cultural, and religious factors. Now this poses a challenge for governments in terms of how to go about taking preemptive measures against these groups.

This paper recommends that ST&I play a pivotal role in the industrialisation, sustainable development, and growth of nations. Investments and integration of ST&I in social, economic, and governance policies will increase Kenya's global competitiveness, create employment, and increase productivity. Intensified application of science, technology, and innovation is essential in raising productivity and efficiency levels across the economic, social, and political pillars. All these are key attributes to achieving the overarching Kenya Vision 2030 goals.

It is important to note that respondents were of the view that the economic recovery gains that have been made in the last few years and the envisaged Vision 2030 goals provide an opportunity for Kenya to position herself strategically on the global scene. The government therefore formulated this National ST&I Policy and Strategy to guide and promote focused integration of ST&I in all sectors of the economy.

It will be especially important to focus on National Priority Growth Sectors that have a lot of potential to use ST&I to help reach the goal of 10% annual economic growth. In order to realise the above, the government commits itself to facilitating the identification, acquisition, transfer, diffusion, and application of relevant ST&I knowledge in all sectors of the economy. In this case, the government wants everyone involved in Kenya's national innovation system to work together to reengineer structures, institutions, and sectoral policies so that the ST&I Policy and Strategy can be put into action successfully. The ST&I and technical skills development is at the centre of sustainable national development towards the delivery of the Kenyan dream of a knowledge-based economy.

## REFERENCE

Ashour O. (2010). Online de-radicalization? Countering violent extremist narratives: message, messenger and media strategy. *Perspect. Terrorism*. 2010;4:15–19

Bashar I. (2017). Countering violent extremism in Bangladesh. *Counter Terrorist Trends and Analyses*. 2017;9:17–21

Bognoe, Camilla. Understanding the role of gender in preventing and countering violent extremism and radicalization that lead to terrorism, good practices for law enforcement. *Security and cooperation*, (2016).

Botha, Anneli. Assessing the Vulnerability of Kenyan Youths to Radicalisation and Extremism. *Institute for Security Studies Paper 245*, (2013).

Bryden, Matt and Bahra, Premdeep. East Africa triple helix: the Dusit hotel attack and the historical evolution of the jihadi threat. *Volume 12, issue 6*, (2019).

El-Said, Hammed. *New Approaches to Countering Terrorism: Designing and Evaluating Counter Radicalization and De-Radicalization Programs*, Palgrave Macmillan, (2015).

Ibegbu C .(2014). Nigeria: New Thinking in Counter Terrorism – Is it a Way Forward? Available at: <http://saharareporters.com/2014/04/24/nigeria-new-thinking-counterterrorism-%E2%80%93-it-way-forward-cecil-ibegbu>. Accessed December 11, 2024.

Ibekwe C. (2016). Nigeria's Anti-Terrorism War and Lessons from Civilian JTF. *Vanguard*, September 29, 2016.

Koehler, Daniel. *Violence and Terrorism from the Far-Right: Policy Options to Counter an Elusive Threat*. ICCT Policy Brief, (2019).

Kuwali, Dan. *A soft power approach to eradication extremism in Africa*, (2015).

Mueller, John. *Terrorism since 9/11: the case of America*. Columbus, Ohio University,(2018).

Nye, Joseph. *Power in the Global Information Age: From Realism to Globalization*. London and New York: Routledge, (2014).

Omenma, J. T. and Handricks, C. M. (2018). Counterterrorism in Africa: An Analysis of the Civilian Joint Task Force and Military Partnership in Nigeria. *Security Journal*, Vol. 31, Issue 3: 734-794

Possony, Stefan. *Atomic power and world order. The Review of Politics*, (1946).

Powell, Robert. *Nuclear deterrence theory: the search for credibility*, digitally printed version. Re-Issue. Cambridge: Cambridge University Press, (2018).

Schelling, Thomas. *Arms and influence*. Harvard University Center for International Affairs. Arms and influence. Yale University Press, (1966).

Silke, Alfred. *Terrorists, victims and societies: psychological perspectives on terrorism and its consequences*, England, John Wiley and sons, (2013).

The United Nations. *The African regional high-level conference on counter-terrorism and the prevention of violent extremism conducive to terrorism*, Nairobi, Kenya (2019).

Zagare, Frank and Kilgour, Marc. *Perfect deterrence*. Cambridge Studies in International Relations, Cambridge, Cambridge University Press, (2016).