

**UNIVERSITY OF NAIROBI**

**Institute of Diplomacy and International Studies (IDIS)**

**// COUNTERING TERRORISM THROUGH ICT USAGE:  
A CASE OF KENYA, 1998 - 2013 //**

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**DECLARATION**

This Research Project is my own original work and has not been presented for award of academic qualification in any other university.

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The Research Project has been submitted for examination with my approval as University Supervisor

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## **DEDICATION**

**This research project has been dedicated to my family, for their support during my entire Post Graduate Course Program.**

## **ACKNOWLEDGEMENT**

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## TABLE OF CONTENTS

TITLE PAGE.....	i
DECLARATION.....	ii
DEDICATION.....	iii
ACKNOWLEDGMENT.....	iv
TABLE OF CONTENTS.....	v
LIST OF TABLES.....	ix
LIST OF FIGURES.....	x
ABSTRACT.....	xi
ABBREVIATIONS.....	xii

<b>CHAPTER ONE: INTRODUCTION.....</b>	<b>1</b>
1.0 Background to the Study.....	1
2.0 Problems Statement.....	2
3.0 Research Question.....	3
4.0 Objectives of the study.....	4
5.0 Justification and Significance of the Study.....	4
6.0 Literature Review.....	5
6.1 Introduction.....	5
6.2 Trends and Experiences in Kenya’s Contact with Terrorism.....	6
6.3 Possible Causes of Terrorism in Kenya and other States.....	7
6.4 Consequences of Terrorism Activities in Kenya.....	8
6.5 Strategies used in the Fight against Terrorism.....	10
6.6 ICT as a Counterterrorism Tool.....	11
6.6.1 ICT Based Tools that are significant in Counterterrorism.....	11
6.6.2 Capabilities and Limitations of the adoption of ICT Tools as Counterterrorism Strategy.....	12
6.6.3 Challenges in the adoption of ICT as Counterterrorism Strategy.....	13
6.7 Summary of Literature Review.....	15
7.0 Research Hypotheses.....	15
8.0 Research Methodology.....	15

9.0 Conceptual Framework .....16

10.0 Theoretical Framework .....17

11.0 Organization of the study .....21

**CHAPTER TWO: ICT BASED PLANNING PROCESS AND TERRORISM .....22**

2.1 Introduction .....22

2.2 Benefits of ICT Planning in Counterterrorism .....22

2.3 Conclusion .....26

**CHAPTER THREE: ICT BASED APPROACHES TO INTELLIGENCE GATHERING**

3.1 Introduction .....27

3.2 Benefits of ICT Based Intelligence Gathering .....27

3.3 Conclusion .....30

**CHAPTER FOUR: ICT BASED COMMUNICATION AND TERRORISM.....31**

4.1 Introduction .....31

4.2 Benefits of ICT Based Communication .....31

4.3 Conclusion .....33

**CHAPTER FIVE: DATA ANALYSIS, INTERPRETATION, SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS.....34**

5.1 Introduction .....34

5.2 Response Rate .....34

5.3 The designation of the respondents.....35

5.4 Level, Causes and Challenges of Terrorism in Kenya 1998 to 2013.....36

5.4.1 The level of terrorist activities in Kenya after the year 1989 to 2013 .....36

5.4.2 Causes of terrorist activities in Kenya from the year 1998 to 2013.....36

5.4.3 Whether there are impacts of terrorism in Kenya from 1998 to 2013 .....37

5.4.4 General consequences/impacts of the terrorism on the community and society .....38

5.4.5 Ways in which terrorism has impacted on the Kenya society from 1998 to 2013 .....39

<b>5.5 Strategies Used In the Fight against Terrorism in Kenya .....</b>	<b>41</b>
5.5.1 Whether there are specific strategies used in the fight against terrorism in Kenya .....	41
5.5.2 Counterterrorism strategy commonly used in the war against terror in Kenya .....	42
5.5.3 Whether the outcome of the fight against terrorism would have been different if ICT based tools were given more prominence .....	43
5.5.4 The extent to which ICT has been an effective tool in the war against terrorisms.....	44
5.5.5 How ICT and related tools affect the fight against the war on terrorism .....	44
5.5.6 Ways in which ICT has been useful as a tool of fighting terrorism in Kenya .....	45
<b>5.6 ICT based Tools as Counterterrorism Strategies .....</b>	<b>46</b>
5.6.1 Whether the use of ICT planning processes would reduce the activities of terrorist .....	46
5.6.2 The proportion in which the use of ICT based planning process would impact on the fight against terrorism .....	47
5.6.3 The extent to which the use of ICT based planning process would reduce terrorism activities .....	48
5.6.4 How the use of ICT based planning process would affect war against terrorism activities .....	49
5.6.5 Ways in which the use of ICT based planning process would impact on the fight against terrorism. ....	50
<b>5.7 ICT based Intelligent process as a counterterrorism strategy .....</b>	<b>51</b>
5.7.1 Whether the based intelligence systems has an effect on counterterrorism.....	51
5.7.2 The proportion in which the use of ICT based intelligence process would impact on the fight against terrorism .....	52
5.7.3 The extent to which the use of ICT based intelligence gathering process would reduce terrorism activities.....	53
5.7.4 How the use of ICT based intelligence gathering process would reduce terrorism activities .....	54
5.7.5 Ways in which the use of ICT based intelligence gathering process would impact on the fight against terrorism .....	55
<b>5.8 Communication and counterterrorism .....</b>	<b>57</b>

5.8.1 Whether the use of ICT based communication processes would reduce the activities of terrorist .....	57
5.8.2 The proportion in which the use of ICT based communication process would impact on the fight against terrorism .....	57
5.8.3 The extent to which the use of ICT based communication process would reduce terrorism activities.....	58
5.8.4 How the use of ICT based communication process would reduce terrorism activities .....	59
5.8.5 Ways in which the use of ICT based communication process would impact on the fight against terrorism .....	60
5.9 Summary of Findings, Conclusions and Recommendations and Recommendations for Further Research .....	62
5.9.1 Summary of Findings.....	62
5.9.2 Conclusion .....	68
5.9.3 Recommendations.....	68
5.9.4 Recommendations for further research .....	69
Bibliographical References .....	70
Questionnaire .....	74



## LIST OF TABLES

Table 5.1	Response Rate .....	35
Table 5.2	Level of terrorist activities in Kenya after the year 1989 to 2013 .....	36
Table 5.3	General consequences /impacts of the terrorism on the community and society .....	39
Table 5.4	Ways in which terrorism and related activities have impacted on the Kenya society from 1998 to 2013 .....	40
Table 5.5	How ICT and related tools affect the fight against the war on terrorism in Kenya .....	45
Table 5.6	Ways in which ICT has been useful as a tool of fighting terrorism in Kenya and the world at large.....	46
Table 5.7	The proportion in which the use of ICT based planning process would impact on the fight against terrorism .....	48
Table 5.8	How the use of ICT based planning process would affect war against terrorism activities .....	50
Table 5.9	Ways in which the use of ICT based planning process would impact on the fight against terrorism .....	51
Table 5.10	The proportion in which the use of ICT based intelligence process would impact on the fight against terrorism .....	53
Table 5.11	How the use of ICT based intelligence gathering process would reduce terrorism activities .....	55
Table 5.12	Whether the use of ICT based communication processes would reduce the activities of terrorist .....	57
Table 5.13	The proportion in which the use of ICT based communication process would impact on the fight against terrorism .....	58
Table 5.14	How the use of ICT based communication process would reduce terrorism activities .....	60
Table 5.15	Ways in which the use of ICT based communication process would impact on the fight against terrorism .....	61

## LIST OF FIGURES

Figure 5.1	The designation of the respondents.....	35
Figure 5.2	Causes of continuous terrorist activities in Kenya from the year 1998 to 2013.....	37
Figure 5.3	Whether there are impacts associated with the terrorism in Kenya.....	38
Figure 5.4	Whether there are specific strategies used in the fight against terrorism in Kenya .....	41
Figure 5.5	Counterterrorism strategy commonly used in the war against terror in Kenya ...	42
Figure 5.6	Whether the outcome of the fight against terrorism would have been different if ICT based tools were given more prominence .....	43
Figure 5.7	The extent to which ICT and related tools has been an effective tool in the war against terrorisms .....	44
Figure 5.8	Whether the use of ICT planning processes would reduce the activities of terrorist.....	47
Figure 5.9	The extent to which the use of ICT based planning process would reduce terrorism activities .....	49
Figure 5.10	Whether the based intelligence systems has an effect on counterterrorism.....	52
Figure 5.11	The extent to which the use of ICT based intelligence gathering process would reduce terrorism activities.....	54
Figure 5.12	Ways in which the use of ICT based intelligence gathering process would impact on the fight against terrorism .....	56
Figure 5.13	The extent to which the use of ICT based communication process would reduce terrorism activities.....	59

## **ABSTRACT**

Terrorism has long been associated with unprecedented, sustained and continued violent attacks, loss of lives and destruction of property. The actions and activities of terrorists impact on safety and security of the population, infrastructure and installations. Terrorism and related operations have been responsible for the mass commission of crimes including forced settlements, mass transfer of the population, persecution and murders among other vices. Countries experiencing terrorism related actions have not been able to register any growth in the economic, social, political and technological spheres and in the process are unable to discharge their primary responsibilities. Due to its negative consequences, terrorism needs to be countered through the adoption of the most effective mechanisms. This study sought to determine the impact of ICT based tools as counterterrorism strategy. The study was guided by three objectives: (1) to establish the impact of ICT based planning system as a counterterrorism strategy; (2) to examine the impacts of ICT based intelligence gathering as a counterterrorism strategy and (3) to assess the impacts of ICT based communication as a counterterrorism strategy. The study was designed to test three main hypotheses: (1) if ICT based planning system is applied as a counterterrorism strategy then terrorism in Kenya would reduce by 72%; (2) if ICT based intelligence gathering system is applied as a counterterrorism strategy then terrorism in Kenya would reduce by 75% and (3) if ICT based communication is applied as a counterterrorism strategy then terrorism in Kenya would reduce by 60%. The findings of the study showed that ICT tools of planning, intelligence and communication have a huge and generally more positive impacts on the fight against terrorism in Kenya and the world over. The findings further indicated that the use of ICT based planning, intelligence and communication process have contributed greatly to the reduction of terrorism by varied degrees ranging from 60% to 80%. The study concluded that ICT tools remain the most significant and important strategy in the fight against terrorism today and in future. ICT based planning, communication and intelligence processes have brought tremendous developments through improved response times, location of sites, knowledge of operation and plans. This is achieved through increased accuracy, speed, simplicity, efficiency and economy. The study recommends that ICT based tools be adopted as the official strategy for fighting terrorism in Kenya and the world over. Further recommendation from the study is that more resources be channeled towards the acquisition of ICT tools and that high strategic training be provided to the personnel in ICT tools application in the fight against terrorism.

## **ABBREVIATIONS**

<b>ICT</b>	<b>-</b>	<b>Information and Communication Technology</b>
<b>DSS</b>	<b>-</b>	<b>Decision Support System</b>
<b>MIS</b>	<b>-</b>	<b>Management Information System</b>
<b>TPS</b>	<b>-</b>	<b>Transactional Processing System</b>
<b>KWS</b>	<b>-</b>	<b>Knowledge Worker System</b>
<b>ESS</b>	<b>-</b>	<b>Executive Support System</b>
<b>EAC</b>	<b>-</b>	<b>East African Cooperation</b>
<b>ECOWAS</b>	<b>-</b>	<b>Economic Community of West African States</b>
<b>SLDF</b>	<b>-</b>	<b>Sabaot Land Defence Forces</b>
<b>LAN</b>	<b>-</b>	<b>Local Area Network</b>
<b>WAN</b>	<b>-</b>	<b>Wide Area Network</b>
<b>WWW</b>	<b>-</b>	<b>World Wide Web</b>
<b>IGAD</b>	<b>-</b>	<b>The Intergovernmental Authority on Development</b>

## **CHAPTER ONE**

### **INTRODUCTION**

#### **1.0 Background to the Study**

Since its inception and development as an organized functional unit, Information and Communication Technology (ICT) has been applied in almost all areas of the economy including education, security, defence, manufacturing industry, agriculture and tourism among others. ICT as a discipline has been successfully applied as a competitive tool as it determines the growth or stagnation, survival or demise, prosperity or decline as well as efficiency or inefficiency and effectiveness or non effectiveness in the application of resources of an entity or enterprise. The successful application of ICT and related tools has resulted in increased growth, prosperity, innovations, survival and competitiveness among organizations. On the contrary inappropriate application of ICT and related tools contributes to stagnation, demise and low resources application that creates high stakes for vulnerability to outside attacks.<sup>1</sup>

ICT has transcended all sectors including both the public and private sectors. Additionally, both large and small organizations have soundly adopted the use of ICT in the planning, organization, operations and control process. In the world over ICT has become the most prominent tool in manufacturing, security, financial and human resources management. In the United States and Europe for example, the use of ICT and related tools has been more organized and formalized with increased benefits realized than in Africa and Asian continents. In the United States of America and most countries in Europe, ICT has been used in security, training and development purposes, tracking of criminal elements and analyzing trends and events among countries. Importantly, ICT has been very fundamental in the controlling of criminal and terrorism related activities and has been successful in the provision of information to aid in developing counterterrorism strategies and systems.<sup>2</sup>

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<sup>1</sup> Steiner D K. *"The Outcomes of the Application of ICT in Modern Organizations"* (Geneva, Heinemann Publishers, 2011) pp. 67-93

<sup>2</sup> Barnes M H. *"The Trends and Developments in the use of ICT Tools around the Globe"* (New York, Pearson International, 2012) pp. 122-143

In Africa in particular, very few countries including Kenya, Nigeria, Egypt and South Africa have fully embraced the use of ICT and related information processing, dissemination and other applications. Ironically, in all these countries ICT continue to occupy a minimal space and has been used more as a clerical, human resources and financial tools. Little use has been made of ICT in the tracking of crime, security and country defence<sup>3</sup>. Thus despite the high values gained of ICT in Europe, USA and a few states in Asia, ICT in Africa has not received full attention in all areas but only paled to routine and none specialized areas. This undesirable trend has left many countries in Africa in more vulnerable positions with increased possibilities of attacks more so without the useful tracking systems. In the last fifteen years, Kenya has experienced more terrorist attacks than any country in the east African region and probably in the whole of the African continent. While this could be blamed on the country's proximity to unstable countries such as Somali, and South Sudan, the country has weak tracking systems. Particularly, Kenya does not have adequate ICT capability to help combat the activities of terrorists from unstable neighbouring countries and elsewhere around the globe. For instead of the use of computer networks and related systems in the security sector, the systems have been mostly applied in office work and other information processing purposes.<sup>4</sup>

## **2.0 Problems Statement**

Over the last two decades the world has witnessed unprecedented, sustained and continued violent attacks, loss of lives and destruction of property resulting from terrorism and related activities. From the United States of America to Europe and Africa to Asia the safety and security of the population, infrastructure and both public and private installations has been in doubt. Simply, no country in the world has been spared the gouts of terrorism and increased ugly incidents of high volume of criminal styled scenarios, incidents and situations. The 1998 twin attacks of the US Embassy in Kenya and Tanzania, the September 11 attack of the World Trade Centre in United States in 2001, the recent attacks in Kenya at the West Gate malls and the Mpeketoni incident as well as the myriads of terrorist activities taking place in Nigeria among

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<sup>3</sup> Oluyede H D. "*Challenges in the use of Information Technology in Africa*" (Lagos ,Regional International Press, 2010) pp. 111-127

<sup>4</sup> Fairley P. G, "*The perception about the use of ICT as a Counterterrorism Strategy*" Boston McGraw-Hill, 2012) pp. 201-209

other incidents in Africa and the world over lay bear the hallmarks of the terrorism activities. In each of the above cases, the number of deaths witnessed were in tens while hundreds injured with unprecedented and continued fear, desperation among the population.<sup>5</sup>

The outcomes of terrorist attacks and violent styled executions and persecution of the population has led to more unfavorable circumstances for the countries, regions and continents as well as the entire world. The number of international and regional conflicts has doubled, in the process denting the prospects of peace needed for effective growth, developments, economic performance and effective technological and knowledge transfers. This has had real challenges among countries, communities and individuals to gain meaningful developments. Terrorism has had high negative stakes on the key sectors of the economy, infrastructure, defence, security, tourism, transport, education, agriculture and political spheres for any country the world over<sup>6</sup>. Reeling from the effects of terrorism with the aggregate negative hall marks and outcomes, states, communities, institutions and regional blocks and bodies have been in the forefront of designing strategies to stem and eradicate terrorism. The counterterrorism approaches commonly applied by states and organizations have all zeroed on the use of armed forces, groups and specialized civil police in the fight against terrorism. This has not proved successful either. The recent past has witnessed the increased application of ICT and related tools as a counterterrorism approach. Whereas the approach has been in other states such as USA and Europe, it has been less successful in other states such as those in Africa in general and Kenya in particular with recorded little implementation.<sup>7</sup>

### **3.0 Research Question**

1. What is the impact of the use of ICT based planning as a counterterrorism strategy in Kenya?
2. What is the impact of the use of ICT based intelligence gathering as a counterterrorism strategy in Kenya?

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<sup>5</sup> Gachau P L. "*ICT Application In Public and Private Sector Organization in Kenya*" CCK journal volume 13 No. 3 2013 pp. 24-35

<sup>6</sup> Khumalo H S. "*Terrorism and its Consequences- A Considered view of the African Continen*" (Durban University, University Press, 2013) pp. 85-125

<sup>7</sup> Emenike, H D Huseisn L M & Omar H M, "*Counterterrorism Activities and Approaches, the ICT Perspective*" (Abidjan, Regional Security Press Centre, 2012) pp. 93-126

3. What is the impact of the use of ICT based communication as a counterterrorism strategy in Kenya?

#### **4.0 Objectives of the study**

1. To establish the impact of ICT based planning system as a counterterrorism strategy in Kenya.
2. To examine the impacts of ICT based Intelligence gathering as counterterrorism strategy in Kenya.
3. To assess the impacts of ICT based communication as a counterterrorism strategy in Kenya.

#### **5.0 Justification and Significance of the Study**

Terrorisms and related incidents have created disruptions resulting in increased negative and dysfunctional consequences for Kenya's citizens. The violence arising from terrorism has forced countries to redesign their activities and operations to reduce the occurrences and consequences of terrorist activities. The results of any nature of terrorism are unwelcome and undesirable for mankind. The deaths, injuries, maiming and other unnatural acts such as destruction of property and violent reaction constitute the gross violation on international peace and human rights with the result being high human suffering, deprivation of economic and social rights and a threat to human existence. It is therefore paramount that for ensuring of stability, peace, tranquility and meaningfulness in human existence, terrorism must be eliminated at all cost. Countries need development and not unpredicted violence and misunderstandings. Terrorism poses a threat to development, human existence and defined lifestyles. However, the elimination of terrorism should not be pegged on the use of violent means through armed methods alone. Modalities should be developed to prevent more deaths through the use of soft approaches to resolution of conflicts with the use of ICT being the preferred approach<sup>8</sup> This study would be of benefit to a number of organizations, institutions and bodies including the United Nations and affiliated

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<sup>8</sup> Fairley P, G, "*The Perception about the use of ICT as a Counterterrorism Strategy*" (USA, Boston McGraw-Hill, 2012) pp. 204-221



bodies, regional groupings such as the EAC and ECOWAS, states and governments, private and public consultancy firms, universities, colleges and schools.

The United Nations and the affiliated bodies and the regional groupings the world over, would use the study in designing the strategies, rules, policies and procedures in fighting terrorism and responding to terrorists and related acts. The governments, public and private firms too would benefit from the study. The information provided would be useful in planning, organizing and controlling the resources necessary to respond to terrorism activities and outcomes. The Universities, Colleges and Schools would use the study as blue prints or benchmarks for future study programs or reference material.

## **6.0 Literature Review**

### **6.1 Introduction**

Over the last three decades terrorism and related consequences have been the dominant topics across the world. The high attention given to terrorism emanates from the notion that terrorism has both negative and positive outcome to the society and countries in almost all the continents. There is a general belief among scholars, security experts and practitioners that terrorism is caused by an array of factors. Additionally terrorism has both positive and negative consequences with the negative outcome being the dominant. Various strategies exist to help in the fight against terrorism in Kenya and the world at large including training and development, use of arms and armed personnel.<sup>9</sup> This section of the study evaluates the existing literature on key aspects of terrorism including the scale, effects and causes of terrorism and subsequent events in Kenya. The section takes a close view of the trends and experiences in Kenya's contact with terrorism, possible causes of terrorism in Kenya and other states, consequences of terrorism activities in Kenya among other important areas. The chapter ends with an examination of the application of ICT in the fight against terrorism in Kenya

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<sup>9</sup> Nasimiyu W J. *Trends and Consequences of the Terrorisms Activities in Kenya, 1990s and Beyond*. (Nairobi, East African Publishers, 2006) pp. 75-89.

## **6.2 Trends and Experiences in Kenya's Contact with Terrorism**

At the attainment of independence from Britain in 1960 through the early 1990, Kenya enjoyed relative peace, stability and tranquility with unparalleled security and safety for both its citizens and territory. During the period, the country experienced positive developments associated with low human right abuses, strong cohesion among the citizens, infrastructural growth and high expansion in the technological, economic, social and legal as well as political spheres. The tourism and manufacturing sectors experienced the highest growth and expansion during the period with high revenues and profits realized. There were few if any clandestine groups posing real threat and challenges to the country. Towards the last quarter of 1990s the scenario changed drastically. The country is today experiencing high level of insecurity, more human rights abuses, forced immigration and emigration, increased organized criminal groups and more threat to the peace and security of the citizens from the said groups. The event started in 1998 with twin terrorist attacks of the USA embassy in Kenya and Tanzania that resulted in massive loses of life property and personal liberty of the population. Since 1998 to date the country has experienced increased threats and attacks from terrorists both from within and without the borders.<sup>10</sup>

The scale of attacks by terrorists increased tremendously during the periods of 2011 and beyond with more attacks with devastated effects such as deaths, injuries, frustration, persecution, forced transfer and other related consequences having been witnessed. Today the country reels from constant, concerted and continuous attacks from organized groups operating from both within and without Kenya.<sup>11</sup> The 2013 attack on the Westgate mall, and isolated but concerted attacks among the private and public installation in Nairobi, Mombasa and the northern Kenya towns of Garissa, Wajir and Moyale comprise the most notable terrorist activities in Kenya. Additionally, public transport facilities, government buildings, foreign nationals and the private installations have not been spared. In the recent past, areas of worship have equally emerged as the other targets among the terrorist. This has occurred in all major towns and cities in Kenya and even in remote areas. The war against Al-Shabaab in Somalia has generated organized

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<sup>10</sup> Baraza P. M, *"The Emergence of Terrorist Groups and their Influences on the Society"* (Nairobi Longman Publishers, 2013) pp. 20-30

<sup>11</sup> Hussein M K. *"Repercussions of the Terrorist Activities in Kenya"* (Mombasa, East African Publishers, 2012) pp. 87-99

armed and daring groups with the capacity and capability to undertake organized attacks within the east African region and beyond.

### **6.3 Possible Causes of Terrorism in Kenya and other States**

There has been a debate among the security experts, professional and scholars as to whether terrorism is a way of life or an act that has specific and profound causes. While less than 30% of the experts, scholars and professionals have been of the view that terrorism is a way of life and occurs naturally, over 65% of the experts scholars and professionals have been of the view that terrorism has causes. The proponents of this school of thought argue that terrorism in a country results from cultural orientation, ethnic composition, resource availability and distribution, geographical locations, and stability of the neighboring states and the country inlets and outlets. The foreign policy being pursued by a country, its relations both dogmatically and international readiness to intervene in the international and domestic conflicts may make a country vulnerable and likely target for the terrorists.<sup>12</sup> In Kenya most of the terrorist attacks have been linked to the cultural orientation and in particular religious practices. By and large the attacks have been concentrated on areas predominantly occupied by the Muslim population although few incidents are reported in Christian dominated areas.<sup>13</sup> In the recent past, most of the terrorists and related activities have been concentrated in the coast regions, northern Kenya and Nairobi area making the areas vulnerable to attacks. The Kenya foreign policy and intervention in international conflict has seen the country suffer a myriad of attacks. For instance the 1998 attacks on the USA embassy have been highly linked to Kenya's foreign relations with the United States of America and other western countries. From time immemorial the country through its successive government have been in good relations with the international community more so the United States of America and the European countries and this has been viewed negatively by section of the foreign and domestic sets of the population. Additionally the Kikambala attacks in the Coast and many other have been associated with the country's relations with Israel<sup>14</sup>

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<sup>12</sup> Akello J. H, "*Problems of Terrorism Facing Kenya and the World in the 21<sup>st</sup> Century*" EAC Secretariat Journal Vol. 7 No. 8 2013 pp. 56-58

<sup>13</sup> Hayes P H, "*Challenges Facing the Global community Today- Threat of Global Terrorism*" (USA Boston, Prentice Hall Publisher, 2005) pp. 123-256

<sup>14</sup> Baraza P. M, "*The Emergence of Terrorist Groups and their Influences on the Society*" (Nairobi, Longman Publishers, 2013) pp.103-128

Since Kenya took the initiative to intervene in Somali, more concerted attacks on the country have taken place more than before. To date more terrorist attacks are often reported in the far flung regions of northern Kenya, Nairobi and coast region and adjacent places in Kenya. The retaliatory attacks by the terrorists that have been witnessed in Wajir, Garissa, Moyale and areas along the border are attributed to the country's involvement in the war against Al-Shabaab in Somali. Apart from Somali, Kenya is surrounded by some countries that are in armed conflicts making the country unsafe. The influx of the refugees with their desperation, stress, frustration and suffering has been the hall mark of radicalization and a number of attacks in the country.<sup>15</sup>

The possession of small arms by unlicensed groups is recipe for terrorist activities. The porous and uncontrolled borders continue to make the country unsafe and insecure. Thus through the possession of arms and other weapons, the clandestine groups tend to ready themselves for attacks. Other factors causing terrorism and related activities comprise of the resources availability and regional accessibility to the national resources. Those areas that feel neglected in the distribution of resources and general developments do develop militant approach. The Niger delta and the northern Nigeria and northern Kenya have been some of the classic examples that have felt neglected and some groups from these areas have resorted to terrorist activities. The Pokot, the Turkana and the Samburu with their life style and climatic conditions have been the hot spots for terrorist kind of actions in Kenya.<sup>16</sup>

The kind of training, education and social setting may be some of the great factors of terrorism. The fundamentalist kind of religious indoctrination through hard teachings among the various groups has constantly contributed to the state of insecurity in Kenya. The Mungiki, the SLDF, and other groups comprise threats to national peace and stability.<sup>17</sup>

#### **6.4 Consequences of Terrorism Activities in Kenya**

The activities connected with terrorism and related actions have resulted in more negative and unfavorable consequences to the country, society, community and the individual citizens in Kenya and the rest of the world. There have been more injuries, maiming, grievous bodily harms

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<sup>15</sup> Omar A. B, "*The Positive Consequences and Considerations of Terrorism as a Global Problem*" (Arusha, East African Publishers, 2013) pp. 83-118

<sup>16</sup> Kihara J. G, "*Modern Approaches to Tackling Terrorisms*" (Nairobi, Uzima Publisher, 2013) pp. 78-92

<sup>17</sup> Kewell P. G, "*The Trends and Dilemma of Terrorism in Africa and Beyond*" (Chicago, Heinemann Education Publishers, 2011) pp. 68-92

and deaths as well as stress, frustration and mental and physical impairments to the population arising from the bombings, arson and shooting associated with terrorism. Among the communities, societies and sectors in the country, terrorism has created very poor relations, high tension, suspicion animosity, conflicts, grievances, destruction of property and perennial disputes. Specifically, this has been the case between the Muslims and the Christians in the country and among the region in Kenya and has created position tending to lack of cohesiveness, disunity and bad blood<sup>18</sup>

The 1998 bombing of the United States of America embassy in Kenya resulted in deaths of hundreds of Kenyans, injuries and bodily harm to many others and destruction of property of huge amount and great value. It also created high levels of animosity, tension and conflicts between the Muslims and the Christians in Kenya. The recent Westgate attack with similar terrorist activism and tendencies also resulted in deaths, injuries, and maiming, mental and physical impairments among the individuals who were involved. On the national front terrorism in Kenya has resulted in mass transfer of the population, persecution related consequences, forced relocations through immigration and emigration and settlements resulting in the creation of refugee style crisis. Buildings, bridges, government installations and churches, have been the major targets for terrorists in Kenya. Additionally, the foreign embassies, international centers, hotels and educational facilities have not been spared by terrorists in Kenya.<sup>19</sup>

Despite the largely negative consequences associated with the terrorist attacks, Kenya has made various positive strides in the war against terror. This has provided positive fronts resulting in the acquisition of equipment, gargets, machinery and facilities to aid in the fight against terrorism. As part of the antiterrorism strategy, there have been training and development centers, disaster management centers and related programs and proactive team working and forward planning, organization and control through legislation and other informal approaches.<sup>20</sup> The center for disaster management in Kenya has been useful in addressing all forms of disasters that are experienced in Kenya including those resulting from terrorism.

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<sup>18</sup> Kihara J. G, *“Modern Approaches to Tackling Terrorisms”* (Nairobi, Uzima Publisher, 2013) pp. 102-114

<sup>19</sup> Okpombo S W, *“The Principles And Practices Of Effective Human Safety And Security: The Information Systems Approach”* Ghana, Accra, Ecowas Secretariat 2014 pp. 67-73

<sup>20</sup> Gachau P L. *“ICT Application In Public and Private Sector Organization in Kenya”* CCK journal volume 13 No. 3 2013 pp. 37-39

## **6.5 Strategies used in the Fight against Terrorism**

Due to the largely negative and dysfunctional consequences associated with terrorism, various strategies have been developed among societies and communities to combat terrorism. In Kenya, for instances a myriad of activities and action plans have been in place to fight terror. The use of the armed groups with both small and large arms comprising of the Police, Armed forces and other state agencies has been the most popular approach used. The antiterrorism police wing, the Special Forces within the Kenya Defence Forces and the arming of civilian population comprise the key steps in the fight against terrorism in Kenya. Although this is considered as more confrontational approach, sometimes unfavorable and against the international laws, it has turned out as one of the effective ways to counter terrorism. Another approach commonly used in the fight of terrorist activities comprise of direct and indirect legislation. The passage of laws by the national assembly, other personalities, institutions and bodies having the power to make such laws, comprise a fundamental pedigree in the fight against terrorism. The most recent security law 2014 in Kenya that has hitherto been suspended by the courts comprise of the most important steps in the fight against terrorism in Kenya. Laws contribute to legitimacy in the action against terrorist activities.<sup>21</sup>

Training in counterterrorism and related matters has been another step used in the fight against terrorism in Kenya. Almost all learning institutions both public and private have counterterrorism programs. These include the colleges, universities and other public and private institutions. Conflict resolution and peace building efforts also present common denominator in the fight against terrorism. Both forced and non-forced methods have been employed among the communities and at the national fronts to control terrorism. These are conducted by special groups, religious sectors and renowned specialists in the fields of disaster management, counseling and counterterrorism.<sup>22</sup>

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<sup>21</sup> Hussein M K. *“Repercussions of the Terrorist Activities in Kenya”* (Mombasa, East African Publishers, 2012) pp. 87-99

<sup>22</sup> Odiko H. N, *“The Causes of Terrorist Attacks in Kenya”* (Kakamega MMUST press centre, 2013) pp. 54- 69

## **6.6 ICT as a Counterterrorism Tool**

### **6.6.1 ICT Based Tools that are significant in Counterterrorism**

The current counterterrorism approaches require sound and adequate information flows, better planning and strategy development systems, accurate decisions through effective resources mobilization, strong coordination, organization and control mechanism and fast and accurate intelligence on the planning, organization and activities of the terrorists. Additionally, due to the sophistication of the machinery and strategies used by terrorists in their heinous acts, countries and governments all over the worlds need to develop and train their personnel to enable quick and fast but appropriate response to terrorist activities. Today organizations around the globe have adopted the use of ICT and related tools in the fight against terrorism. ICT enables effective planning, decision making, resources mobilization and control and intelligence gathering and dissemination using ICT based tools. Such ICT tools and related technologies help in exposing terrorist plans, maneuvers, tactics and operation and facilitate counter actions from the stakeholders.<sup>23</sup>

One of the most significant development in the war against terrorism in the recent time has been the adoption of ICT based communication and information sharing, intelligence gathering and planning and strategy development systems. ICT based tools have been fundamental in offering effective strategic training and development programs through the provision of timings and resources.<sup>24</sup> Organizations and personnel around the globe have been able to undergo effective training owing to the facilities provided by the computer based technologies. Through such facets as decision support systems in the form of ESS, DSS, MIS among other technologies, ICT has been an effective tool in the making of quick, accurate and less costly decisions. This has great impacts on response to terrorist threats.<sup>25</sup>

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<sup>23</sup> Gachau P. L, "ICT Application in Public and Private Sector Organizations in Kenya" CCK Journal Vol. 13 No. 3, 2013

<sup>24</sup> Steiner D K. "The Outcomes of the Application of ICT in Modern Organizations" (Geneva, Heinemann Publishers, 2011) Pp. 67-93

<sup>25</sup> Khan, F R, "The Role of ICT in the Fight against Terrorism" (India, New Delphi. Pearson International 2012) pp 201-244

The emergence of new ICT tools based on social aspects such as the face book, twitter, blog and other systems have enabled the passage of information in more timely manner and in the process aiding in planning, decision making, resources mobilization and are strong ingredient for effective counterterrorism training and development strategies. These tools have had great influences on the nature of intelligence held by organizations and governments. ICT has proved very useful in the surveillance, forecasting, monitoring and analyzing the activities and operations of the terrorists and other clandestine groupings thereby providing the most critical improvement in the development of strategies and tactics to counter their plans.<sup>26</sup>

### **6.6.2 Capabilities and Limitations of the adoption of ICT Tools as Counterterrorism Strategy**

Over the last decade there has been strong inclination by states and governments towards the adoption of ICT and related tools as counterterrorism strategy. More emphasis today is being placed on the ICT planning processes, decision making processes, communication and information sharing systems, intelligence gathering and dissemination prospects as well as training and development of personnel. Additionally, greater preference has been billed on the application of ICT in resources control, operations organization and implementation, and analysis of plans and strategies geared towards the fight against terrorism. ICT related tools enables accurate, fast, flexible and timely but less costly operations and responses towards terror activities. Through ICT related tools the very complex and cumbersome operations are simplified thereby reducing the overall costs associated with the war against terror. Fewer resources are thus needed in the planning, organization, communication and control mechanism in the war against terrorism than in the physical scenarios. The location of the terrorist hideouts, their plans, strategies and tactics both in the present and in the future, the nature of tools, machinery and hardware possessed by the terrorists could be known in advance more easily then through the physical dimensions. Through ICT based training, personnel and their organizations

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<sup>26</sup> Mwinyi H M, "*Experiences in the Adoption of Computer Technology: Capabilities and Limitations*" Tanzania, Arusa. EAC secretariat journal volume 10 No. 5 2014 pp. 25- 36



gain superior knowledge, develop better response mechanism and effective environmental analysis that results in efficient dealing with terrorism as a threat.<sup>27</sup>

The application of ICT in the fight against terrorism suffers from criticisms and accusations that it is associated with costs of the machinery, hardware, need for constant training and development programs, constant design and redesign of resources and the notion that the tools could be used effectively as counter strategies towards the government plans to fight terrorisms. In this regard ICT tools seem critically expensive and could only be applied effectively by large and established organizations and governments thereby leaving large section of the population and the society vulnerable to terrorist attacks.<sup>28</sup>

The need for continuous training on ICT based systems weighs heavily on the resources, time, facilities and personnel within the country. This creates fatigue, frustration and stress and in the process makes the population more venerable and unable to respond effectively to the terrorist activities. This is also closely connected to the need for more flexibility in the programs, operation and resources application as well as the notion for constant design and redesign of the organizational structures. More significantly the view that the ICT based tools could be used by terrorists as counter strategy portends doom for governments and would work to weaken the position and comprise highly the war on terror. Prior knowledge by the terrorists of the plans, operations and response action will expose the population to more attacks. These among other key limitation have proved detrimental to the use of ICT and related tools for planning, communication and intelligence gathering, analysis and dissemination as counter terrorism strategy.<sup>29</sup>

### **6.6.3 Challenges in the adoption of ICT as a Counterterrorism Strategy**

In the recent past, the use of ICT and related tools as counter terrorism strategy has gained momentum among societies, communities, governments and states as well as regions across the globe. Enormous resources continue to be committed to the acquisition of ICT related tools as

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<sup>27</sup> Mayanja A. M. H, "*The Significance of ICT in the Fight against Terrorist and other Threats*" Kampala, Makerere University Printers 2014, pp. 73-86

<sup>28</sup> Kimani J, "*The Challenges in the Development and Application of ICT and other Methods in the Fight against Terrorism*" Nairobi, KIU journal, Vol 12 No. 7, 2014 pp. 33-37

<sup>29</sup> Kiwanuka N. K, "*Recent Development in the Application of Computer Technology-Research and Intelligence Gathering*" Tanzania, Arusa. EAC Secretariat Journal Vol 10 No. 5, 2014 pp. 41-49

the best systems of ensuring security and safety of citizens and their properties. More training and development programs across universities, vocational colleges and lower level learning institutions are offered in support of the use of ICT in ensuring security and other important developments. Despite these noble efforts, the use of ICT in the fight against terrorism continue to face challenges associated with lack of resources, the perception that it could be away to abet terrorism and lack of support from the influential individuals and groups.<sup>30</sup>

ICT and related tools, more especially the planning systems, communication, intelligence gathering, decision making and training systems require hardware and software besides other computer based technologies. The technologies need to be maintained by use of resources from within the organization. Additionally, there is more need for security and safety of the information and data to be ensured within the systems. This increases the need for more resources within organizations. Countries, governments and states must therefore search for the adequate and specified resources to maintain and control the operations associated with ICT based tools and resources. The susceptibility of ICT tools to be used as counter planning, intelligence and communication by the terrorist groups renders the system unsafe and unsuitable in all circumstances. ICT suffers from high possibility of infiltration and unauthorized access with the result being more attacks or planned attacks by the terrorist groups. This has made the general population, governments and societies develop negative attitude and perception on the application of ICT in the fight against terrorism. This, in the process, leads to lukewarm support of the use of ICT as counterterrorism strategy. Over the years the use of other alternative strategies as counterterrorism tactics made ICT less applied. The use of armed and forceful methods to gain compliance, training and development of the potential counterterrorist fighters, communication and information sharing through peace councils, communal leaders and religious groups have been common owing to their cheapness and simplicity.<sup>31</sup>

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<sup>30</sup> Kimani J, *"The Challenges in the Development and Application of ICT and other Methods in the Fight against Terrorism"* Nairobi, KIU Journal, Vol 12 No. 7, 2014 pp. 38-39

<sup>31</sup> Kiwanuka N. K, *"Recent Development in the Application of Computer Technology-Research and Intelligence Gathering"* Tanzania, Arusa. EAC Secretariat Journal Vol 10 No. 5, 2014 pp. 50-53

## **6.7 Summary of Literature Review**

A close examination and scrutiny of the past and present literature in both published and non published forms points out that since 1998 there have been more terrorist attacks than any time before in Kenya. The year 1998 proved the turning point in the fight against terrorism since this was the year in which the twin bombings of the USA embassies in Kenya and Tanzania were carried out. It has emerged that terrorism has causes and is caused by a variety of factors including political and cultural decisions, inequitable allocation of resources, and religious inclination among others. Terrorism has had more negative consequences than positive outcomes. It leads to deaths, injuries, persecution and mass displacements of the population and forced settlements among other negative impacts. The presence of terrorism and terrorists among the societies has created more innovative and proactive approaches, the need for high skills and knowledge developments, the creation of peace support centers and institutions among other positive developments. Various strategies have been adopted to help reduce terrorism and its related effects. The use of ICT and related tools however happen to be the new norm among organizations and states as the best modality to fight terrorism. ICT based planning, communication and information sharing and intelligence gathering and dissemination processes have proved critical in the fight against terrorism in Kenya and across the globe.

## **7.0 Research hypotheses**

H1i. If ICT based planning system is applied as a counterterrorism strategy then terrorism in Kenya will reduce by 72%.

H1ii. If ICT based intelligence gathering system is applied as a counterterrorism strategy then terrorism in Kenya will reduce by 75%.

H1iii. If ICT based communication is applied as a counterterrorism strategy then terrorism in Kenya will reduce by 60%.

## **8.0 Research Methodology**

The study adopted the exploratory design to research. The population of the study comprised of the security, terrorism and information technology experts and professionals stationed in Nairobi and Mombasa counties. Out of a population of one hundred and sixty eight (168) professionals

targeted, the study selected a sample of forty nine professionals as its unit of analysis. The data used in the study were obtained from the primary and secondary sources. The instruments utilized in the collection of data comprised of group interviews, questionnaires (semi structured) and analysis of documents.

The analysis of data was undertaken through the use of descriptive statistic tools. Use was made of the measures of central tendency, measures of dispersion and frequency distribution systems. In this regard, computation was undertaken in respect of the means, mode standard deviation and percentage and average scores. The study outcomes have been presented using descriptive statistics methods and systems including use of frequency distribution charts, tables and graphs. The values for the study outcomes have been presented in percentages, percentage averages or averages.

## **9.0 Conceptual Framework**

A conceptual framework is a diagrammatic or graphical representation of the variables under the study. It shows the relationship that exists between the independent variables and dependent variable in the study. For the purpose of this study the conceptual framework as indicated below is a diagrammatic representation between the independent variables of ICT based planning process, ICT based communication process and ICT based intelligence gathering systems and the dependent variable of the war on terrorism.

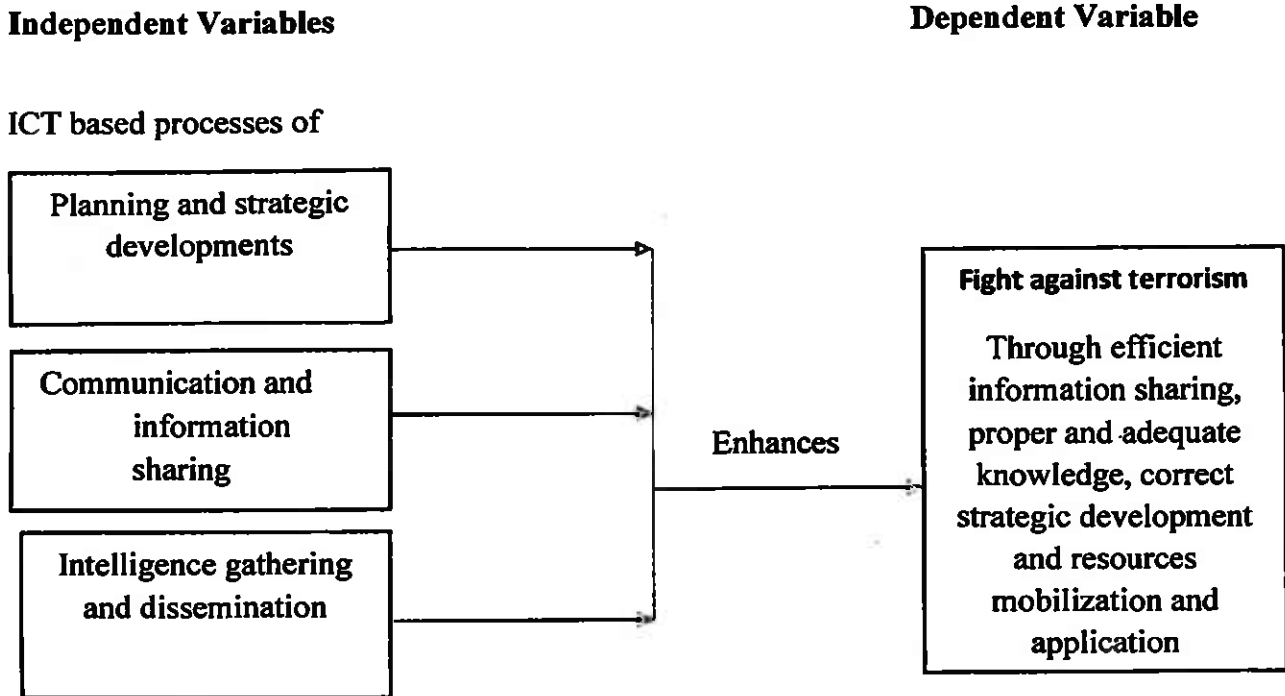
As indicated in the diagram below, the ICT based planning process would enhance the war on terrorisms. The use of ICT based tools in surveillance, forecasting and monitoring would reduce the activities of terrorists and in the process reduce terrorism in Kenya.

In addition, the application of ICT based communication and information sharing process would contribute highly to the reduction in terrorist activities. This is achieved through ICT tools such as telecommunication, video conferencing, teleconferencing and the adoption of emerging technologies such as Facebook, Twitter, Whatsapp and blog through information about the activities of terrorists can be passed easily and between different organization within the shortest time possible, thus enabling the planning and responses activation

The application of ICT based intelligence gathering and dissemination process would also highly enhance the war on terrorism. ICT based tools of voice capture, image capture, and voice

syntheses would make it practical to determine the activities and hide outs of the terrorist as well as knowledge of their future plans, strategies and operations.

**Figure 1.1 Conceptual Framework**



**10. Theoretical Framework**

The problem of terrorism and related activities has been the dominant subject in the world today and probably in the near future. Terrorism has largely negative effects and consequences associated with deaths, injuries, commission of crimes, rising levels of poverty and deprivation of individual rights, liberties and freedoms. Terrorism is caused by variety of factors including political decisions, poor economic and governance policies and increased poverty levels among the population. When the population is rendered vulnerable and unable to meet their basic and fundamental requirements they resort to violence, intimidating and retaliatory tactics to gain power with the result being arson, bombings, assaults, felony among other internationally recognized crimes. Because of the more negative and dysfunctional results associated with terrorism including violence, intimidation, persecution and destruction of poverty there has been high need among nations and other organizations to reduce terrorism and its effects. The

strategies in use in fighting terrorism comprise of the use of armed personnel and resources, peace conferences, the application of research and developments and lately the application of ICT based tools.

This study, about the usage of ICT as counterterrorism strategy, is based on the instrumental theory of terrorism. Developed by Martha Crenshaw, the theory advocates that terrorism is a means of getting political power and is largely associated with violence and conflict. The theory further advocates that the governing organizations (government) and the governed or section of the governed are in a typical state of conflict with each party's actions aimed at influencing the other.

The theory suggests that terrorism is one form of violent coercion, a bargaining process based on the power to hurt and intimidate as a substitute for the use of overt military. In other words the theory provides that terrorism is based on the power to hurt other than the conventional military strength.

Another key provision of the instrumental theory revolves around the notion that terrorism is meant to produce a change in government position but not the destruction of military power.

According to the instrumental theory, the non-state organization using terrorism is assumed to act on the basis of calculation of the benefits or value to be gained from an action, the costs of the attempts or failure, the consequences of the action or the probability of success. Terrorism actions may occur for several reasons. The major reasons include the notions that the value sought is overwhelmingly important, the cost of trying are low, the status quo is intolerable and the probability of succeeding is high.

The theory suggests that extremist groups may act out of anticipation of rewards or out of desperation in response to an opportunity or threat. The theory concludes that terrorism by its very nature is a strategy of surprise attack and is considered a necessity for small groups who must thereby compensate for the weaknesses in numbers and destructive capacity.<sup>32</sup>

The relevance of the theory to the field under study is open and evident. Terrorism in Kenya has been associated with predominantly Muslim community who have been involved in destructive

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<sup>32</sup> Martha Crenshaw, *"Inside Terrorist Organizations"* (New York, Columbia University Press, 1998)

activities through bombings, arson and use of arms in anticipation for rewards. The attack of the US Embassy in 1998 and the current wave of attacks organized by clandestine groups from Somalia, Southern Sudan and within Kenya have been associated with the groups' demand for power and state positions.

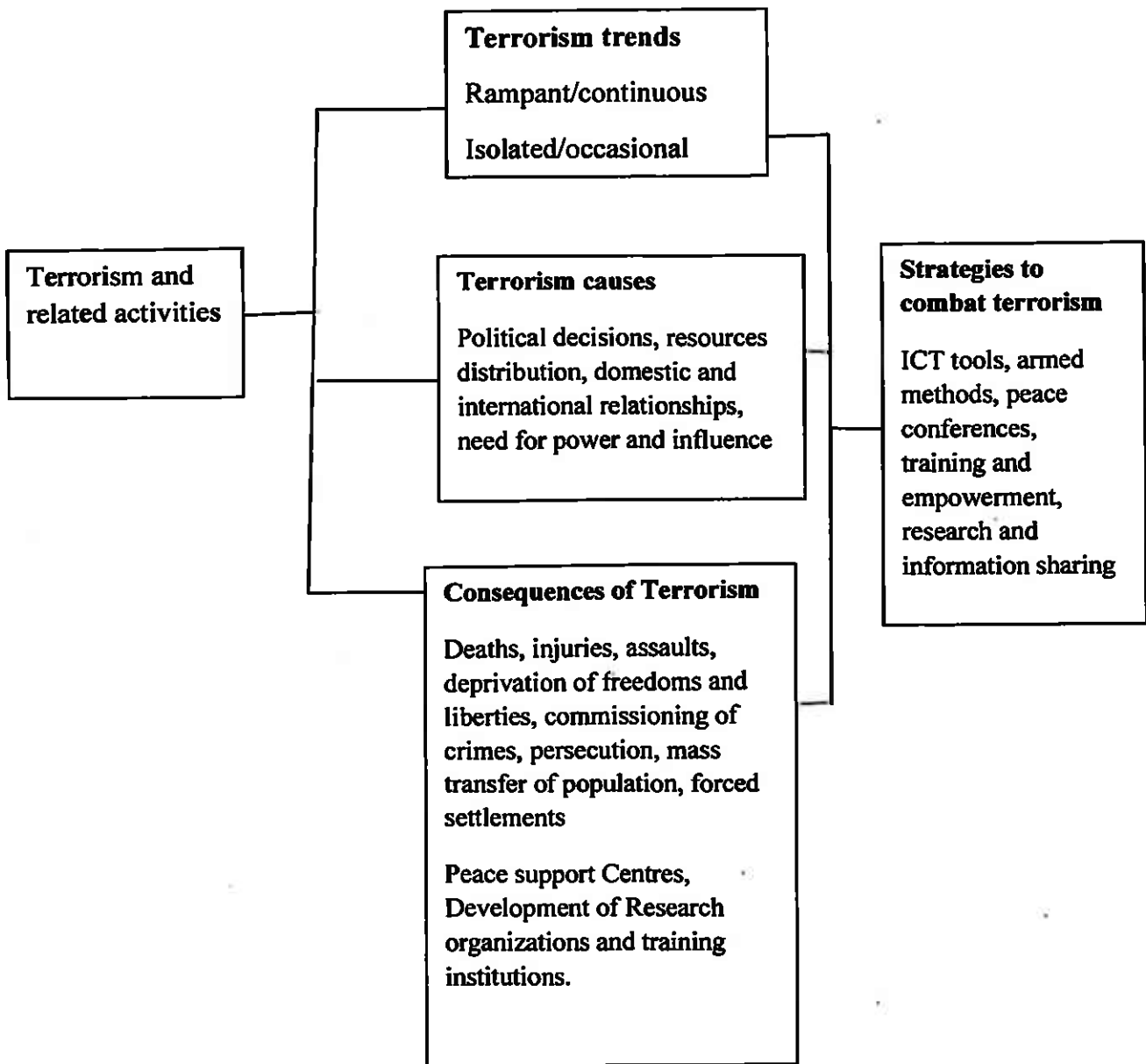
Through terrorism actions, Kenya and neighbouring states have experienced more dysfunctional status in forms of deaths of citizens, cases of human rights violations, destruction of property and infrastructure and poor economic, social and technological developments.

The current state of the tourism industry along the coastal region of Kenya is a manifestation of terrorist activities. Once considered the boon of the economy of Kenya, tourism has slumped due to fear of terrorist acts. The education sector and the infrastructural networks have too suffered tremendously from terrorism related activities.

Today the country has gained the status of unsafe and insecure destination owing to disturbances associated with terrorist organizations operating from within and without the country. It is evident that no single urban centre in Kenya is safe from terrorism.

All along, terrorists in Kenya after their heinous actions, have complained of being marginalized, discriminated against in all sectors and under threat from state establishments. In this regard, they justify their actions as related to their defence and seeking the ears of the political leadership and influencing their decisions.

**Figure 1.2 Elements of Counterterrorism around the Globe**





## **11.0 Organization of the study**

This study was divided into five chapters; chapters one, two, three, four and five. Chapter one was about the introduction and contains the elements such as background to the study, statement of the problem, objectives of the study, research questions, literature review and research methodology. The chapter also contains the hypotheses of the study, the organization of the study, the conceptual framework and the theoretical framework upon which the study was based.

Chapter two is about the examination of the role of ICT based planning process. The chapter examines the ICT based planning tools, their role as counterterrorism strategies, and the capabilities and limitation of the ICT tools in the fight against terrorism.

Chapter three is about the assessment of the ICT based communication process as a counterterrorism strategy. The chapter diagnosed such processes as telecommunications, video conferencing, teleconferencing and electronic meetings as communication systems and their role as counterterrorism strategies and the merits and demerits of ICT based communication process in the fight against terrorisms in Kenya and all over the world.

Chapter four is about the determination of ICT based intelligence gathering process as counterterrorism strategy. This chapter establishes the role of ICT based intelligence gathering processes in the fight against terrorism in Kenya and the advantages and disadvantages of ICT based intelligence gathering process as a tools for fighting terrorism.

Chapter five is about the analysis of data, interpretation of the findings, presentation of study outcomes and provision the summary of findings, conclusion and recommendations arising from the study.

## CHAPTER TWO

### ICT BASED PLANNING PROCESS AND TERRORISM

#### 2.1 Introduction

Since its inception and adoption among organizations as the official platform for conducting transaction, development of processes and systems and undertaking operation, ICT has contributed to improved developments in all spheres. ICT has brought transformations and innovative approaches in the fields of engineering, manufacturing, security, marketing, human resources, productions and operations and service industry.<sup>33</sup>

#### 2.2 Benefits of ICT Planning in Counterterrorism

ICT and related technologies continues to provide accurate, correct, flexible, low costs services and products in the forms of communication, planning and strategy developments, research and intelligent gathering among other important areas. Through the application of social media such as Whatsapp, Youtube, Facebook, Twitter and other more established systems such as email, voice mails and video conferencing, computer technology today serve as the best tool for communication both in the formal and non-formal structures.<sup>34</sup> The communication function of the computer technology has largely been associated with the developments of the telecommunication networks such as the LAN, WAN and WWW among other networks. These technologies enable faster, accurate, reliable, flexible and simple information flows and sharing among all the stakeholders within the shortest time possible.<sup>35</sup> ICT has been used as an excellent tool for voice capture and analysis, image capture, configuration and synthesis, tracking of location of people and objects, analysis and provision of adequate and correct information about organizations, peoples and other aspects. Through ICT, the processes of data capture, information location and tracking, image identity and configuration and high probable data filtering is highly accomplished. Additionally ICT has been a perfect tool in environmental

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<sup>33</sup> Ochoudho S O, *“ICT Tools and the Application in Security and Safety Issues among East African Countries”* (Kampala, Longman Publishers, 2013) pp. 103-128.

<sup>34</sup> Graham H. T, *“New Considerations in the Management of Global Threats: Terrorism and HIV and AIDS”* (Harlow, Essex Prentice Hall Publisher, 2010) pp. 305-322

<sup>35</sup> Kiwanuka N. K, *“Recent Development in the Application of Computer Technology-Research and Intelligence Gathering”* Tanzania, Arusa. EAC Secretariat Journal Vol 10 No. 5, 2014 pp. 32-35

scanning/surveillance, monitoring and forecasting and problem analysis thus aiding in the organizational planning processes.<sup>36</sup>

It has been observed that both the strategic and tactical planning processes among organizations do result from the information technologies comprising of MIS, DSS, KWS, TPS and ESS. The use of ICT has resulted in accurate, low costs and inexpensive plans that are not only comprehensive but also adequate and long term in approach.<sup>37</sup> In the security sector the use of ICT and related tools have ensured high safety standards, prevention of vices and commission of crimes, excellent security of citizens and properties through increased awareness and understanding, information provision and capture of images and voices and subsequent analysis of the same. The ICT continues to play a fundamental role despite the criticisms related to costs, complexity, need for high resources and high levels of training and development programs.

A journal from Harvard business school stated that the current trends in the activities and action of terrorisms and related operation requires better planning and effective strategy development. Planning aids in resources mobilization, resources design, logistics requirements knowledge and development of better systems operation and processes to help fight terrorists. The journal noted that anti-terrorisms planning system may be either short term or long term or strategic or tactical in nature and would be undertaken through individual or group approaches. Whereas the strategic long terms and group based processes portend positive development in the fight against terrorism with unanimous favorable outcomes, the application of the tactical and individual based plans contribute to the temporary benefits which are largely dysfunctional in nature.<sup>38</sup> The application of the strategic planning dimensions thus requires the use of modern technology (ICT), development of better organizational culture, effective design of structures and communication and information sharing processes and having a more proactive instead of reactive mind set.

ICT today happen to be the most important tool in planning processes in both private and public organizations and is important in structural design, communication information sharing and

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<sup>36</sup> Khan, F R, "*The Role of ICT in the Fight against Terrorism*" (India, New Delphi. Pearson International, 2012) pp. 201-244

<sup>37</sup> Zuma S, "Steps taken by the Governments to Deal with the Problems related to Terrorisms" KIM Journal Vol. 3 No. 5, 2013 pp. 15- 22

<sup>38</sup> Kihara J. G, "*Modern Approaches to Tackling Terrorisms*" (Nairobi, Uzima Publisher, 2013) pp. 78-92

decision processes and flexible cultural developments that aids in strategy developments.<sup>39</sup> In today's world and in the future, effective planning will require prior and advanced knowledge of the competitor's tactics, objectives, strategies, activities and actions. Additionally, prior knowledge of the tools, equipment, machinery and technology and their operation schedules is required. Such knowledge would aid an organization in the development of counter operation strategies. Although this scenario has been fundamentally sound in the business sector, in the security sector the fight against terrorism today has necessitated the need for forecasting, scanning or surveillance, monitoring and analyzing the environments with a view to coming up with a more viable counter strategy. The use of ICT and related tool such the social media, models and systems assists in environmental scanning or surveillance, monitoring, forecasting and analysis. ICT enables the provision of the correct set of information and data on the events around the globe, helps identify the kind of resources, equipment and machinery required to fight terrorists as well as the nature of logistics required for effective combating and other related anti-terrorism strategies.<sup>40</sup>

Through a study conducted at the EU headquarters in Brussels, Belgium on the impacts of the application of ICT as a counter terrorism strategy, it was declared that the application of ICT in the development of anti-terrorism plans would greatly reduce the terrorist activities, action and operation around the globe. The study findings revealed that as it has happened in the USA where ICT related tools such as drones, environmental scanners and GPS among other tools have successfully been used in the scanning/surveillance and monitoring the environments, the application of ICT related tools in Kenya will greatly help in the reduction of terrorist activities. The study findings concluded that ICT based anti-terror planning system will ensure the correct amount of resources in terms of personnel, equipment, machinery and other logistics.<sup>41</sup> Additionally ICT does enable the involvement of all the stakeholders in the anti-terror operations in Kenya through highly collaborative and cooperative approaches. It would enable team

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<sup>39</sup> Okpombo S W, "*The Principles and Practices of Effective Human Safety and Security: The Information Systems Approach*" Ghana, Accra, Ecowas Secretariat 2014 pp. 67-73

<sup>40</sup> Odenyo H. R, "*Preventing the Actions and Plans of Terrorist Groups through the Use of Current Computer based Technology*" (Nairobi, Government Printers, 2011) pp. 71-79

<sup>41</sup> Griffins W. H, "*Essentials to Successful Dealing with Terrorism*" (San Diego, Prentice Hall International, 2009) pp. 708-723

approach to planning with the results being a more effective strategy in the fight against terror.<sup>42</sup> During the last decade, the world over, the use of ICT in planning has transcended both profit and non-profit organization. Among majority of countries, the use of ICT tools such as drones, scanners, CCTV tools and other related devices have assumed wider and greater dimensions. In those countries where ICT has been put to effective use in the planning process, there has been reported high reduction in crime rates by over 70%. USA rarely experiences criminal and terrorist related activities on wider scale as in the other parts of the world.<sup>43</sup> This could be attributed to her high usage of computer based technology in the monitoring and forecasting of the activities of the criminal groups including terrorists. The development of drones and their capabilities to monitor and detect has been a great revelation in the fight against organized criminal groups around the globe. ICT has been an important tool in the mobilization of resources, design of resources and development of anti-terror schedules.<sup>44</sup>

The nature of operation in the fight against terror in Kenya has been characterized as being highly wasteful, inefficient and non-coordinated with more resources geared towards non-essential programs. The National Police Service, the Kenya Defense Forces and other armed groups have all been involved in the fight against terrorism with utmost confusion resulting in increased attacks, deaths, injuries forcible transfers of the population arson and other international related crime being meted by the terrorists. This state of affairs could be blamed on the lack of proper planning and strategy to fight the terrorists. It has been noted that there has been more use of the tactical short term planning, with individual based approaches and without the involvement of key stakeholders thereby reducing the nature of coordination required for effective fight against terrorists.<sup>45</sup> The Garissa university attack is a classic example of the consequences of poor planning in the war against terror. The application of ICT would act to indicate the amount, nature and type of resources required at the host spots.

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<sup>42</sup> Odhiambo T. K, "*Combating Terrorism through the ICT Sector Tools*" (Nairobi, KPC Press, 2012) pp. 31-37

<sup>43</sup> Ojukwu J. R, "*Challenges in the Development of Anti-Terrorism Strategies*" (Lagos, International Press Centre, 2012) pp. 72-89

<sup>44</sup> Song D. K, "*The Effects of Terrorism among Business and Non-business Sectors*" (Seoul, Pearson International Publishers, 2011) pp. 48-65

<sup>45</sup> Okafor D. G, "*Terrorism as a New Menace: Causes and Consequences*" (Abuja, New Regional Publishers, 2012) pp. 134-145,

### **2.3 Conclusion**

This study sought to determine the impacts of ICT based planning process as a counter terrorism strategy. The study was further based on the first hypothesis that if ICT based planning process is adopted as anti-terrorism strategy then terrorism would reduce by 65%. From the information generated from the present and previous literature on the use of ICT based planning in the fight against terrorisms as presented in this chapter of the study, it has emerged that indeed ICT based planning process has huge and tremendous developments as anti-terrorism tool and would greatly contribute to reduction in terrorism and related activities.

ICT based tool of planning provide accurate, correct, flexible, low costs services and products in the forms of communication, planning and strategy developments, research and intelligent gathering among other important actions. ICT based Planning aids in effective, resources mobilization, resources design, logistics requirements knowledge and development of better systems and processes to help fight terrorists. ICT based tools aids in the development of long term and strategic planning and enables the inclusion of groups from public and private organization. This is achieved through effective structural design, communication and information sharing and decision processes and flexible cultural developments that aids in strategy development. The use of ICT and related tool such as the social media, models and systems assists in environmental scanning or surveillance, monitoring, forecasting and analysis. ICT enables the provision of the correct set of information and data on the events, around the globe, helps identify the kind of resources, equipment and machinery required to fight terrorists and the nature of logistics required for effective combating of terrorism and other related anti-terrorism strategies.

## CHAPTER THREE

### ICT BASED APPROACHES TO INTELLIGENCE GATHERING

#### 3.1 Introduction

The most critical and significant step in the fight against terrorism, engineering developments, innovative and change approaches and making organizations more effective has been intelligence gathering and related research activities. Comprehensive, timely and accurate intelligence is a source of superior knowledge, enables accurate and correct predictions of actions, explanations of key events, conditions and processes among other important benefits.<sup>46</sup> Intelligence gathering is an essential part of an organization functioning today and constitute the most elementary function for the performance, survival, competitiveness, growth and development programmes. The concept of intelligence gathering through research can be achieved through the application of traditional manual system or the modern electronic based systems. Although majority of organizations and agencies still prefer the use of the traditional manual system in research, the use of computer based tools have gained huge ground and is currently the norm and practice among many organizations, countries, regional blocks and continents. Effective intelligence gathering process minimizes the costs of identifying the location of data, collection of data, preparation of data, analysis and presentation of data for use. In all these information processes, ICT has proven useful in the provision of accurate, timely and relevant information thus enabling quick and accurate responses to the prevailing conditions.<sup>47</sup>

#### 3.2 Benefits of ICT based Intelligence Gathering

One of the most critical and significant development in the war on terror has been the development, application and adoption of ICT based intelligence gathering, storage and communication methods. As opposed to the manual based research and intelligence gathering, the use of ICT as a tool for research has been found to be very accurate, fast and cost effective with the most relevant and flexible outcomes.<sup>48</sup> ICT contributes to reduction of complex intelligence gathering processes to simple versions with the fundamental ability to be clearly

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<sup>46</sup> Odhiambo T. K, "*Combating Terrorism through the ICT Sector Tools*" (Nairobi, KPC Press, 2012) pp. 31-37

<sup>47</sup> Kihara J. G, "*Modern Approaches to Tackling Terrorisms*" (Nairobi, Uzima Publisher, 2013) pp. 63-67

<sup>48</sup> Ojukwu J. R, "*Challenges in the Development of Anti-Terrorism Strategies*" (Lagos, International Press Centre, 2012) pp. 65-67

understood. ICT essentially contributes to the identification of the terrorist actions, activities, and operations before hand thus helping in detecting their next courses of action before they strike. It is contended that the use of ICT as opposed to the manual system has been associated with huge reduction in the costs and logistics required in intelligence gathering with the net effect being quick responses to the threats and knowledge of aftermath treatments.<sup>49</sup> Through the use of ICT in intelligence gathering, analysis, presentation and dissemination, countries have been able to wade off the threat posed by their enemies, clandestine groups, and other organized criminal gangs. This has been the case in USA and Europe that have been in the forefront of the application of ICT as a better terrorism intelligence gathering strategy. In most instances, the fight against terrorist has been very easily achieved in the United States of America owing to the use of computer based technology in the conduct of intelligence gathering<sup>50</sup>

Through a study conducted at the IGAD secretariat on the trends of terrorist attacks in Kenya over the last decade it was noted that there have been increased terrorism activities in Kenya despite the presence of the national intelligence networks, security institutions and bodies. Hardly a month passes in Kenya without reporting of terrorism related activities in the forms of death, bombings, injuries, arsons and shootings. The study finding revealed that from Garissa to Busia the preoccupation today is the fight against terrorism. The study suggested that the rampant occurrences of terrorist activities could be attributed to the nature of intelligence gathering system being undertaken by the Kenya security forces. There has been frequent use of the manual gathering of intelligence and information about terrorism with use being made more of the human being as security agents.<sup>51</sup> The study concluded that although the use of the manual intelligence gathering system is popular among many states and countries more so in Africa and Asian countries, the process has high levels of inaccuracies, incorrect information inputs, and may be counterproductive in resources, human adjustments and logistical requirements. The application of ICT based intelligence gathering, storage and dissemination

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<sup>49</sup> Griffins W. H, "*Essentials to Successful Dealing with Terrorism*" (San Diego, Prentice Hall International, 2009) pp. 654-667

<sup>50</sup> Kihara J. G, "*Modern Approaches to Tackling Terrorisms*" (Nairobi, Uzima Publisher, 2013) pp. 55-60

<sup>51</sup> Khumalo H S, "*Terrorism and its Consequences-A Considered view of the African Continent*" (Durban University, University Press, 2013) pp. 128-130



system boast of greater speed, accuracy, correctness and possible connectivity and information sharing among the players thus enabling swift and quick responses to acts of terror.

Recent events in Kenya have signaled need for a shift in responses to terrorism activities. From West gate to Kikambala attacks the rate and scale of attacks have been tragic resulting in deaths, desperations, forced settlements, mass transfer of the Kenya population, increased conflicts and suspicions among the citizens. The attacks on the Kenyan people by the Al-Shabaab terrorist group could be attributed to lack of proper planning, intelligence gathering and analysis of the terrorist actions. Majority of the approaches in the fight against terrorism are manual systems with little use of ICT and related tools. A manual system by its very nature is inaccurate, time consuming, rigid and immobile. The application of ICT in the intelligence gathering process will greatly reduce the activities of terrorism in Kenya and the entire east Africa region. Like in the USA and Europe ICT will work to speed up the response through the provision of more accurate and timely information that enable the tracking down of terrorists. The location of the terrorists would also effectively be determined with the result being ease in attacks and counterattacks. This is despite the notion that ICT can be counterproductive since the same tools can effectively be used by the gangs to monitor the country or organization as well as their maintenance requirements and increased training and development demands.<sup>52</sup>

Although Kenya has designed more strategies in the fight against terrorism, exerted efforts needs to be expended towards the elimination of terrorists. This can be achieved through the adoption of the use of ICT in the planning, communication and intelligence gathering processes. The information provided by ICT through intelligence gathering has the pedigree of high accuracy, relevance and simplicity as well as high flexibility. Additionally, ICT results in low costs and resources, more information at the least time possible and increased mobility in response to the actions and activities of terrorists.<sup>53</sup> These would really work to aid Kenya in the war against terrorism.

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<sup>52</sup> Khaemba P. K, "The Importance of ICT as a Tool for Ensuring Security" MMUST Journal volume 3 No. 8 2013 pp. 17- 25

<sup>53</sup> Odenyo H. R, "Preventing the Actions and Plans of Terrorist Groups through the Use of Current Computer based Technology" (Nairobi, Government Printers, 2011) pp. 71-79

### **3.3 Conclusion**

**This study sought to assess the impacts of ICT based intelligence process as a counter terrorism strategy. The study was based on the hypothesis that if ICT based intelligence gathering process is adopted as counter terrorism strategy then terrorism would reduce by 72%. From the present and past publication of the impacts of ICT based intelligence gathering on the fight against terrorism it has emerged that indeed the adoption of ICT based intelligence gathering process contributes to tremendous and positive developments in the fight against terrorism and would work towards the reduction of terrorism and terrorist activities. ICT based intelligence gathering, storage and communication methods have been considered a major development in the war against terrorism. The use of ICT as a tool for research has been found to very accurate, fast and cost effective with the most relevant and flexible outcomes. ICT contributes to reduction of complex intelligence gathering processes to simple versions with the fundamental ability to be clearly understood. ICT essentially contributes to the identification of the terrorist actions, activities and operations. ICT based intelligence gathering process has been associated with huge reduction in the costs and logistics required in intelligence gathering with the net effect being quick responses to the threats and knowledge of aftermath treatments. The application of ICT intelligence gathering, storage and dissemination boast of greater speed, accuracy, correctness and possible connectivity and information sharing among the players thus enabling swift and quick responses to acts of terror.**

## **CHAPTER FOUR**

### **ICT BASED COMMUNICATION AND TERRORISM**

#### **4.1 Introduction**

Today more than ever before terrorist have become more sophisticated in their tactics, actions, activities, plans and operations thus outwitting the security agencies and operatives in their maneuvers. The result has been negative consequences resulting in deaths, injuries, fear, despondency and even mass transfers of the population. Effective combating of terrorist activities and action requires sound and better communication and information sharing systems to enable planning, decision making, control, prediction and forecasting as well as monitoring of the activities and courses of actions.<sup>54</sup>

#### **4.2 Benefits of ICT based Communication**

The current trends and operation among the terrorist cells calls for the adoption of more flexible, accurate and faster way of information exchange between the agencies involved in the fight against terrorists. These scenarios call for the application of the ICT with its related tools and characteristics of effective and efficient information processing, storage and dissemination.<sup>55</sup> ICT as opposed to the manual system of communication provides a secure, faster, economical and flexible communication and information sharing functions. This is despite the fact that most organizations in the public sector have not embraced ICT as a tool in most of their operations citing its costs, cumbersomeness in use, need for constant training and developments and constant design and designs programs.

The demand for effective and all round communication system with instant feedbacks is a prerequisite for effective operation today in the security sectors. Additionally, the security sector activities require faster, accurate and correct information input so as to be undertaken effectively. These are better provided by the ICT based tools such as telecommunication technologies, information systems technologies and emerging technologies. The use of computer technologies

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<sup>54</sup> Tembo P. W, "*Terrorisms and its Outcomes on the Population and Infrastructure*" (Durban, Orange Free State University Press, 2013) pp. 211-219

<sup>55</sup> Griffins W. H, "*Essentials to Successful Dealing with Terrorism*" (San Diego, Prentice Hall International, 2009) pp. 523-541

has provided high level of innovation, creativity and effectiveness and has been applied in counterterrorism in the location of terrorist cites, planning for the counter terrorist operations. This results in quick and faster responses in the fight against the terrorists. ICT based communication system is more cost effective, highly flexible and less time consuming then the manual systems of communication since it offers immediate feedbacks and knowledge of the results.<sup>56</sup>

The war against terrorism in general requires a concerted effort from all the stakeholders who should be clearly and fully informed about the plans and priorities, decisions to be made and control systems. The activities need to be neatly coordinated and organized if success is to be achieved. Lack of communication leads to poor plans, wrong priorities, poor coordination and organization systems with the results being in effective responses to the terrorists.<sup>57</sup> With largely manual systems of communication which offer no flexible and timely feedback has been a contributing factor in the slow response by the security agencies to counter acts of terror. The Kenyan war on terror may not be won with the current communication and information sharing set up that is composed of more of human elements, high rigidity, and with high inputs on time and resources. The use of ICT based communication strategies would drastically work to reduce the operation of terrorists by enabling the security agencies to respond more effective to their maneuvers and plans.<sup>58</sup>

The current state of increased and concerted terrorist activities in Kenya, east African region and Africa at large has resulted in more dysfunctional circumstances for the citizens and the country at large. Terrorism has affected the economic plans, political agenda, infrastructural developments and more importantly the tourism sector in Kenya. The fight against terrorism has been going on for a long time but without much success due to the manual based communication systems and practices, intelligence gathering networks and planning and strategy development systems. The use of the non-ICT based system in the communication and information sharing among the security forces in Kenya has resulted in incorrect information inputs that are not only

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<sup>56</sup> Kiwanuka N. K, "*Recent Development in the Application of Computer Technology-Research and Intelligence Gathering*" Tanzania, Arusa. EAC Secretariat Journal Vol 10 No. 5, 2014 pp. 41-49

<sup>57</sup> Pullins S. G, "*The need for and Relevance of the Antiterrorism Strategies Formulation and Development among States and Regions*" (Liverpool, Pearson International, 2012) pp. 183-197

<sup>58</sup> Emenike, H D Husein L M \$& Omar H M, "*Counterterrorism Activities and Approaches, the ICT Perspective*" (Abidjan, Regional Security Press Centre, 2012) pp. 93-126

inaccurate but also inflexible and costly to operate.<sup>59</sup> The application of ICT based tools in the fight against terrorism more so in communication and information sharing will greatly enhance the operations of the fight against terrorism and possibly eliminate the acts of terror. ICT enables mass communication and faster information transfer with quick and reliable feedback that is required in the fight against terrorism.

#### **4.3 Conclusion**

Thus study sought to establish the impacts ICT based communication process as counter terrorism strategy. The study was also based on the hypothesis that if ICT based communication process is adopted in the fight against terrorism then terrorism would reduce by 75%. From the literature under review in this chapter of the study, it has been established that ICT based communication process has positive impacts on the war on terrorism and its adoption would reduce terrorism activities by huge degrees. It has emerged from the literature that ICT as opposed to the manual system of communication provides a secure, faster, economical and flexible communication and information sharing functions. This is despite the fact that ICT as a tool is faced with hurdles related to costs, cumbersomeness in use, need for constant training and development and constant designs. Combating of terrorist activities and actions requires sound and better communication and information sharing systems to enable planning, decision making, control, prediction and forecasting as well as monitoring of the activities and courses of actions. ICT based communication process facilitates the adoption of more flexible, accurate and faster ways of information exchange between the agencies involved in the fight against terrorists. ICT has provided high level of innovation, creativity and effectiveness thus resulting in quick and faster responses in the fight against terrorism. ICT based communication system is more cost effective, highly flexible and less time consuming than the manual systems of communication since it offers immediate feedbacks and knowledge of the results. The use of the ICT based system in the communication and information sharing among the security forces around the globe has resulted in huge reductions of terrorist activities with the result being better and organized planning, intelligence gathering and appropriate responses

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<sup>59</sup> Fairley P, G, *"The Perception about the use of ICT as a Counterterrorism Strategy"* (USA, Boston McGraw-Hill, 2012) pp. 204-221

## **CHAPTER FIVE**

### **DATA ANALYSIS, INTERPRETATION, SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS**

#### **5.1 Introduction**

The study sought to investigate the role of ICT as a factor in the fight against terrorism. The study was concentrated in Kenya and covered the period running from 1998 to the year 2013. The aspects under investigation included the trends of the terrorist activities in Kenya from 1998 to 2013, the effects or impacts of terrorism on the population and the strategies in place to fight it. Data editing and reconciliation were done before the data analysis was undertaken. This was paramount to remove any incoherence and irrelevance in data and was also essential to avoid reaching wrong conclusions and drawing wrong inferences. Data was entered into the SPSS V18.0 for windows. The data analysis was supplemented by using other computer software packages like Microsoft Excel.

#### **5.2 Response Rate**

A total of forty nine (49) questionnaires were produced and administered to the sampled categories of respondents. At the end of the study thirty four (34) questionnaires were returned, coded and analyzed. The overall response rate was therefore 69.4% with the majority of the respondents being Antiterrorism Experts which attracted a response rate of 73% while the minority were government employees working in the security and terrorism sector who attracted a response rate of 66.7% as recorded in table 5.1 below. The response rate was impressive among all the categories of the respondents for the study since over half of the respondents responded. This showed their approval and the success of the research.

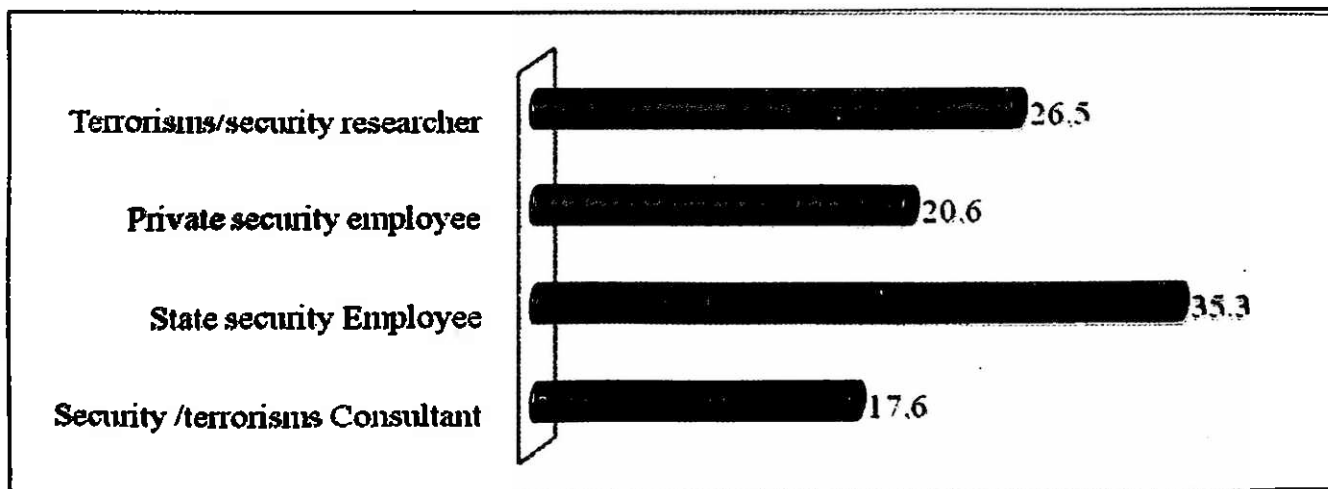
**Table 5.1 Response Rate**

<b>Category of the population</b>	<b>Sample Size</b>	<b>Those who Responded</b>	<b>Response Rate</b>
Consultant	9	6	66.7%
Private Security Employees	14	10	71.4%
Government Security Employees	11	7	63.6%
Antiterrorism Experts	15	11	73%
<b>Total</b>	<b>49</b>	<b>34</b>	<b>69.4%</b>

**5.3 The designation of the respondents**

When asked to state their levels of designation in the security and counterterrorism sectors, the respondents provided varied responses as indicated in figure 5.1 below:

**Figure 5.1 The designation of the respondents**



From figure 5.1 above, the study attracted nearly all parties from all the departments in the security sector. 35.3% of the respondents stated to be employees serving with government organs. This was followed by 26.5% of the respondents who stated to be employees serving as counterterrorism and security experts. Whereas slightly more than 20% the respondents stated to be employees serving with private security organs, the rest 17.6% the respondents stated to be

serving as consultants in the security and counterterrorism. This finding denotes that respondents had a fair to high degree of knowledge in the area under investigation by the study.

#### **5.4 Level, Causes and Challenges of Terrorism in Kenya 1998 to 2013**

##### **5.4.1 The level of terrorist activities in Kenya from the year 1998 to 2013**

When asked to state the level of terrorist activities in Kenya from the year 1989 to 2013 respondents provided varied responses as indicated in table 5.2 below:

**Table 5.2 level of terrorist activities in Kenya after the year 1989 to 2013**

<b>Variable</b>	<b>Frequency</b>	<b>Percent</b>
Rampant/ continuous/fierce	25	73.5%
Isolated/ periodic/ non fierce	9	26.5%
<b>Total</b>	<b>34</b>	<b>100%</b>

From the table 5.2 above majority (73.5%) of the respondents were of the view that there has been rampant/continuous/fierce and concerted terrorist activities in Kenya from the year 1998 to 2013. Less than 27% of the respondents were of the view that there has been Isolated/ periodic/ non fierce terrorist activities in Kenya from the year 1998 to 2013.

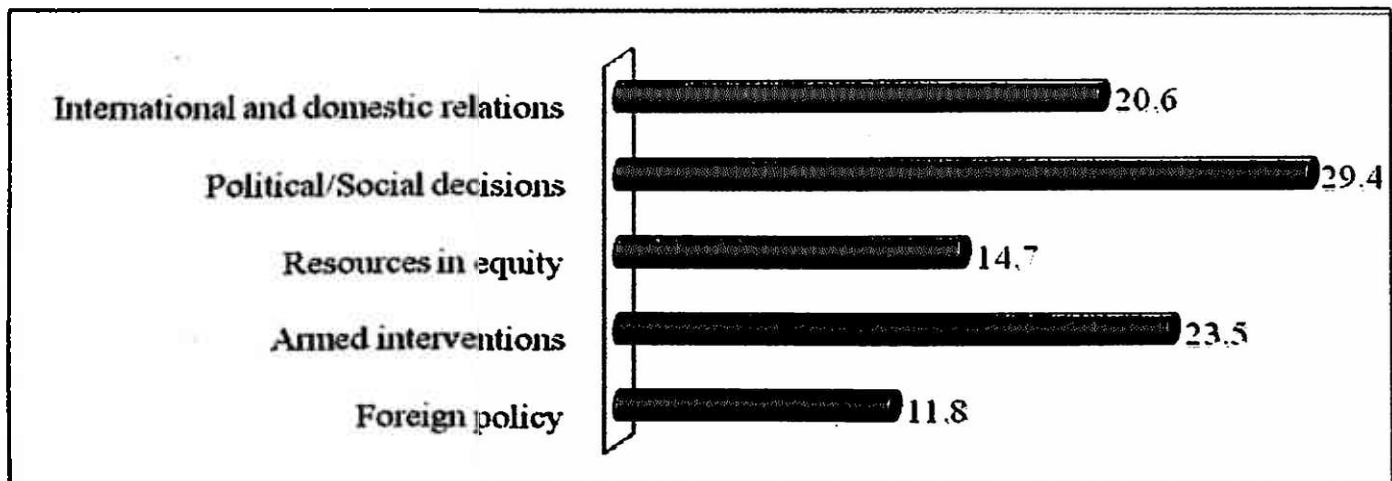
This finding indicates that there has been rampant/continuous/fierce and concerted terrorist activities in Kenya from the year 1998 to 2013. This finding borrows heavily from the instrumental theory of terrorism that proposes terrorism could be rampant or isolated.

##### **5.4.2 Causes of rampant and continuous terrorist activities in Kenya from the year 1998 to 2013.**

This study sought to determine the causes of rampant and continuous terrorist activities in Kenya from the year 1998 to 2013. The respective respondents were asked to state causes of rampant and continuous terrorist activities in Kenya from the year 1998 to 2013. They provided varied responses as indicated in figure 5.2 below:



**Figure 5.2 Causes of continuous terrorist activities in Kenya from the year 1998 to 2013.**



From figure 5.2 above 29.4% of the respondents were of the view that the increase in the terrorism could be attributed to the kind of political and social decisions made by government officers and departments. This was followed by 23.5% who stated to have believed that the increment in terrorist activities could be attributed to country tendency to use armed intervention most of the times, while only 11.8% of the respondents attribute the increase to the nature of the country's foreign policy and 20.6% attributed the increase to the kind of international and domestic relations patterns with the international community and the neighboring countries. The rest 14.7% of the respondents were of the view that increase in the terrorist activities could be attributed to the resources distribution systems and practices.

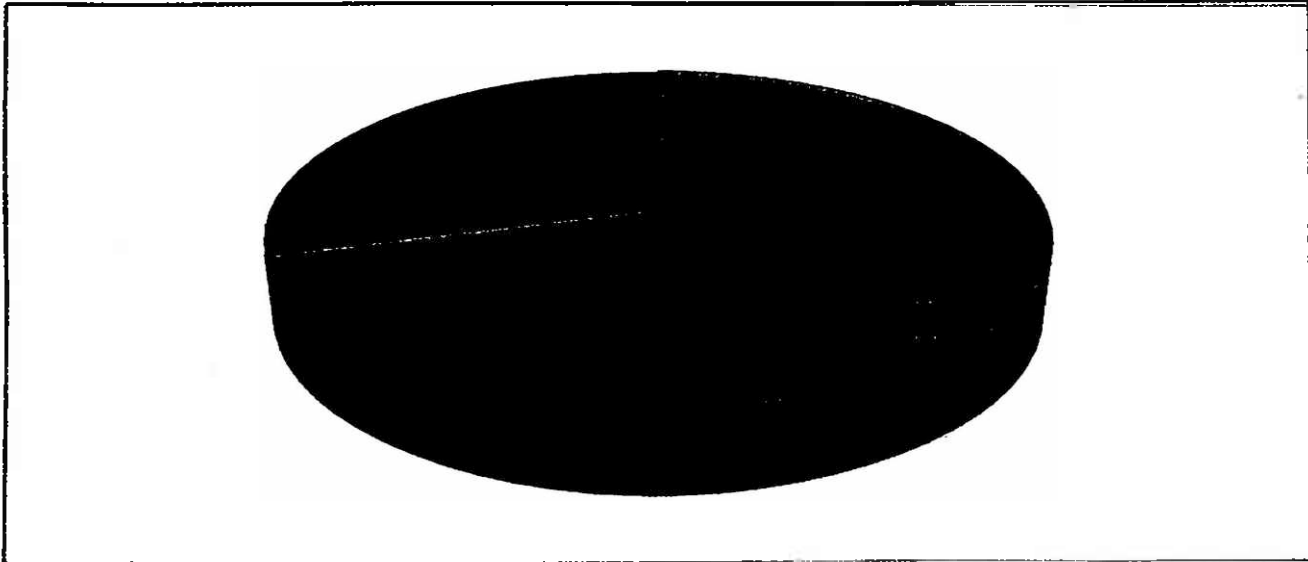
This finding denotes that terrorism is caused by an array of factors including Kenya's foreign policy, resources distribution, conflict intervention among other factors. The finding resonates with Martha Crenshaw instrumental theory that suggests that terrorism is caused by variety of factors comprising of political decisions, resources distribution, domestic and international relationships, need for power and influence.

#### **5.4.3 Whether there are impacts associated with the terrorism in Kenya and the world over from 1998 to 2013**

This study sought to determine whether there were impacts associated with the terrorism in Kenya and the world over. Towards this, respondents were asked to state whether they believed

there were impacts associated with the terrorism in Kenya and the world over. They provided the responses as indicated in figure 5.3 below.

**Figure 5.3 Whether there are impacts associated with the terrorism in Kenya**



From figure 5.3, majority (71%) of the respondents stated to have believed that terrorism has real impacts and effects all over the world. Only 29% stated to have believed that terrorism has no real impacts and effects all over the world. The finding denotes that terrorism has real impacts and effects all over the world. In the views of instrumental theory, terrorism has impacts associated with violence, intimidation, persecution, destruction of property, coercion and use of force to bargain for power and high levels of insecurity.

#### **5.4.4 General consequences/impacts of the terrorism on the community and society**

This study sought to establish the general consequences of the terrorism on the community and society. In this regard, respondents were asked the nature of their perceived outcomes of terrorism on their activities, operations and processes and development initiatives. They provided the responses as indicated in table 5.3 below.

**Table 5.3 General consequences /impacts of the terrorism on the community and society**

<b>Variable</b>	<b>Frequency</b>	<b>Percent</b>
Largely positive consequences/impacts	4	11.8%
Largely negative consequences/impacts	21	61.8%
Negative / positive consequences /impacts	9	26.5%
<b>Total</b>	<b>34</b>	<b>100%</b>

From table 5.3 above, over (61%) of the respondents stated to have agreed that terrorism and related activities are largely associated with negative consequences. While 26.5% of the respondents were of the view that terrorism has both positive and negative consequences towards the society and community, less than 12% of the respondents were of the opinion that terrorism has had largely positive consequences on the society and community. This finding indicates that terrorism generally has negative consequences towards the development efforts and strategies in the society and the world at large. In line with the specific provisions of instrumental theory of terrorism, terrorism has more negative consequences and results in violent coercion, a bargaining process based on the power to hurt and intimidate as a substitute for the use of overt military.

#### **5.4.5 Ways in which terrorism and related activities has impacted on the Kenya society from 1998 to 2013**

This study sought to determine the ways in which terrorism and related activities have impacted on the Kenya society since 1998 to 2013. In this regard respondents were asked to state the ways in which terrorism and related activities have impacted on their lives from 1998 to 2013. They gave the responses as indicated in table 5.4 below.

**Table 5.4 Ways in which Terrorism and related Activities have impacted on the Kenya Society from 1998 to 2013**

<b>Variable</b>	<b>Frequency</b>	<b>Percent</b>
Death and Injuries	6	17.6%
Mass Displacement of population	5	14.7%
Forced Settlement	5	14.7%
General Human Rights Violations	7	20.6%
Persecution/Frustration and Stress	5	14.7%
Development of Training centers	3	8.8%
Proactive Planning and Control	2	5.9%
Acquisition of Facilities/Technology	1	2.9%
<b>Total</b>	<b>34</b>	<b>100%</b>

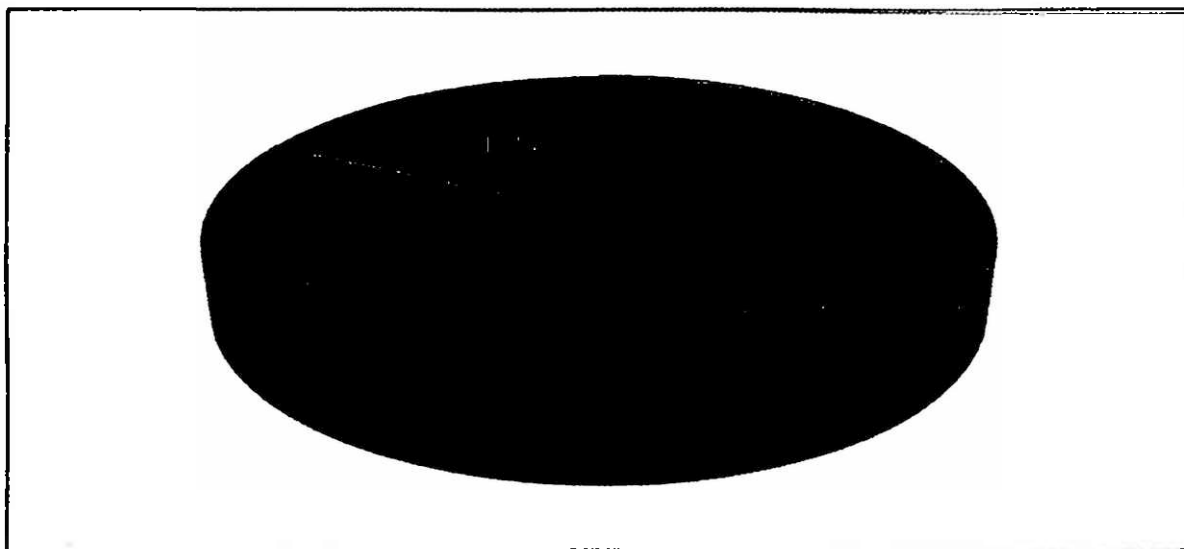
From table 5.4 above 82.4% of the respondents were of the view that terrorism has impacted on their lives in unfavorable ways. 20.6% mentioned the perennial human rights abuses associated with terrorism, 17.6% mentioned the deaths and injuries, the respondent who noted mass displacements of the population, forced settlements, persecution and frustration to the population were 14.7% of the respondents. Only 17.6% of the respondents were of the view that terrorism and related activities have impacted on their lives in favorable ways. Among this category of respondents 8.8% stated that terrorism has resulted in the creation of training centers. This was followed by 5.9% who stated that terrorism has resulted in proactive planning among the population and the country. The rest 2.9% were of the view that it has resulted in the acquisition of facilities/technology. The theoretical framework on which the study is based advocates that terrorism results in deaths, injuries, assaults, deprivation of freedoms and liberties, commissioning of crimes, persecution, mass transfer of population, forced settlements. This is despite the perceived positive outcomes resulting from terrorism activities including creation of peace support centres, development of research organizations and training institutions.

## **5.5 Strategies used in the Fight against Terrorism in Kenya**

### **5.5.1 Whether there are specific Strategies used in the Fight against Terrorism in Kenya**

This study sought to determine whether there are specific strategies used in the fight against terrorism in the country/organization. In this regard respondents were asked to state whether there are specific strategies used in the fight against terrorism. They provided the responses as indicated in figure 5.4 below.

**Figure 5.4 Whether there are Specific Strategies used in the Fight against Terrorism in Kenya**



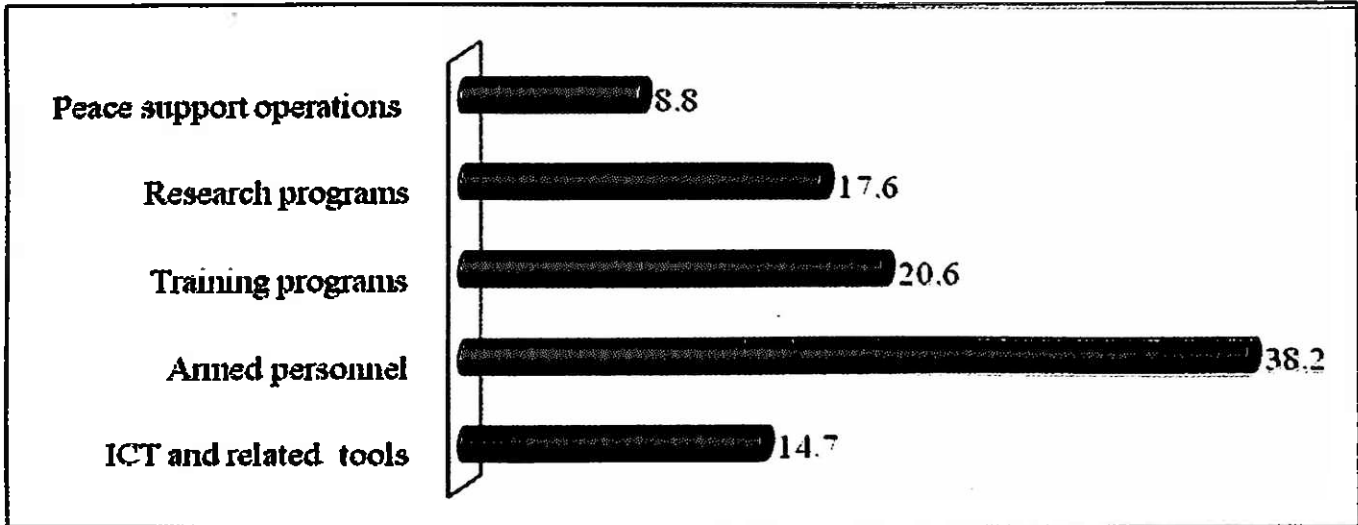
From figure 5.4 above majority (82%) of the respondents were of the view that there are strategies in place to guide the fight against terrorism in Kenya and their specific organizations. Only 18% of the respondents were of the view that there are no strategies in place to guide the fight against terrorism in Kenya and their specific organizations.

This finding denotes there are strategies in place to guide the fight against terrorism in Kenya. The finding is strictly in conformity with the theoretical framework provisions that terrorism has causes and strategies to limit its effects.

**5.5.2 Counterterrorism Strategies commonly used in the War against Terror in Kenya**

This study sought to establish the kind of antiterrorism strategy commonly used by the state and private firms in the war against terror in Kenya. Towards that end respondents were asked to state the strategy commonly used by them in the war against terrorism. They provided the responses as indicated in figure 5.5 below

**Figure 5.5 Counterterrorism Strategy commonly used in the War against Terror in Kenya**



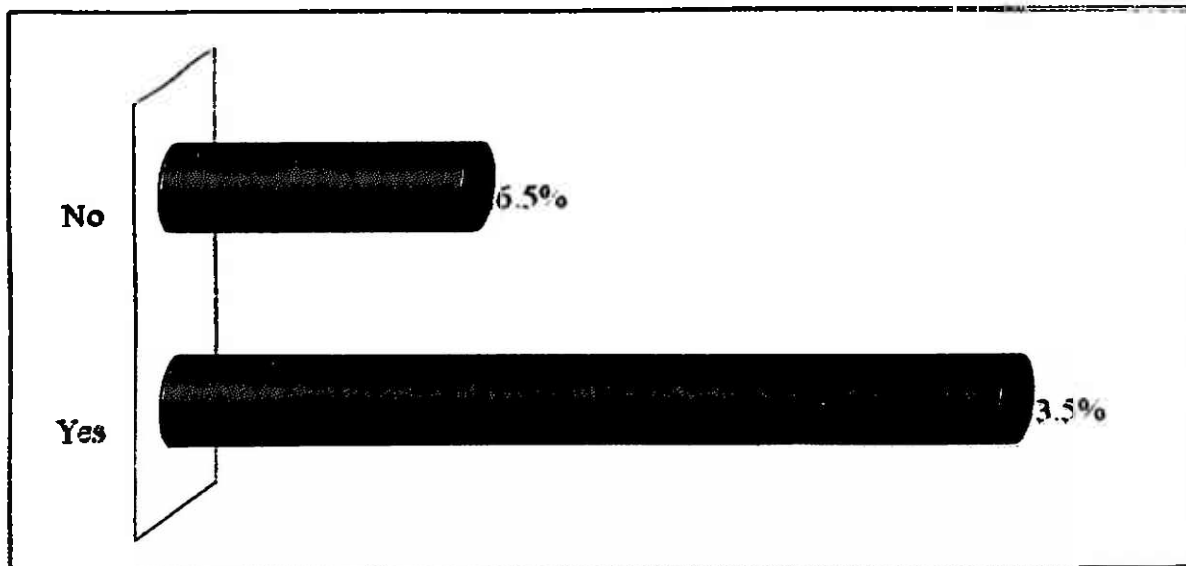
From figure 5.5 above majority (38.2%) of the respondents were of the view that the strategy of the use of armed personnel to fight terrorism is commonly applicable in Kenya. Only 14.7% of the respondents were of the view that the strategy of the use of ICT and related tools to fight terrorism is commonly applicable in Kenya. Separately, 20.6% of the respondents were of the view that the strategy of empowering the citizens through training to fight terrorism is commonly applicable in Kenya while 17.6% of the respondents were of the view that the strategy of the use of research and development and information provision to fight terrorism is commonly applicable in Kenya.

According to the instrumental theory, the most viable strategies in the fight against terrorism comprise of ICT tools, armed methods, peace conferences, training and empowerment, research and information sharing

### 5.5.3 Whether the outcome of the fight against Terrorism would have been different if ICT based tools were given more Prominence

This study sought to determine whether the fight against terrorism in Kenya would have been more enhanced had the use of ICT and related tools been accorded prominent roles. Towards this perspective, respondents were asked to state whether they believed the fight against terrorism in Kenya would have been more enhanced had the use of ICT and related tools been accorded prominent roles. They provided the responses as indicated in figure 5.6 below:

**Figure 5.6 Whether the outcome of the Fight against Terrorism would have been different if ICT based Tools were given more Prominence**

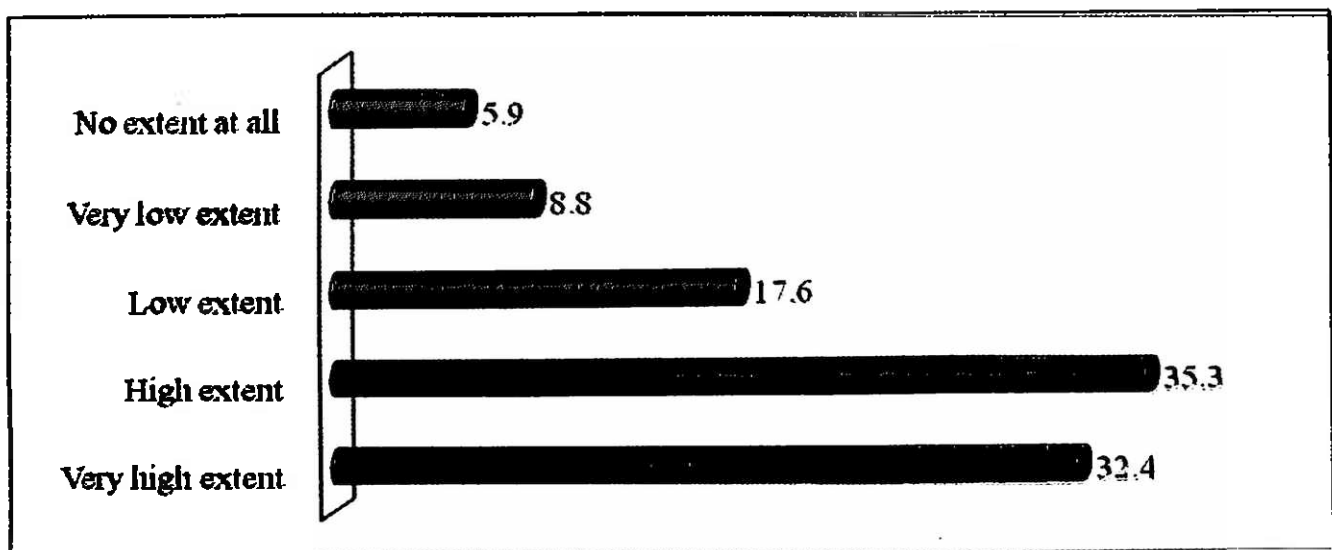


From figure 5.6 above majority (73.5%) of the respondents were of the view that the fight against terrorism in Kenya would have been more enhanced had the use of ICT and related tools been accorded prominent roles. Less than 27% were of the view that the fight against terrorism in Kenya would not have been more enhanced had the use of ICT and related tools been accorded prominent roles.

#### 5.5.4 The extent to which ICT and related Tools has been an effective Tool in the War against Terrorism

This study sought to examine the extent to which ICT and related tools has been an effective tool in the war against terrorism. Towards this end respondents were asked to state the extent to which ICT and related tools has been an effective tool in the war against terrorism. They provided the responses as indicated in figure 5.7 below

Figure 5.7 The extent to which ICT and related Tools have been effective in the War against Terrorism



From figure 5.7 above majority (67.7%) of the respondents stated to have agreed to a high extent that the application of ICT would make the war on terror more effective in Kenya. Only 26.4% stated that ICT would be effective only to a low extent. The rest 5.9% of the respondents stated the tools would be effective to no extent at all

#### 5.5.5 How ICT and related Tools affect the fight against the War on Terrorism

This study sought to determine how ICT and related tools affect the fight against the war on terrorism. In this respect respondents were asked to state how they believed the use of ICT has affected the fight against terrorism in Kenya for the last fifteen years. They provided the responses as indicated in table 5.5 below.



**Table 5.5 How ICT and related Tools affect the fight against the War on terrorism in Kenya**

<b>Variable</b>	<b>Frequency</b>	<b>Percent</b>
Enhances successful fight	19	55.9%
Reduces successful fight	11	32.4%
No effect on successful fight	4	11.8%
<b>Total</b>	<b>34</b>	<b>100%</b>

From table 5.5 above majority (55.9%) of the respondents were of the view that the use of ICT results in enhancement in the successful fight against terrorism. Only 32.4% of the respondents were of the view that the use of ICT results in reduced success in the successful fight against terrorism and 11.8% were of the view that the use of ICT has had no effect on the war on terrorism in Kenya.

This finding indicates that the use of ICT results in enhancement in the successful fight against terrorism.

#### **5.5.6 Ways in which ICT has been useful as a Tool for Fighting Terrorism in Kenya and the World at Large**

This study sought to establish the ways in which ICT has been useful as a tool of fighting terrorism in Kenya and the world at large. In this regard respondents were asked to state the ways in which they believed ICT has been of use to the fight against terrorism. They provide the Responses as indicated in table 5.6 below:

**Table 5.6 Ways in which ICT has been useful as a Tool for Fighting Terrorism in Kenya and the World at Large**

<b>Variable</b>	<b>Frequency</b>	<b>Percent</b>
Planning and Strategy Formulation	7	20.6%
Location of Terrorist sites	6	17.6%
Provision of Intelligence and Information	5	14.7%
Speed Flexibility and Reliability in response	4	11.8%
Resources Design and Management	5	14.7%
Counter Information	2	5.9%
Cost of ICT tools	3	8.8%
Constant need for Redesign of resources	2	5.9%
<b>Total</b>	<b>34</b>	<b>100</b>

From table 5.6 above, majority (79.4%) of the respondents stated that ICT aids in the fight against terrorism in more favorable ways. This comprises ICT as an aid in planning and strategy formulation (20.6%), location of terrorist sites and hideouts (17.6%), provision of intelligence and information (14.7%), speed, flexibility and reliability in response (11.8%) and resources design and management (14.7%).

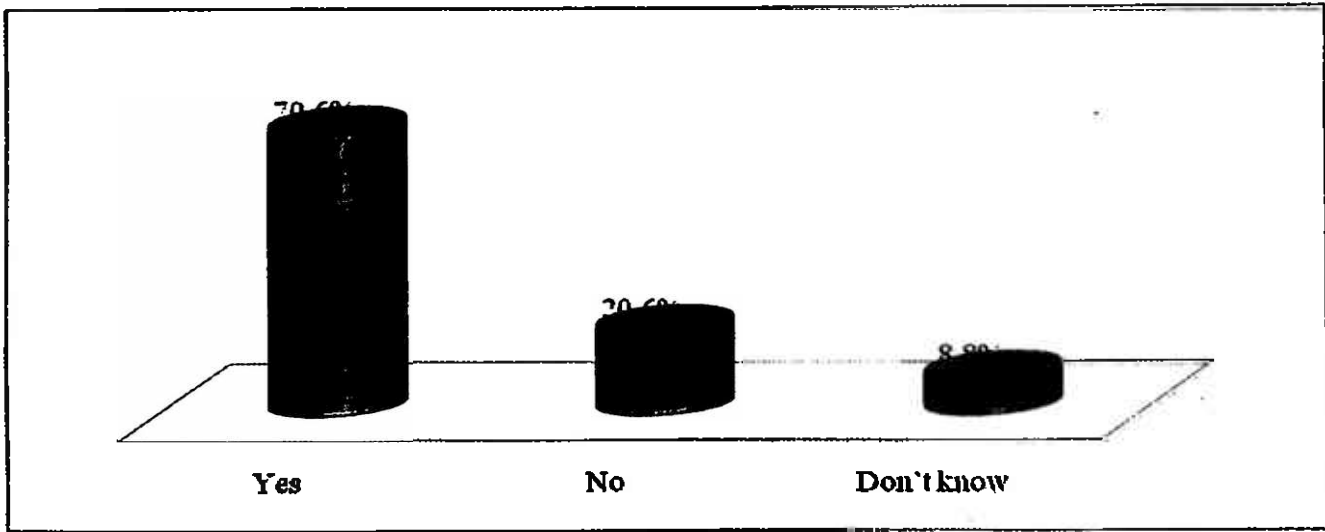
The findings for 5.5.3, 5.5.4, 5.5.5 and 5.5.6 denotes the current version among security practitioners that ICT and related tools play important, significant and critical roles in the fight against terrorism and ensuring security and safety of citizens.

## **5.6 ICT based Tools as Counterterrorism Strategies**

### **5.6.1 Whether the use of ICT Planning Processes would reduce Terrorism Activities**

This study sought to examine whether the use of ICT planning processes as counterterrorism strategy would reduce the activities of terrorists. Towards this end respondents were asked whether the use of ICT based communication as a counterterrorism strategy would reduce the activities of terrorists in Kenya. They provided responses as indicated in figure 5.8 below

**Figure 5.8 Whether the use of ICT Planning Processes would reduce the Terror Activities**



From figure 5.8 above, majority 70.6% of the respondents stated that the use of ICT based planning process as a counterterrorism strategy would reduce the activities of terrorists in Kenya. Slightly more than 20% of the respondents were of the view that the use of ICT based planning process as a counterterrorism strategy would not reduce the activities of terrorists. This finding denotes that the use of ICT based planning processes as a counterterrorism strategy would reduce the activities of terrorists in Kenya.

### **5.6.2 The Proportion in which the Use of ICT based Planning Process would Impact on the Fight against Terrorism**

This study sought to determine the proportion in which the use of ICT based planning process would impact on the fight against terrorism. In this respect respondents were asked to state the proportion in which the use of ICT based planning process would impact on the fight against terrorism. They provided the responses as indicated in table 5.7 below

**Table 5.7 The proportion in which the use of ICT based Planning Process would impact on the Fight against Terrorism**

<b>variable</b>	<b>frequency</b>	<b>percent</b>
0-45%	9	26.5%
45% -90%	14	41.2%
Over 90%	11	32.4%
<b>total</b>	<b>34</b>	<b>100%</b>

From table 5.7 above majority (73.6%) of the respondent were of the view that the use of ICT as a planning process tool would reduce the activities of terrorist by between 45- 100%. Only 26.5% of the respondent was of the view that the use of ICT based planning process would reduce the activities of terrorist by between 0 - 45%.

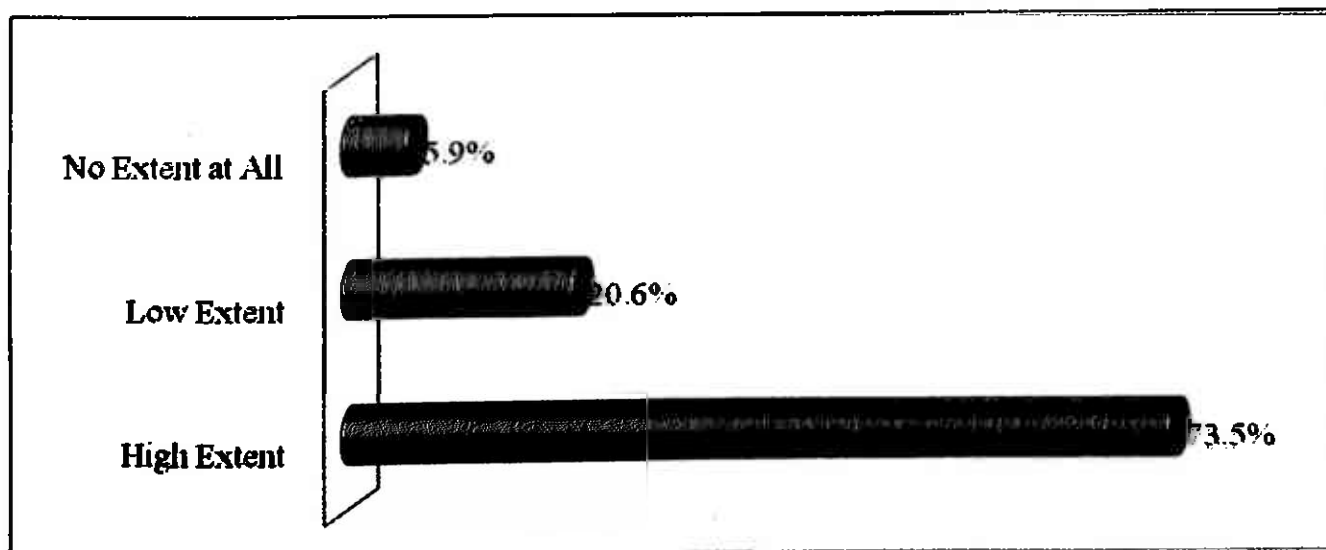
This finding is in line with the first hypothesis that the use of ICT based communication process would reduce the activities of terrorist in Kenya by 72%.

### **5.6.3 The extent to which the use of ICT based Planning Process would reduce Terrorism**

#### **Activities**

This study sought to establish the extent to which the use of ICT based planning process would reduce terrorism activities. Towards this end respondents were asked to state the extent to which the use of ICT based planning process would reduce terrorism activities in Kenya. They provided the responses as indicated in figure 5.9 below

**Figure 5.9 The extent to which the Use of ICT based Planning Process would reduce Terrorism Activities**



From figure 5.9 above, majority (73.5%) of the respondents were of the view that the use of ICT based planning process would reduce terrorism activities in Kenya to a high extent. While less than 6% of the respondents stated that use of ICT based planning process would reduce terrorism activities in Kenya to no extent at all, slightly more than 20% were of the view that the use of ICT based planning process would reduce terrorism activities in Kenya to a low extent.

This finding denotes that the use of ICT based planning process would reduce terrorism activities in Kenya to a high extent.

#### **5.6.4 How the use of ICT based Planning Process would affect War against Terrorism Activities**

This study sought to examine how the use of ICT based planning process would reduce terrorism activities. In this respect respondents were asked to state how the use of ICT based planning process would reduce terrorism activities in Kenya. They provided the responses as recorded in table 5.8 below

**Table 5.8 How the use of ICT based Planning Process would affect War against Terrorism**

**Activities**

<b>Variable</b>	<b>Frequency</b>	<b>Percent</b>
Enhances effectiveness of the war on terror (quick response)	21	61.8%
Reduces effectiveness of the war on terror (slow response)	9	26.5%
No impacts on the effectiveness of war on terror	4	11.8%
<b>Total</b>	<b>34</b>	<b>100%</b>

From table 5.8 above, majority (61.8%) of the respondents stated that the use of ICT based planning process would enhances effectiveness of the war on terror through quick responses. While 26.5% of the respondents were of the view that use of ICT based planning process would reduce effectiveness of the war on terror through slow responses. Only 11.8% were of the view that use of ICT based planning process would have no impacts on the effectiveness of war on terror.

This finding denotes that the use of ICT based planning process enhances the effectiveness of the war on terror in Kenya by facilitating quick responses.

**5.6.5 Ways in which the Use of ICT based Planning Process would impact on the Fight against Terrorism.**

This study sought to assess the ways in which the use of ICT based planning process would impact on the fight against terrorism. In this regard respondents were asked to state the ways in which ICT based planning process would impact on the fight against terrorism. They provided the responses as indicated in table 5.9 below

**Table 5.9 Ways in which the use of ICT based Planning Process would impact on the Fight against Terrorism.**

<b>Variable</b>	<b>Frequency</b>	<b>Percent</b>
Strategic /innovative and flexible mind set	7	20.6%
Accurate scanning, monitoring, forecasting & analysis	4	11.8%
Resources mobilization and application	6	17.6%
Team approach to planning	5	14.7%
More accurate and practical plans	7	20.6%
Counter planning by terrorists	3	8.8%
Requires constant design and redesign ( expensive )	2	5.9%
<b>Total</b>	<b>34</b>	<b>100.0%</b>

From table 5.9 above, majority (85.7 %) of the respondents were of the view that the use of ICT based planning process would impact on the fight against terrorism in more positive and favorable ways. This includes the capabilities of strategic/innovative and flexible mind set, 20.6%, accurate scanning, monitoring, forecasting & analysis 11.8%, resources mobilization and application, 17.6%; team approach to planning 14.7 and more accurate and thoroughness in planning 20.6%

Only 14.3% were of the view that the use of ICT based planning process would impact on the fight against terrorism in a negative and unfavorable ways. Including that ICT could be used as counter planning strategy by the terrorists to monitor the activities of the security organizations 8.8% and the notion that the use of ICT tools counterterrorism requires constant design and redesign hence expensive venture to undertake.

This finding denotes that the use of ICT based planning process affects the fight against terrorism in more positive and favorable ways

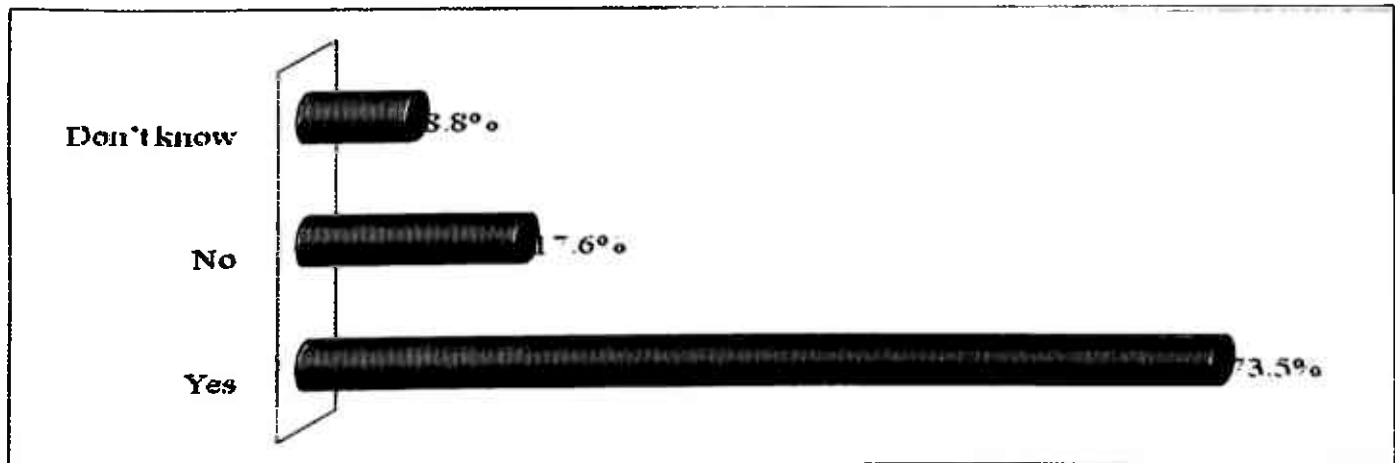
## **5.7 ICT based Intelligent Gathering Process as a Counterterrorism Strategy**

### **5.7.1 Whether ICT based intelligence gathering systems has an effect on Counterterrorism**

This study sought to determine whether ICT based intelligence gathering system has an effect on counterterrorism. Towards this end, respondents were asked to state whether the use of ICT

based intelligence gathering would reduce the terror activities in Kenya. They provided the responses as indicated in figure 5.10 below.

**Figure 5.10 Whether ICT based intelligence gathering systems has an effect on Counterterrorism**



From figure 5.10 above, over (73%) of the respondents stated that the use of ICT based intelligence gathering process as a counterterrorism strategy would reduce the activities of terrorists in Kenya. Only 17.6% of the respondents were of the view that the use of ICT based intelligence gathering process as a counterterrorism strategy would not reduce the activities of terrorists. This finding denotes that the use of ICT based intelligence gathering process as a counterterrorism strategy would reduce the activities of terrorists in Kenya.

### **5.7.2 The Proportion in which the use of ICT based Intelligence Gathering Processes would impact on the Fight against Terrorism**

This study sought to determine the proportion in which the use of ICT based intelligence gathering process would impact on the fight against terrorism. In this respect respondents were asked to state the proportion in which the use of ICT based intelligence gathering process would impact on the fight against terrorism. They provided the responses as indicated in table 5.10 below.



**Table 5.10 The proportion in which the use of ICT based Intelligence Gathering Process would impact on the Fight against Terrorism**

<b>Variable</b>	<b>Frequency</b>	<b>Percent</b>
0-40%	7	20.6%
40% -80%	15	44.1%
Over 80%	12	35.3%
<b>Total</b>	<b>34</b>	<b>100%</b>

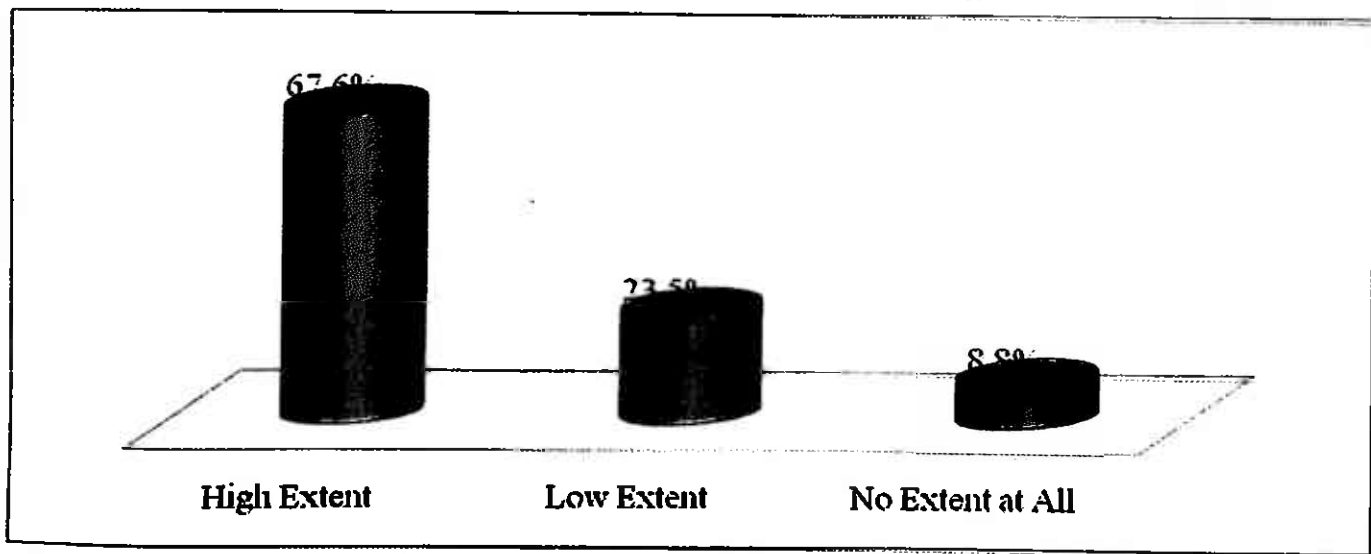
From table 5.10 above, majority (79.4%) of the respondent were of the view that the use of ICT as an intelligence gathering process would reduce the activities of terrorist by between 40- 100%. Only 20.6% of the respondents were of the view that the use of ICT as an intelligence gathering process would reduce the activities of terrorist by between 0 - 40%.

This finding is in line with the second hypothesis that the use of ICT as an intelligence gathering process would reduce the activities of terrorist in Kenya by 75%.

**5.7.3 The extent to which the Use of ICT based Intelligence Gathering Process would reduce Terrorism Activities**

This study sought to establish the extent to which the use of ICT based intelligence gathering process would reduce terrorism activities. Towards this end respondents were asked to state the extent to which the use of ICT based intelligence gathering process would reduce terrorism activities in Kenya. They provided the responses as indicated in figure 5.11 below.

**Figure 5.11 The extent to which the Use of ICT based Intelligence Gathering Process would reduce Terrorism Activities**



From figure 5.11 above, over 67% of the respondents were of the view that the use of ICT based intelligence gathering process would reduce terrorism activities in Kenya to a high extent. While less than 9% of the respondents stated that use of ICT based intelligence gathering process would reduce terrorism activities in Kenya to no extent at all, less than 24% were of the view that the use of ICT based intelligence gathering process would reduce terrorism activities in Kenya to a low extent.

This finding denotes that the use of ICT based intelligence gathering process would reduce terrorism activities in Kenya to a high extent

#### **5.7.4 How the use of ICT based intelligence gathering process would reduce terrorism activities**

This study sought to examine how the use of ICT based intelligence gathering process would reduce terrorism activities. In this respect respondents were asked to state how use of ICT based intelligence gathering process would reduce terrorism activities In Kenya. They provided the responses as recorded in table 5.11 below.

**Table 5.11 How the use of ICT based intelligence gathering process would reduce terrorism activities**

<b>Variable</b>	<b>Frequency</b>	<b>Percent</b>
Enhances effectiveness of the war on terror	27	79.4%
Reduces effectiveness of the war on terror	5	14.7%
No impacts on the effectiveness of war on terror	2	5.9%
<b>Total</b>	<b>34</b>	<b>100%</b>

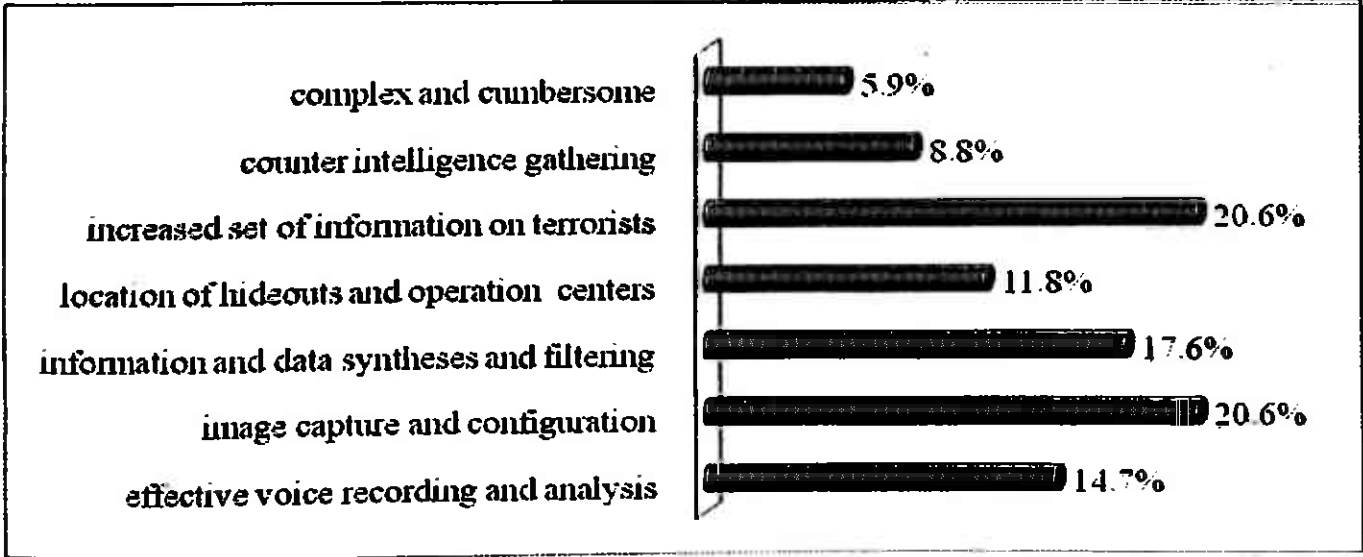
From table 5.11 above, majority (79.4%) of the respondents stated that the use of ICT based intelligence gathering process would enhances effectiveness of the war on terror. While 14.7% of the respondents were of the view that the use of ICT based intelligence gathering process would reduce effectiveness of the war on terror. Only 5.9% were of the view that the use of ICT based intelligence gathering process would have no impacts on the effectiveness of war on terror.

This finding denotes that the use of ICT based intelligence gathering process would enhance the effectiveness of the war on terror in Kenya.

#### **5.7.5 Ways in which the use of ICT based Intelligence Gathering process would impact on the Fight against Terrorism**

This study sought to assess the ways in which the use of ICT based intelligence gathering process would impact on the fight against terrorism. In this regard respondents were asked to state the ways in which ICT based intelligence gathering process would impact on the fight against terrorism. They provided the responses as indicated in figure 5.12 below.

**Figure 5.12 Ways in which the use of ICT based Intelligence Gathering Process would impact on the fight against terrorism**



From figure 5.12 above over 85% of the respondents were of the view that the use of ICT based intelligence gathering process would impact on the fight against terrorism in more positive and favorable ways. This includes its capabilities of effective voice recording and analysis (14.7%), better information and data syntheses and filtering (17.6%), improved image capture and configuration (20.6%), effective location of hideouts and operation centers (11.8%) and increased accuracy and correct set of information on terrorists (20.6%).

Only 14.7% were of the view that the use of ICT based intelligence gathering process would impact on the fight against terrorism in more negative and unfavorable ways. They stated that ICT could be used as counter intelligence strategy by the terrorism to monitor the activities of the security organization (8.8%) and the notion that the use of ICT would make the fight against terrorism cumbersome and complex (5.9%).

## **5.8 Communication and Counterterrorism**

### **5.8.1 Whether the use of ICT based Communication Processes would reduce Terrorist**

#### **Activities in Kenya**

This study sought to determine whether the use of ICT based communication processes would reduce the activities of terrorist. Towards this end respondents were asked whether the use of ICT based planning as a counterterrorism strategy would reduce the activities of terrorists in Kenya. In this regards, the respondents provided the responses as indicated in table 5.12 below

**Table 5.12 Whether the use of ICT based Communication Processes would reduce the Activities of Terrorists**

<b>Variable</b>	<b>Frequency</b>	<b>Percent</b>
Yes	27	79.4%
No	5	14.7%
Don't know	2	5.9%
<b>Total</b>	<b>34</b>	<b>100%</b>

From table 5.12 above, majority (70.6%) of the respondents stated that the use of ICT based communication process as a counterterrorism strategy would reduce the activities of terrorists in Kenya. Slightly more than 14% of the respondents were of the view that the use of ICT based communication process as a counterterrorism strategy would reduce the activities of terrorists in Kenya.

This finding denotes that the use of ICT based communication process as a counterterrorism strategy would reduce the activities of terrorists in Kenya.

### **5.8.2 The proportion in which the use of ICT based Communication Process would impact on the Fight against Terrorism**

This study sought to determine the proportion in which the use of ICT based communication process would impact on the fight against terrorism. In this respect respondents were asked to

state the proportion in which the use of ICT based communication process would impact on the fight against terrorism. They provided the responses as indicated in table 5.13 below

**Table 5.13 The proportion in which the use of ICT based Communication Process would impact on the Fight against Terrorism**

<b>Variable</b>	<b>Frequency</b>	<b>Percent</b>
0-30%	6	17.6%
30% -60%	16	47.1%
Over 60%	12	35.3%
<b>Total</b>	<b>34</b>	<b>100%</b>

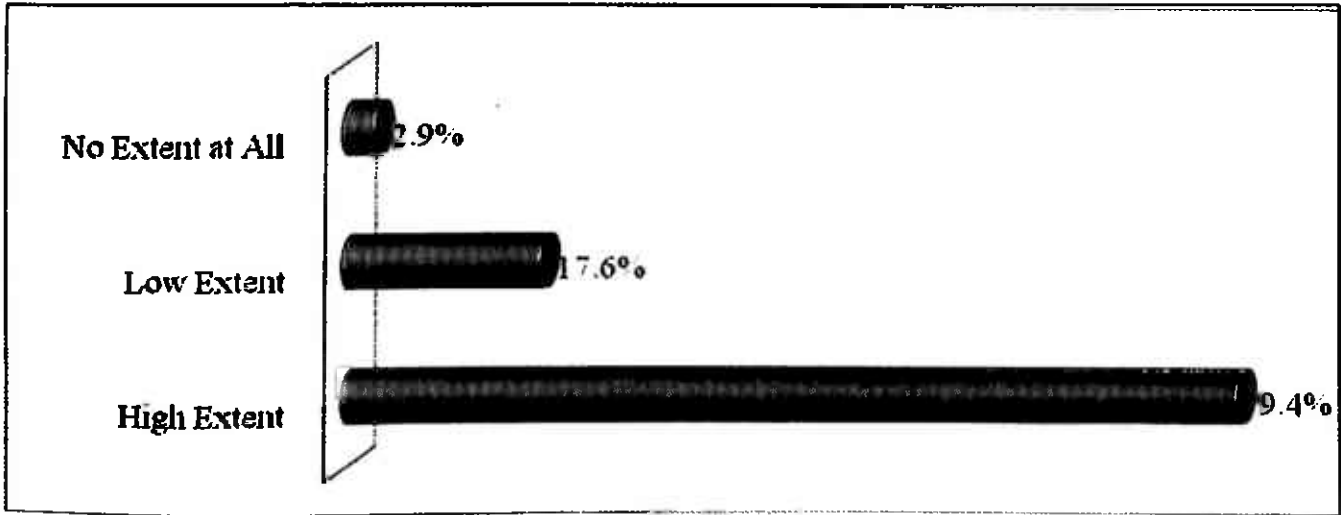
From table 5.13 above, majority (82.4%) of the respondents were of the view that the use of ICT based communication process would reduce the activities of terrorist by between 30-100%. Only 17.6% of the respondents were of the view that the use of ICT based communication process would reduce the activities of terrorists by between 0 - 30%.

This finding is in line with the third hypothesis that the use of ICT based communication process would reduce the activities of terrorist in Kenya by 60%.

### **5.8.3 The extent to which the use of ICT based Communication Process would reduce Terrorism Activities**

This study sought to establish the extent to which the use of ICT based communication process would reduce terrorism activities. Towards this end respondents were asked to state the extent to which the use of ICT based communication process would reduce terrorism activities in Kenya. They provided the responses as indicated in figure 5.13 below

**Figure 5.13 The extent to which the use of ICT based Communication Process would reduce Terrorism Activities**



From figure 5.13 above, majority (79.4%) of the respondents were of the view that the use of ICT based communication process would reduce terrorism activities in Kenya to a high extent. On the other hand, less than 3% of the respondents stated that use of ICT based communication process would reduce terrorism activities in Kenya to no extent at all. Slightly more than 17% were of the view that the use of ICT based communication process would reduce terrorism activities in Kenya to a low extent.

This finding denotes that the use of ICT based communication process would reduce terrorism activities in Kenya to a high extent.

**5.8.4 How the use of ICT based Communication Process would reduce Terrorism Activities**

This study sought to examine how the use of ICT based communication process would reduce terrorism activities. In this respect, respondents were asked to state how the use of ICT based communication process would reduce terrorism activities in Kenya. They provided the responses as recorded in table 5.14 below.

**Table 5.14 How the use of ICT based Communication process would reduce Terrorism Activities**

<b>Variable</b>	<b>Frequency</b>	<b>Percent</b>
Enhances effectiveness of the war on terror (quick responses)	24	70.6%
Reduces effectiveness of the war on terror (slow responses)	7	20.6%
No impacts on the effectiveness of war on terror	3	8.8%
<b>Total</b>	<b>34</b>	<b>100%</b>

From table 5.14 above, majority (70.6%) of the respondents stated that the use of ICT based communication process would enhance effectiveness of the war on terror. While 20.6% of the respondents were of the view that the use of ICT based communication process would reduce effectiveness of the war on terror through slow responses. Only 8.8% were of the view that the use of ICT based communication process would have no impacts on the effectiveness of war on terror. This finding denotes that the use of ICT based communication process enhances the effectiveness of the war on terror in Kenya by facilitating quick responses.

**5.8.5 Ways in which the use of ICT based Communication Process would impact on the Fight against Terrorism**

This study sought to assess the ways in which the use of ICT based communication process would impact on the fight against terrorism. In this regard respondents were asked to state the ways in which ICT based communication process would impact on the fight against terrorism. They provided the responses as indicated in table 5.15 below



**Table 5.15 Ways in which the use of ICT based Communication Process would impact on the Fight against Terrorism**

<b>Variable</b>	<b>Frequency</b>	<b>Percent</b>
High flexibility	6	17.6%
Ready feedback	5	14.7%
Enables information sharing	7	20.6%
Correct ideas, opinions and understandings	5	14.7%
Accurate and simplified data inputs	8	23.5%
Counter information	2	5.9%
Costly to undertake	1	2.9%
<b>Total</b>	<b>34</b>	<b>100%</b>

From table 5.15 above, more than 90% of the respondents were of the view that the use of ICT based communication process would impact on the fight against terrorism in more positive and favorable ways. This includes the capabilities of providing ready feedback, 14.7%, high levels of flexibility (17.6%) enables information sharing and other positive elements (20.6), accurate and simplified data inputs 23.5% and having the correct ideas and tactics to fight the terrorists 14.7%.

Only 8.8% of the respondents were of the view that the use of ICT based communication process would impact on the fight against terrorism in negative and unfavorable ways. These ways included that ICT could be used as counter information strategy by the terrorists to monitor the activities of the security organizations (8.8%) and the notion that the use of ICT based communication tools require constant design and redesign hence expensive venture to undertake.

This finding denotes that the use of ICT based communication process affects the fight against terrorists in more positive and favorable ways.

## **5.9 Summary of Findings, Conclusions and Recommendations and Recommendations for Further Research**

### **5.9.1 Summary of Findings**

From the study, it emerged that there has been rampant/continuous/fierce but concerted terrorist activities in Kenya from the year 1998 to 2013. This was supported by majority (73.5%) of the respondents who stated that there has been rampant/continuous/fierce but concerted terrorist activities in Kenya from the year 1998 to 2013. Less than 27% of the respondents were of the view that there has been isolated/periodic/non fierce terrorist activities in Kenya from the year 1998 to 2013. It emerged from the study that the increase in the terrorism activities could be attributed to the various reasons including the kind of political and social decision made by government officers and departments. About 29.4% due to armed intervention, 23.5% due to nature of the country foreign policy while 11.8% due to the kind of international and domestic relations patterns with the international community and the neighboring countries contributing to 20.6% among other causes.

The study found that there are various challenges being faced in the war against terrorism in Kenya including lack of facilities and technology 30%, the information systems and flows, lack of international support 17.6%, shift in tactics 14.7% and attitude and perceptive tendencies (11.8%) among other challenges. The study found that terrorism has real impacts and effects all over the world. This was supported by majority (71%) of the respondents who stated that terrorism has real impacts and effects all over the world. Only 29% stated to have believed that terrorism has no real impacts and effects all over the world. The finding denotes that terrorism has real impacts and effects all over the world.

It emerged from the study that terrorism and related activities are largely associated with negative consequences. This was supported by more than (61%) of the respondents who agreed that terrorism and related activities are largely associated with negative consequences. While 26.5% of the respondents were of the view that terrorism has both positive and negative consequences towards the society and community. Less than 12% of the respondents were of the opinion that terrorism has had largely positive consequences on the society and community.

It was found from the study that terrorism has had an impacted on the lives of the population both in Kenya and globally in more unfavorable ways. This was supported by 82.4% of the

respondents who were of the view that terrorism has impacted on their lives in unfavorable ways. Only 17.6% of the respondents were of the view that terrorism and related activities have impacted on their lives in favorable ways.

From the study it emerged that there are strategies in place to guide the fight against terrorism in Kenya and the world over. This was supported by majority (82%) of the respondents who were of the view that there are strategies in place to guide the fight against terrorism in Kenya and the world over. Only 18% of the respondents were of the view that there are no strategies in place to guide the fight against terrorism in Kenya and their respective organizations. It also emerged that the strategy of the use of armed personnel to fight terrorism instead of ICT based tools is commonly applicable in Kenya. This was supported by over 38% of the respondents who stated that that the strategy of the use of armed personnel to fight terrorism is commonly applicable in Kenya. Only 14.7% of the respondents were of the view that the strategy of the use of ICT and related tools to fight terrorism is commonly applicable in Kenya. Other counterterrorism aspects considered applicable in Kenya comprised of empowering the citizens through training (20.6%), research and development through information sharing and generation (17.6%). It was found from the study that the use of ICT proved to be the most popular and emerging counterterrorism strategy used in the war against terrorism. This was supported by more than 32% of the respondents who stated that the use of ICT was the most popular and emerging counterterrorism strategy used in the war against terrorism. Other emerging strategies from the study comprised of the adoption of the strategies of training programs and peace support operations (20.6%) as well as the use of armed personnel (11.8%).

It further emerged from the study that the application of ICT would make the war on terror in Kenya more effective. This was supported by majority (67.7%) of the respondents who agreed that the use of ICT would enhance the war on terrorism to a high extent. Only 26.4% stated that ICT would be affective only to a low extent. The study found that the use of ICT results in enhancement in the successful fight against terrorism. This was supported by majority (55.9%) of the respondents who stated that the use of ICT results in enhancements in the successful fight against terrorism. Only 32.4% of the respondents who stated that the use of ICT results in reduced success in the successful fight against terrorism and 11.8% were of the view that the use of ICT has had no effect on the war on terrorism in Kenya. Finally, the study found that the use

of ICT and related tools aids in the fight against terrorism in more favorable ways. This was supported by majority (79.4%) of the respondents who stated that ICT aids in the fight against terrorism in more favorable ways.

This study sought to determine the impacts of the application of ICT based planning process as a counter terrorism strategy. The aspects under investigation comprised of whether the use of ICT planning processes would reduce the activities of terrorists, the proportion in which the use of ICT based planning process would impact on the fight against terrorism, the extent to which the use of ICT based planning process would reduce terrorism activities, how the use of ICT based planning process would affect war against terror, ways in which the use of ICT based planning process would impact on the fight against terrorism.

From the study it emerged that the use of ICT based planning process as a counterterrorism strategy would reduce the activities of terrorists in Kenya. This was supported by majority (70.6%) of the respondents who stated that the use of ICT based planning process as a counterterrorism strategy would reduce the activities of terrorists in Kenya. Slightly more than 20% of the respondents were of the view that the use of ICT based planning process as a counterterrorism strategy would not reduce the activities of terrorists in Kenya. It also emerged from the study that the use of ICT as a planning process would reduce the activities of terrorist by between 45-100%. This was supported by majority (73.6%) of the respondent who were of the view that the use of ICT as planning process would reduce the activities of terrorist by between 45- 100%. Only 26.5% of the respondents were of the view that the use of ICT based planning process would reduce the activities of terrorists by between 0 - 45%. It was found that the use of ICT based planning process would reduce terrorism activities in Kenya to a high extent. Majority (73.5%) of the respondents were of the view that the use of ICT based planning process would reduce terrorism activities in Kenya to a high extent. While less than 6% of the respondents stated that the use of ICT based planning process would reduce terrorism activities in Kenya to no extent at all. Slightly more than 20% were of the view that the use of ICT based planning process would reduce terrorism activities in Kenya to a low extent.

Additionally the study found that the use of ICT based planning process would enhances effectiveness of the war on terrorism by quick responses. This was supported by the majority (61%) of the respondents who stated that the use of ICT based planning process would enhance

effectiveness of the war on terrorism by quick responses. About 26.5% of the respondents were of the view that the use of ICT based planning process would reduce effectiveness of the war on terror through slow responses. Only 11.8% were of the view that the use of ICT based planning process would have no impacts on the effectiveness of war on terrorism. It further emerged from the study that the use of ICT based planning process would impact on the fight against terrorism in positive and favorable ways. This was supported by majority (85.7 %) of the respondents who were of the view that the use of ICT based planning process would impact on the fight against terrorism in positive and favorable ways. Only 14.3% were of the view that the use of ICT based planning process would impact on the fight against terrorism in negative and unfavorable ways.

This study sought to determine the impacts of the application of ICT based communication process as accouter terrorism strategy. The aspects under investigation comprised of whether the use of ICT communication processes would reduce the terrorist activities, the proportion in which the use of ICT based communication process would impact on the fight against terrorism, the extent to which the use of ICT based communication process would reduce terrorism activities, how the use of ICT based communication process would affect war against terrorism activities and ways in which the use of ICT based communication process would impact on the fight against terrorism.

From the study it was found that the use of ICT based communication process as a counterterrorism strategy would reduce the activities of terrorists in Kenya. This was supported by majority (70.6%) of the respondents who stated that the use of ICT based communication process as a counterterrorism strategy would reduce the activities of terrorists in Kenya. Slightly more than 14% of the respondents were of the view that the use of ICT based communication process as a counterterrorism strategy would not reduce the activities of terrorists in Kenya.

It was also found that the use of ICT based communication process would reduce the activities of terrorist by between 30- 100%. This was supported by majority (82.4%) of the respondents who were of the view that the use of ICT based communication process would reduce the activities of terrorist by between 30- 100%. Only 17.6% of the respondents were of the view that the use of ICT based planning process would reduce the activities of terrorist by between 0-45%.

It emerged from the study that the use of ICT based communication process would reduce terrorism activities in Kenya to a high extent. This was supported by majority 79.4% of the respondents who were of the view that the use of ICT based communication process would reduce terrorism activities in Kenya to a high extent. Less than 3% of the respondents stated that the use of ICT based communication process would reduce terrorism activities in Kenya to no extent at all. More than 17% were of the view that the use of ICT based communication process would reduce terrorism activities in Kenya to a low extent.

It further emerged from the study that the use of ICT based communication process would enhance the effectiveness of the war on terrorism. Most (70.6%) of the respondents stated that the use of ICT based communication process would enhance effectiveness of the war on terrorism. While 20.6% of the respondents were of the view that the use of ICT based communication process would reduce effectiveness of the war on terror through slow responses. Only 8.8% of the respondents were of the view that use of ICT based communication process would have no impacts on the effectiveness of war on terrorism.

It additionally emerged from the study that the use of ICT based communication process would impact on the fight against terrorism in more positive and favorable ways. This was supported by more than 90% of the respondents who were of the view that the use of ICT based communication process would impact on the fight against terrorism in more positive and favorable ways. Only 8.8% of the respondents were of the view that the use of ICT based communication process would impact on the fight against terrorism in negative and unfavorable ways.

This study sought to establish the impacts of the application of ICT based intelligence process as a counterterrorism strategy. The aspects under investigation comprised of whether the use of ICT based intelligence process would reduce the activities of terror, the proportion in which the use of ICT based intelligence gathering process would impact on the fight against terrorism, the extent to which the use of ICT based intelligence process would reduce terrorism activities, how the use of ICT based intelligence process would affect war against terrorism activities, ways in which the use of ICT based intelligence process would impact on the fight against terrorism.

From the study it was found that the use of ICT based intelligence process as a counterterrorism strategy would reduce the activities of terrorists in Kenya. This was supported by over 73% of the respondents who stated that the use of ICT based intelligence process as a counterterrorism strategy would reduce the activities of terrorists in Kenya. Only 17.6% of the respondents were of the view that the use of ICT based intelligence gathering process as a counterterrorism strategy would not reduce the activities of terrorists in Kenya.

It was also found that the use of ICT as an intelligence gathering process would reduce the activities of terrorist by between 40-100%. This was supported by majority 79.4% of the respondents who were of the view that the use of ICT as an intelligence gathering process would reduce the activities of terrorists by between 40-100%. Only 20.6% of the respondents were of the view that the use of ICT as an intelligence gathering process would reduce the activities of terrorist by between 0 - 40%.

Additionally it was found that the use of ICT based intelligence gathering process would reduce terrorism activities in Kenya to a high extent. Over 67% of the respondents were of the view that the use of ICT based intelligence gathering process would reduce terrorism activities in Kenya to a high extent. Less than 9% of the respondents stated that the use of ICT based intelligence gathering process would reduce terrorism activities in Kenya to no extent at all. Less than 24% were of the view that the use of ICT based intelligence gathering process would reduce terrorism activities in Kenya to a low extent.

It emerged from the study that the use of ICT based intelligence gathering process would enhance effectiveness of the fight against terrorism. This was supported by majority 79.4% of the respondents who stated that the use of ICT based intelligence gathering process would enhance effectiveness of the fight against terrorism. While 14.7% of the respondents were of the view that the use of ICT based intelligence gathering process would reduce effectiveness of the war on terror only 5.9% were of the view that the use of ICT based intelligence gathering process would have no impact on the effectiveness of war on terror.

It further emerged from the study that the use of ICT based intelligence gathering process would impact on the fight against terrorism in positive and favorable ways. Over 85% of the respondents were of the view that the use of ICT based intelligence gathering process would

impact on the fight against terrorism in positive and favorable ways. The ways include capabilities of effective voice recording and analysis, better information and data syntheses and filtering, improved image capture and configuration, effective location of hideouts and operation centers and increased accuracy and correct set of information on terrorists. Only 35.3% of the respondents were of the view that the use of ICT based intelligence gathering process would impact on the fight against terrorism in negative and unfavorable ways.

### **5.9.2 Conclusion**

This study was successful in that it was conducted within the prescribed time period of three months and agreed and approved budgetary constraints. The study objectives were comprehensively and adequately achieved. Arising from the summary of findings as presented in the immediate section above, this study concludes that the adoption of ICT based tools as counterterrorism strategy has tremendously enhanced and revitalized the fight against terrorism the world over and Kenya in particular.

Further, this study concludes that the use of ICT based planning process has contributed more positively and favourably towards the fight against terrorism in Kenya. ICT based planning process has worked towards more enhancement in the fight against terrorism.

Additionally, this study concludes that the adoption of ICT based intelligence gathering process and dissemination system has worked towards tremendous enhancement in the fight against terrorism.

Finally, this study concludes that the use of ICT based communication process as a counterterrorism strategy has contributed positively and in more functional ways towards the fight against terrorism.

### **5.9.3 Recommendations**

Arising from the summary of findings and the study conclusions as presented in the immediate sections above, this study recommends that the strategy of ICT as a counterterrorism tool be accorded more prominence than all the other tools used in the war against terrorism in Kenya and the world over.



The study further recommends that the ICT based tools in the forms of planning, intelligence gathering and communication be elevated to strategic positions within organizations both public and private.

Additionally, the study recommends that more resources be tailored toward the adoption of ICT based counterterrorism strategy in Kenya and globally.

#### **5.9.4 Recommendations for Further Research**

This study recommends that further research be conducted on the use of ICT based intelligence gathering process as a counterterrorism strategy.

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**QUESTIONNAIRE**

**Dear respondent,**

You are hereby requested to assist in the filling of this questionnaire. The purpose of the questionnaire is to assist in obtaining data to aid in a conducting research on the impacts of the application of ICT in the war against Terrorism conducted at the University of Nairobi, Institute of Diplomacy and International Studies (IDIS). You are hereby informed that the information you will provide towards this study vide this questionnaire will be treated with utmost confidentiality and will only be provided to a third party upon your approval. In case you meet any difficulty when filling this questionnaire, you are free to contact the designer through mobile contact 0722867871.

1. What is your current designation?

Security /terrorisms Consultant	State security Employee	Private security employee	Terrorisms/security researcher

2. How do you rate the occurrence of terrorism activities and operation in Kenya after 1998?

Rampant/ continuous/ concerted	Isolated/ periodic/ incidental

3. Briefly explain your responses for question 2 above.

.....  
 .....

4. What are the main causes for increased terrorist operation in Kenya from 1998 to 2013?

Foreign policy	Armed interventions	Resources in equity	Political decisions	International and domestic relations	others specify

5. Are there impacts associated with terrorism in Kenya and the world over from 1998 to 2013?

Yes	No	Don't know

6. If yes, what are the general consequences/impacts of the terrorism on the community and society in Kenya?

Largely positive consequences/impacts	Largely negative consequences/impacts	Negative / positive consequences /impacts

7. Briefly explain your responses for question 6 above.

.....  
 .....

8. State the ways in which terrorism and related activities have impacted on the Kenya society from 1998 to 2013

- i.....
- ii.....
- iii.....

iv.....

v.....

9. Are there specific strategies used in the fight against terrorism in Kenya?

Yes	No	Don't know

10. What is the strategy commonly used in the war against terror in Kenya?

ICT and related tools	Armed personnel	Training programs	Research programs	Other specify

11. Briefly explain your responses for question 10 above.

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.....

12. In your opinion, would the outcome of the fight against terrorism be different if ICT based tools were given more prominent roles?

Yes	No	Don't know



13. To what extent would ICT and related tools be an effective tool in the war against terrorisms in Kenya?

High Extent	Low Extent	No Extent at all

14. How does the use of ICT tools affect the fight against terrorism in your country/organization?

Enhances successful fight	Reduces successful fight	No effect on successful fight

15. Briefly explain your responses for question 14 above.

.....  
 .....

16. In which ways have ICT and related tools been useful as a tool of fighting terrorism in Kenya and the world at large?

- i.....
- ii.....
- iii.....
- iv.....
- v.....

17. In your opinion, would the use of ICT planning processes reduce the activities of terrorist in Kenya?

Yes	No

18. If yes what is the nature of impact of ICT based planning on the fight against terrorism in Kenya?

Positive Impacts	Negative impacts

19. By what proportion would the use of ICT based planning process impact on the fight against terrorism in Kenya?

0-45%	45-90%	Over 90%

20. Briefly explain your response for question 19 above

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.....

21. To what extent does ICT based planning impact on the fight against terrorism in Kenya?

High Extent	Low Extent	No extent at all

22. How does the use of ICT based planning affect the fight against terrorism?

Enhances effectiveness of the fight	Reduces the effectiveness of the fight	No effect on the effectiveness of the fight

23. Briefly explain your response for question 22 above

.....  
 .....

24. In which ways does ICT based planning affect the fight against terrorism?

i.....  
 ii.....  
 iii.....  
 iv.....  
 v.....

**ICT based Intelligence Process as a Counterterrorism Strategy**

25. In your opinion, would the use of ICT based intelligence gathering process reduce the activities of terrorist in Kenya?

Yes	No

26. If yes what is the nature of impact of ICT based intelligence gathering process on the fight against terrorism in Kenya?

Positive Impacts	Negative impacts

27. By what proportion would the use of ICT based intelligence gathering process impact on the fight against terrorism in Kenya?

0-40%	40-80%	Over 80%

28. Briefly explain your response for question 27 above

.....  
 .....

29. To what extent does ICT based intelligence gathering process impact on the fight against terrorism in Kenya?

High Extent	Low Extent	No extent at all

30. How does the use of ICT based intelligence gathering process affect the fight against terrorism?

Enhances effectiveness of the fight	Reduces the effectiveness of the fight	No effect on the effectiveness of the fight

31. Briefly explain your response for question 30 above

.....  
 .....

32. In which ways does ICT based intelligence gathering processes affect the fight against terrorism?

- i.....
- ii.....
- iii.....
- iv.....
- v.....

**ICT based communication and information sharing Process as a Counterterrorism Strategy**

33. In your opinion, would the use of ICT based communication and information sharing process reduce the activities of terrorist in Kenya?

Yes	No

34. If yes what is the nature of impact of ICT based communication and information sharing process on the fight against terrorism in Kenya?

Positive Impacts	Negative impacts

35. By what proportion would the use of ICT based communication and information sharing process impact on the fight against terrorism in Kenya?

0-40%	40-80%	Over 80%

36. Briefly explain your response for question 35 above

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.....

37. To what extent does ICT based communication and information sharing process impact on the fight against terrorism in Kenya?

High Extent	Low Extent	No extent at all

38. How does the use of ICT based communication and information sharing process affect the fight against terrorism?

Enhances effectiveness of the fight	Reduces the effectiveness of the fight	No effect on the effectiveness of the fight

**39. Briefly explain your response for question 38 above**

.....  
.....

**40. In which ways does ICT based communication and information sharing process affect the fight against terrorism?**

**i.**.....

**ii.**.....

**iii.**.....

**iv.**.....

**v.**.....