USE OF GROUND RADAR TECHNOLOGY IN REAL-TIME SURVEILLANCE IN FARMER-NOMADIC PASTORALIST CONFLICT ZONES IN NIGERIA.

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ABSTRACT

This study examined the use of ground radar technology in real-time surveillance in farmer-nomadic pastoralist conflict zones in Nigeria. *Two specific research objectives were formulated to guide the study. The research design was exploratory research design. 72 respondents, made up of heads of operation with assistants and heads of administration with assistants were selected using non-proportionate stratified sampling technique and used for the study. The instrument known as "Ground Radar Technology and real time* Surveillance *Questionnaire (GRTRTSQ)" was used to collect the data. The instrument (GRTRTSQ) was subjected to reliability test, using test-retest method and it produced high average reliability coefficient of 0.78 to justify the use of the instrument. The findings revealed that ground radar technology can facilitate Real-time Surreptitious Surveillance and Interception of farmer-nomadic pastoralist in conflict zones in Nigeria. The result also revealed that Ground Radar Technology can significantly Secure Communication and Interception of farmer - nomadic pastoralist in conflict zones in Nigeria. One of the recommendations was that the Ground radar technology, with unique and distinctive features of Real-time Surreptitious Surveillance and Interception should be used in running eco-scanning test to reduce time waste and improved result outcomes.*

KEY WORDS: Ground Radar Technology, Real-time surreptitious Surveillance and Interception, Communication, farmer-nomadic pastoralist conflict

Introduction

The simultaneous killings and destruction of properties as well as farm outputs by herdsmen-farmers in Nigeria is becoming alarming of late. Also, the recent Fulani herdsmen and farmers' crisis no doubt have negative impact on the lives, property, food security and educational development in Nigeria. Though, there is the dearth of quantitative evaluation of the catastrophic attacks, available statistics has it that between June IIOIX to December IIOIL, Human Rights Watch in IIOIC, reported a total death toll of LX persons in more than IIV attacks. It was also reported that an estimate of XO people was killed in Nasarawa Egor (Nasarawa State) and Agatu/Logo (Benue State) in the June IIOIL and recently, lives were claimed in Niger in the April IIIIrd IIOIC crisis between Fulani herdsmen and farmers. This incessant attack has elicited bewilderment all across the nation and the concerned international society. Some groups in the country are already advocating for disintegration. Radar technology is a better technology to discover the location of these miscreants among the herdsmen-farmers who are culprits of the incessant killings in the nation. According to Translation Bureau (IIOIII), Radar is an acronym formed from the word Radio Detection and Ranging. It is technology used for the detection and location of targets. Radar makes use of a phenomenon we have all observed, that of the echo principle. A Radar system has some transmitter facilities which has the ability to send out large Ultra High Frequency (UHF) microwave power through a directional aerial and a receiver which collects energy from the echoes reflected in its direction by the

target. One of the distinctive ability of radar is it capacity to detect a target at great distances and to locate its position with high accuracy.

Available studies show that Radar has long been used for military and non-military purposes in a wide variety of applications such as imaging, guidance, remote sensing and global positioning (Skolnik, ıMCO). The history of radar can be traced back to the experiments by Heinrich Hertz in the late ıMth century Hertz, (ıIOOIII). In the early ıDOOS, an English physicist, Michael Faraday, demonstrated that electric current produces a magnetic field and that the energy in this field returns to the circuit when the current is stopped (Kostenko, Nosich and Tishchenko, ıIOOI). In ıDLV the Scottish physicist, James Maxwell, had formulated the general equations of the electromagnetic field, determining that both light and radio waves are actually electromagnetic waves governed by the same fundamental laws but having different frequencies. He proved mathematically that any electrical disturbance could produce an effect at a considerable distance from the point of origin and that this electromagnetic energy travels outward from the source in the form of waves moving at the speed of light.

Ground radar technology can play a critical role in strengthening Nigeria's National security against potential future attacks. Specifically, it enables the local government, state government, the nation at large and its security apparatus to identify potential threats, share information more readily, provide mechanisms to protect the nation, and develop response capabilities. Ground radar technology is a Surveillance system that has the capabilities to monitor most sensitive equipment's and public places of farmer-nomadic pastoralist conflict.

Statement of the problem

Insecurity has brought a lot of problems to our society including Nigeria. These include death, tears, destruction and so on. Nigeria is going down a path never seen in her history. It is a pretty dangerous path, one that the whole world is watching. People are afraid of their safety. At a time, we taught our problem was corruption and power failure, but now security has taken over.

The conflict between herders and farmers, often highlighted by violence, is a longstanding issue in Nigeria. It has been evolving in frequency and intensity, hence assuming new complexities in recent years. Fulani herdsmen are now classified as a terrorist group. According to the ıIOIX Global Terrorism Index, Fulani pastoralists, regarded as "Fulani militants", were the fourth deadliest terrorist group in the world, only behind the Taliban, the Islamic State (also known as ISIS or ISIL) and Boko Haram (Institute of Economics and Peace, ıIOIX). Fulani herders are geographically dispersed as far as their nomadic movements, and so are their attacks. Although hostilities have concentrated more in the North-Central, there is an extension to the South-East, South-South, North-West, North-East and the South-West geopolitical zones of Nigeria (SBM Intelligence, ıIOIL).

However, it is not an exaggeration to note that several methods have been put in place to combat the problem. The other proposed solutions seem not to have measured up with the intense condition of the event, but the surveillance system is proving a significant option. Hence, this study seeks to examine how ground radar technology can aid in security surveillance of farmer□nomadic pastoralist in conflict zones in Nigeria.

Research question

i. How will Ground Radar Technology assist in Real-time Surreptitious Surveillance and Interception of farmer-nomadic pastoralist in conflict zones in Nigeria?
ii. What are the effects of using Ground Radar Technology to Secure Communication among law enforcement agencies in farmer - nomadic pastoralist conflict zones in Nigeria?

Research Objectives

i. To determine how Ground Radar Technology assist Real-time Surreptitious Surveillance and Interception of farmer-nomadic pastoralist in conflict zones in Nigeria.
ii. To examine the effects of using Ground Radar Technology to Secure Communication among law enforcement agencies in farmer - nomadic pastoralist conflict zones in Nigeria?

Statement of Hypothesis

i. Ground Radar Technology does not significantly assist Real-time Surreptitious Surveillance and Interception of farmer-nomadic pastoralist in conflict zones in Nigeria.
ii. Ground Radar Technology do not significantly affect Secure Communication among law enforcement agencies of farmer-nomadic pastoralist in conflict zones in Nigeria.

Concept of Ground Radar technology

The essentiality of Ground Radar Technology in curbing the present security challenges in some part of the country can never be overemphasized seeing to the fact the technology make uses of pulses electromagnetic radiation to penetrate the surface of the ground, and go below to reveal any anomalies in soil or other materials. Its technique is able to detect buried objects and to characterize the subsurface structure and properties in a wide variety of applications (Pettinelli, ııooɒ). Numerous studies describe how ground radar techniques are able to detect electromagnetic anomalies under a variety of conditions, such as the location and orientation of plastic and metal pipes or barrels, reinforcing steel bars, metal nets, voids and fractures in concrete, walls and pavements (Zeng and McMechan, ıммc; Power and Olheoft, ıммv; Tong, ıммıı; Pettinelli et al., ııooɒ).

Griffin and Pippett (ııooıı) stated that the ground radar method provides a high resolution image of subsurface features in the form of a cross-section view that is essentially a map of the variation in ground electrical properties. They found that these can be correlated with physical changes such as the soil/bedrock interface, the boundary between different soil types, the water table, underground structures such as pipes, cables and tunnels as well as voids and cavities. In addition, features in the ground radar section will correlate with the geological profile if, for instance, stratigraphic boundaries representing different rock types correspond to significant variations in the electrical properties, but not necessarily to other physical properties such as density, grain size or chemical composition (Griffin and Pippett, ııooıı).

Ground radar is composed of a receiver and transmitter antenna, a control unit, battery supply and a survey cart. The control unit is the main part of the ground radar because it controls the whole system. It manages the IP protocol link with the laptop and provides the trigger signal and power supply to the antenna. The survey cart is equipped with an incremental encoder. The incremental encoder is used for precise positioning (cm level) of the centre of the antenna above the ground surface. The antenna receives the electrical pulse produced by the control unit, amplifies it and transmits it into the ground or other medium at a particular frequency. The antenna frequency is a major factor in depth penetration. The higher the frequency of the antenna, the shallower into the ground it will penetrate. Although, a higher frequency should be better at detecting smaller targets (this is a function of the wavelength of the transmitted wave). At the same time, the ground radar can be equipped and synchronized with the Global Positioning System (GPS) to determine the planar sub-centimetre accurate location.

Ground radar is a device used for non-invasive scanning which is able to record an accurate depth reading and the signature of targets (radagram) for further property interpretation, and can detect shallow or deep targets depending on the applied frequency of the antenna. However, the accuracy of the depth information is limited since it depends on the speed of travel of the wave in an unknown soil or rock. A high frequency waveform (short wavelength) will provide a more detailed or higher resolution image than a low frequency waveform, but the higher frequencies are

attenuated or absorbed at a greater rate so the penetration depth is not as great as lower frequencies (Daniels, 2007). Meanwhile the shape of the target such as a sphere, a cuboid or a long thin cylindrical object will affect the choice of antenna type and configuration as well as the kind of signal processing techniques to be employed (Daniels et al., 2004). Detection of pipe materials (metal or non-metal pipe) is possible by measuring differences between the reflected waves (reflection strength) (Paniagua et al., 2007).

Fortuny-guasch (2000) mentioned that there are some difficulties associated with the limitations of ground radar such as, multiple internal reflections, clutter generated by the air ground interface, and poor impedance matching at the antenna and a heterogonous velocity distribution in the subsurface. Meanwhile, Daniels (2007) mentioned that the ground radar performance can be improved by considering a few factors such as path loss, target reflectivity, clutter and system dynamic range. He added that the spatial resolution of the radar can be determined by considering the depth and plan resolution separately.

Results in the study of Daniels et al. (2004) reveals that for ground radar to operate effectively, it must meet the following basics: Efficient coupling of the electromagnetic radiation into the ground; Adequate penetration of the radiation through the ground to the target depth; Obtaining from the buried object, or other dielectric discontinuities, a sufficiently large scattered signal for detection at or above the ground surface; and an adequate band width in the detected signal to the desired resolution and noise level.

Generally, Daniels (2004) assert that the idea of ground radar techniques is not very different from free space radar (conventional techniques), as any radar system depends on the design and operational factors. However, ground radar is clearly different in propagation loss, clutter characteristics and target characteristics.

Concept of Real-Time Surveillance

Real-Time Surveillance is one of the components of Ground radar technology which can play a critical role in strengthening Nigeria's National security against potential future attacks. Specifically, it has the capabilities to monitor most sensitive equipment's and public places of farmer - nomadic pastoralist. The word Surveillance is applied to monitoring from a distance by means of digital device such as high definition weather proof CCTV cameras, or interception of electronically transmitted information such as internet traffic or phone calls. According to Kathori (2007), surveillance is the system for collection, analysis, interpretation and dissemination of data and information on an ongoing basis. It is also a mechanical or electronic system or device that enables continuous or periodic video recording, observation or monitoring of an individual or group.

SkyWall100 is one of the products of Ground Radar Technology and it is interesting to note that SkyWall100 is a handheld system that gives a mobile operator the ability to physically capture a drone in a specifically designed 'drone entangling' net. It uses compressed air to launch a projectile up to the drone after the operator has targeted it using the onboard Smart-Scope. SkyWall100 can be used as a standalone drone defense system but can also be integrated with a wider security system, using the skylink module, to offer a highly capable counter drone package.

Concept of Farmers

A farmer is seen as a person engaged in agriculture, raising living organisms for food or raw materials usually for the primary motive of either selling or for self-sustaining purposes. In a subsistence economy, farm products might to some extent be either consumed by the farmer's family or pooled by the community.

A farmer according to Dyer (2006) is a person engaged in agriculture, raising living organisms for food or raw materials. The term usually applies to people who do some combination of raising field crops, orchards, vineyards, poultry, or other livestock. A farmer might own the farmed land or might work as a laborer on land owned by others, but in advanced economies, a farmer is usually a farm owner, while employees of the farm are known as farm workers, or farmhands. In developed nations, a

farmer (as a profession) is usually defined as someone with an ownership interest in crops or livestock, and who provides land or management in their production

Concept of Nomadic Pastoralist

Pastoralism, an aspect of agriculture which involves the breeding and rearing of livestock (goats, sheep, cattle and camels), contributes its own quota to the economy of any country. In Nigeria, livestock products come at a relatively cheap supply to consumers and generate income for herders. Livestock production has also been shown to contribute substantially to the nation's agricultural Gross Domestic Product (GDP) (Abass ۲۰۱۱; Adisa and Badmos, ۲۰۰۹; Muhammed, et al, ۲۰۱۰). These positive indicators are attributable to an extensively established proclivity among an otherwise "restricted inventory of pastoral peoples" in the country (Blench, ۲۰۱۰), many of whom not only consider pastoralism a vocation, but also equate their engagement in it a traditional obligation. There are about fourteen groups, and their respective sub-groups, that are actively involved in pastoralism in Nigeria; including the Kanembu, Koyam, Fulbe (Fulani), Shuwa, and Berber groups (Blench, ۲۰۰۲).

Pastoralism is an inherent traditional practice among Fulani nomads. Even during the colonial period, Lambrecht (۱۹۷۱) recounts, when Western ideas, techniques and attendant developments were transforming the traditional life of most Nigerian people, far less alteration was made on the way of life of the Fulani people who stuck "to their pastoral traditions ruled by the eternal rhythm of seasons and care of the herd" (p. ۲۲). Indeed, despite the "clash between modernism and traditionalism" that has challenged their economic livelihood over the years, the Fulani have largely maintained their system of production and consumption (Genyi, ۲۰۰۷).

Cattle are a treasured possession among the Fulani. Owning and rearing cattle play significant roles in the socio-cultural organization and relations of the Fulani people. For instance, a man's wealth is quantified by the number of cattle he owns. As a marriage rite, the father of the bride transfers one of his cattle herds to the groom at the marriage ceremony, or the bride goes to the groom's house with her own cattle. Adisa and Badmos (۲۰۰۹), however, note that "cattle belonging to individual family members are usually herded together, with male family members assuming automatic rights to all cattle. It is difficult to determine cattle ownership by female family members". While herding the cattle is a duty for the men, the women are tasked with milking the cows, processing and selling dairy products. Conversely, among the non-nomadic Fulani, the milking of cows, rather than being an exclusive duty of women, is also done by men (Lambrecht, ۱۹۷۱).

Concept of Conflict

Conflict is a phenomenon ubiquitous in occurrence and, yet, a diversely-defined concept. The conceptualization of conflict by scholars is usually divided along the lines of either a general approach or a nature-based approach (Stein, ۱۹۷۱). Pia and Diez (۲۰۰۷) define conflict as a contest or struggle between people with opposing needs, ideas, beliefs, values or goals. Conflict, according to Fisher (۲۰۰۰) is an incompatibility of goals or values between two or more parties in relationship, combined with attempts to control each other and antagonistic feelings toward each other.

Swanstrom and Weissmann (۲۰۰۲), who define conflict as "perceived differences in issue position between two or more parties at the same moment in time" (p. ۹), contend that perception should be central to the definition of conflict as a concept because the occurrence of conflict is not entirely based on attitudes and behaviours, but often provoked and sustained by the subjective perceptions of opposing parties. Critical and interpretative perspectives are also used to define conflict (nature-based approach) based on the reasoning that certain conflicts may be more complicated than they first appear (Martin and Nakayama, ۲۰۱۰).

Coser (۱۹۶۷) considers conflict in a positive sense by stating that the generation of new institutions, new norms and economic and technological innovations can all be brought about as a result of conflict. Corroboratively, Gopin (۲۰۰۹) posits that conflict can be constructive when it leads people toward shared goals, greater efficiency, greater justice, and greater trust. In contrast, conflict becomes negative or destructive when marked differences among people stifle commonality in the

pursuit of a goal or interest and, worse, result in incivilities and violence. This dimension of conflict is most damaging because the verbal or physical abuse a party exercise on the other is easily followed with a cycle of retaliation (Gopin, 2006).
Augsburger (1992) cited in Martin and Nakayama (2010) delineates productive (or positive) conflict from destructive (or negative) conflict in four ways. First, in productive conflict, individuals or groups narrow the conflict in terms of definition, focus, and issues; but in destructive conflict they escalate the issues or negative attitudes. Second, while individuals or groups, in productive conflict, limit conflict to the original issue; in destructive conflict, there is an escalation of the original issue, with any aspect of the relationship open for re-examination. Third, in productive conflict, individuals or groups direct the conflict toward cooperative problem solving; whereas, strategies employed in destructive conflict are the use of power threats, coercion, and deception. Fourth, in productive conflict, individuals or groups trust leadership that stresses mutually satisfactory outcomes; but in destructive conflict, they polarise behind single-minded and militant leadership.

Theory

Securitization Theory by Weaver (2004)

This theory is an analytical framework intended to increase understanding about how traditional and non-traditional security threats are perceived and managed chiefly by states. The main argument of securitization theory is that security is an (illocutionary) speech act, that solely by uttering 'security' something is being done. Weaver (2000) asserts that it is by labelling something a security issue that it becomes one. By stating that a particular referent object is threatened in its existence, a securitizing actor claims a right to extraordinary measures to ensure the referent object's survival. The issue is then moved out of the sphere of normal politics into the realm of emergency politics, where it can be dealt with swiftly and without the normal (democratic) rules and regulations of policy-making. For security this means that it no longer has any given (pre-existing) meaning but that it can be anything a securitizing actor says it is. Security is a social and inter-subjective construction.
Buzan (1991) asserts that to prevent 'everything' from becoming a security issue, a successful securitization consists of three steps. These are: (i) identification of existential threats; (ii) emergency action; and (iii) effects on inter-unit relations by breaking free of rules (Buzan, 1991). To present an issue as an existential threat is to say that: 'If we do not tackle this problem, everything else will be irrelevant (because we will not be here or will not be free to deal with it in our own way)' (Buzan, 1991). This first step towards a successful securitization is called a securitizing move. A securitizing move is in theory an option opens to any unit because only once an actor has convinced an audience (inter-unit relations) of its legitimate need to go beyond otherwise binding rules and regulations (emergency mode) can we identify a case of securitization. In practice, securitization is thus far from being open to all units and their respective subjective threats. Rather, it is largely based on power and capability and therewith the means to socially and politically construct a threat. In this way the study of security remains wide, but with restrictions pertaining to 'who' can securitize it is neither unmanageable nor incoherent. This being said it should be noted that Weaver (1991) is extremely critical of framing issues in terms of security. For him: 'security should be seen as a negative, as a failure to deal with issues of normal politics' (Buzan, 1991). Because of this, he favours a strategy of desecuritization whereby securitization is reversed and issues are moved out of 'the threat-defence sequence and into the ordinary public sphere' where they can be dealt with in accordance with the rules of the (democratic) political system. Although this is clearly a normative statement on the part of Weaver, it is important to notice that it has no bearing on what securitization theory can do. While for normative theorists being political lies at the very heart of their approach to security, in Weaver's securitization theory being political (intended or unintended) is only of secondary importance. This is because being political can never replace the political act that is securitization/desecuritisation (Weaver, 2000).

Securitization/desecuritization is a political choice by a securitizing actor, which the analyst seeks to uncover by means of using securitization theory.
The application of this theory to the study draws on the analytical strength of this approach which is based on its ability to situate a community at the heart of security. This therefore means that the welfare of the people affected by the nomadic pastoralist conflict should be paramount. In other words, the physical security of people as well as the socio-economic wellbeing of the people should be prioritized by the state. The scope of global security should be expanded to include threats in seven areas such as human security which requires using ground radar technology to monitor the activities in conflict zone.

METHOD

Research Design

Exploratory research Survey design was considered appropriate for this study. The researcher does not have direct control of independent variables because their manifestation have already occurred. The researcher cannot manipulate the effects but just obtain the effect on already existing natural course of events

Area of the Study

The area of the study was Plateau state and Benue State. The study area chosen based on the prevalence and the incessant herdsmen and farmers conflict in the area.

Population of the Study

The population of the study comprised of all the staff of Operation Save Haven Plateau State and Operation Whirl Stroke Benue State. This comprises of the Nigerian Police, Nigerian army, Nigerian Air Force, Nigerian Navy, Department of State Services and Nigeria Security and Civil Defense Corps from three states (Plateau State and Benue State).

Sample and Sampling Technique

xl respondents were randomly selected for the study using non-proportionate stratified sampling technique. This is necessitated by the fact that the questionnaires were administered to v respondents (head of operation with assistant and head of administration with assistant) in each of the l aforementioned originations in the two selected states.

Instrumentation

The researcher will develop an instrument called questionnaire. The questionnaire is designed using the four point Likert type scale and divided into two sections with an introduction to assure the respondent of the confidentiality of their responses. Section A was the demographic part measuring name of organization, sex of the respondents and age of the respondents, while Sections B addressed the constructs of the variables

Validation of the Instrument

The questionnaire items were subjected to validation by *2* experts in the Department of Statistics, University of Benue, Benue State.

Reliability of the Instrument:

Pearson Product Moment Correlation was used to determine the reliability coefficient of the instruments. Using the test-retest method, the instruments were administered twice to twenty (ıı0) that were not part of the study with two weeks' interval between each administration. The reliability coefficient for the instrument ranged from 0.cıı to 0.mo, which showed that the instruments were highly reliable.

Administration of Instrument

The questionnaire was administered to the sampled respondent after obtaining permission from the appropriate officers in the selected organization on a presentation of a letter of introduction. This was done personally in collaboration with five trained research assistants who were carefully selected and trained for the exercise by the researcher.

Method of Data Analysis

Data collected were processed using the Statistical Package for Social Science (SPSS). The research questions were answered using descriptive statistics; while

two hypotheses were tested using the independent t-test analysis at 0.05.

Results and Discussion

Answering the Research Questions

Research Question One

How will Ground Radar Technology assist in Real-time Surreptitious Surveillance and Interception of farmer – nomadic pastoralist in conflict zones in Nigeria? Table 1 was used to answer the research question.

Table 1: Descriptive analysis of the extent to which Ground Radar Technology will assist in Real-time Surreptitious Surveillance and Interception of farmer - nomadic pastoralist in conflict zones in Nigeria.

Responses	Freq	%	Remark
Very great extent	111	11M.1C	1st**
Great extent,	1M	11L.111M	11nd
Average	1X	110.D11	111rd
Little extent	111	1L.LC	Vth
Very little extent	X	L.MV	Xth*
TOTAL	72	100%	

** The greatest extent

** The least extent

Source: Field Survey

Table 1 shows the extent to which Ground Radar Technology will assist in Real-time Surreptitious Surveillance and Interception of farmer – nomadic pastoralist in conflict zones in Nigeria. From the result, it was observed that 111(11M.1C%) of the respondents affirmed very great extent, while X(L.ML%) affirmed very little extent. The result therefore means that Ground Radar Technology will assist in Real-time Surreptitious Surveillance and Interception of farmer – nomadic pastoralist in conflict zones in Nigeria.

Research Question Two

What are the effects of using Ground Radar Technology to Secure Communication among law enforcement agencies in farmer – nomadic pastoralist conflict zones in Nigeria? Table 11 was used to answer the research question.

Table 2: Descriptive analysis of the extent of the effects of using Ground Radar Technology to Secure Communication among law enforcement agencies in farmer - nomadic pastoralist conflict zones in Nigeria

Responses	Freq	%	Remark
Very great extent	1111	VV.VV	1st**
Great extent,	11X	111V.C11	11nd
Average	M	111.X	111rd
Little extent	V	X.XL	Vth
Very little extent	11	11.CD	Xth *
TOTAL	C11	100%	

** The greatest extent

** The least extent

Source: Field Survey

Table II shows the extent of the effects of using Ground Radar Technology to Secure Communication among law enforcement agencies in farmer - nomadic pastoralist conflict zones in Nigeria. From the result, it was observed that IIIII(VV.VV) % of the respondents affirmed very great extent while II(II.CD%) of the respondents affirmed very little extent. The result therefore means that there is significant effect of using Ground Radar Technology to Secure Communication among law enforcement agencies in farmer - nomadic pastoralist conflict zones in Nigeria.

Hypotheses Testing

Hypothesis One

The null hypothesis states that Ground Radar Technology cannot significantly facilitate Real-time Surreptitious Surveillance and Interception of farmer - nomadic pastoralist in conflict zones in Nigeria. In order to test the hypothesis ordinal regression analysis, incorporating chi-squared analysis, was performed on the data, (see table III).

Table 3: Model Fitting Information of the Analysis of how ground radar technology can facilitate Real-time Surreptitious Surveillance and Interception of farmer-nomadic pastoralist in conflict zones in Nigeria.

Model	-II Log Likelihood	Chi-Square	Df	Sig.
Intercept Only	XI.IX			
Final	IIM.VI	III.CV	II	.000

Link function: Logit.

***Significant at 0.05 level; N= 72; df = 2, critical X^2-value = 5.99**

The table shows that the calculated X"-value (III.CV) at the final model was greater than the critical X"-value of X.MM at 0.X alpha level with II degree of freedom. This means that ground radar technology can facilitate Real-time Surreptitious Surveillance and Interception of farmer-nomadic pastoralist in conflict zones in Nigeria. It was also deemed necessary to find out the extent to which ground radar technology can predict Real-time Surreptitious Surveillance and Interception of farmer-nomadic pastoralist in conflict zones in Nigeria, (see table V).

Table 4: Pseudo R-Square of how ground radar technology can predict Real-time Surreptitious Surveillance and Interception of farmer-nomadic pastoralist in conflict zones in Nigeria.

Cox and Snell	.IILI
Nagelkerke	.IIDX
McFadden	.IIIII

Link function: Logit.

The above table presents the extent of ground radar technology prediction on Real-time Surreptitious Surveillance and Interception of farmer-nomadic pastoralist in conflict zones in Nigeria, showing three Pseudo R-Square values 0.IILI for cox and Snell, 0.IIDX for Nagelkertke and 0.IIIII for McFadden. From the above three Pseudo R-Square values it was observed that ground radar technology can predict between III% and IIL.I% of Real-time Surreptitious Surveillance and Interception of farmer-nomadic pastoralist in conflict zones in Nigeria.

Hypothesis Two

The null hypothesis states that Ground Radar Technology cannot significantly facilitate Secure Communication and Interception of farmer - nomadic pastoralist in conflict zones in Nigeria. In order to test the hypothesis ordinal regression analysis, incorporating chi-squared analysis, was performed on the data, (see table x).

Table 5: Model Fitting Information of the Analysis of how ground radar technology can facilitate Secure Communication and Interception of farmer-nomadic pastoralist in conflict zones in Nigeria.

Model	-II Log Likelihood	Chi-Square	df	Sig.
Intercept Only	IIID.IIIIID			
Final	IIV.LOL	IIII.CIII	II	.OOI

Link function: Logit.

***Significant at 0.05 level; N= 72; df = 2, critical X^2-value = 5.99**

The table shows that the calculated X^{II}-value (IIII.CII) at the final model was greater than the critical X^{II}-value of X.MM at 0.X alpha level with II degree of freedom. This means that ground radar technology can facilitate Secure Communication and Interception of farmer-nomadic pastoralist in conflict zones in Nigeria. It was also deemed necessary to find out the extent to which ground radar technology can predict Secure Communication and Interception of farmer-nomadic pastoralist in conflict zones in Nigeria, (see table L).

Table 6: Pseudo R-Square of how ground radar technology can predict Secure Communication and Interception of farmer-nomadic pastoralist in conflict zones in Nigeria.

Cox and Snell	.ICV
Nagelkerke	.IIIII
McFadden	.IIIIII

Link function: Logit.

The above table presents the extent of ground radar technology prediction on Secure Communication and Interception of farmer-nomadic pastoralist in conflict zones in Nigeria, showing three Pseudo R-Square values 0.ICV for cox and Snell, 0.IIIII for Nagelkertke and 0.IIIIII for McFadden. From the above three Pseudo R-Square values it was observed that ground radar technology can predict between III% and IIII.I% of Secure Communication and Interception of farmer-nomadic pastoralist in conflict zones in Nigeria.

The results of the data analyses in tables i and iii were significant due to the fact that the calculated X"-value iii.cv was greater than the critical X"-value of x.mm at 0.0x level with ii degree of freedom. The result implies that that ground radar technology can facilitate Real-time Surreptitious Surveillance and Interception of farmer-nomadic pastoralist in conflict zones in Nigeria. The result therefore was in agreement with the research findings of Alekhya Sai Punnamaraju (iioiii) that states that the result of the experiment with Ground Radar Technology proved that it is all because there has been an understanding that UAVs can create major threats beyond the conflict areas. Sometimes, camera-equipped UAVs surreptitiously invade people's privacy. It also agrees with that of Gilad Beeri (iioiL) that state that UAV can intercept data. The significance of the result caused the null hypotheses to be rejected while the alternative one was accepted.

The results of the data analyses in tables ii and x were significant due to the fact that the calculated X"-value iiii.cii was greater than the critical X" value of x.mm at 0.0x level with ii degree of freedom. The result implies that ground radar technology can facilitate Secure Communication and Interception of farmer-nomadic pastoralist in conflict zones in Nigeria. The result therefore was in agreement with the research findings of Leonardo (iioiD) that proved that in-house laboratories devoted to specific areas of applied research, promotes the effective integration of new, innovative components within our existing radar portfolio and the new developments for promotion of communication. According to him, a key element of this strategy is the design of the most advanced fully AESA Kronos family radar, fixed faces, staring and rotating X, C and L band, based on the totally-owned GaAs and GaN technologies. The significance of the result caused the null hypotheses to be rejected while the alternative one was accepted.

Conclusions

Based on the findings of the research work, it was concluded that Ground Radar Technology if adequately installed and utilize can significantly help in assisting Real-time Surreptitious Surveillance and Interception and Securing Communication among law enforcement agencies of farmer - nomadic pastoralist in conflict zones in Nigeria. Also Ground Radar Technology can significantly Secure Communication and Interception of farmer - nomadic pastoralist in conflict zones in Nigeria.

Recommendation

The study however recommends that:

i. Ground radar technology, with unique and distinctive features of Real-time Surreptitious Surveillance and Interception should be used in running eco-scanning test to reduce time waste and improved result outcomes.
ii. GR scan that has sound Communication facilities with high frequencies capable of observing the defective region and with antenna that has improved MHz should be employed in the fight against the herdsmen and farmers conflict.

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