

FORESTS AND FOREST RESERVES AS SECURITY THREATS IN NORTHERN NIGERIA

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Abstract

Forests are important plant communities that consist of trees and other woody vegetation that performs life supporting functions on earth. This paper attempts to examine forests and forest reserves as security threats in the northern region of Nigeria, Africa's most populous nation. The study is both empirical and theoretical in nature as both primary and secondary sources of data were collected, edited and analyzed for the research. The results identified the reasons why forests and forest reserves can be security threats as indicated using examples in countries from different parts of the world such as Colombia, Kenya, Democratic Republic of Congo and India. The results further identified eight forests and forest reserves in the region using their location, specie composition and present status. The security threats they posed were examined which include bases, hideouts and camping sites for insurgents, highway armed robbers, thieves and other criminals. The study proposed the way out of the present insecure situation through launching attack to dislodge the insurgent, protection of forests and forest reserves, reforestation of degraded sections among others. These forests and forest reserves need to be properly harnessed and developed into recreational parks and tourist centers that will yield the much needed revenue to the governments of northern Nigeria.

Keywords: Forest, Forest Reserve, Security Threat

Introduction

Forests are plant communities consisting predominantly of trees and other woody vegetation occupying an extensive area of land. In its natural state, forests remain in a relatively fixed, self-regulated condition over a long period of time (Oludotun, 2011). When areas of land characterized by the presence of trees they are referred to as forests. Forests are collection of trees covering a land area of land with undergrowth. Large areas of land where the dominant plants are trees are forests. Lodha (2007), further defined

forests as large tracts of land covered with trees and other plants growing close together.

Forest reserves are areas of forest designated by the government for the protection of trees growing or planted for the purpose of their ecological benefits among others (Usman and Adefalu, 2010). Forest reserves are areas of land that are protected and managed in order to preserve a particular type of habitat and its flora and fauna which are often considered rare or endangered (Farlex, 2014). Forest reserves are thus areas of forests which are reserved and managed for conservation and to provide special opportunities for study or research.

Governments especially in semi arid regions of the world designate areas of forests as forest reserves to stimulate rainfall, reduce wind erosion, stem the tide of desertification and halt the encroachment of the desert. Therefore in many countries forest reserves enjoy judicial and/or constitutional protection under a legal system. According to Garg et al., (2006), forests are the next most important resources of nature on earth after air and water. They essentially support life on earth by absorbing carbon dioxide and releasing oxygen, thereby maintaining balance in the gaseous atmosphere and also in completion of hydrological cycle to cause rainfall. Forests are sources of food, medicine, timber and many other products. They play protective roles against soil erosion, drought, floods, intense radiation etc. Forest also performs accessory functions which include the role of forests in recreation, aesthetics and as habitat of diverse wild life (Anjaneyulu, 2005).

It is based on above importance of forests that the United Nations mandated that 25% of the surface area of every country should be conserved under permanent forest cover as the minimum ecological requirement for the socio-economic survival of the country (Bugaje, 2007). It is in compliance with the above mandate that forest and forest reserves are found in different countries of the world. However in northern Nigeria, forests and forest reserves have presently become security threats. This is because forests and forest reserves have become bases for insurgents to launch attacks. Hideouts for armed robbers who launch attacks on travelers/traders, hideouts for thieves, criminals and cattle rustlers and camping sites for unknown gum men to launch attacks on local people.

The Study Area

Northern Nigeria was a British protectorate in the northern areas of modern day Nigeria formed in 1905 from the union of the Royal Niger Company above Lokoja on the River Niger(See Figure 1). Today the region is a geographical region of Nigeria that is made up of nineteen (19) out of the thirty six (36) States that comprise the Federal Republic of Nigeria. The

region covers about 60% of Nigeria’s land area of 923,800 square kilometers. It is more populated than the southern region and based on the 2006 population census, the States have a population of 73,599,965 representing 52.57% of the total population (African Masterweb, 2013).

Since the year 2009, the security situation in northern Nigeria deteriorated with communal/ethnic classes in Plateau and Nasarawa States, Fulani herdsmen/farmers crisis in Plateau, Nasarawa and Benue States, suspected Fulani herdsmen battle with Tiv and Jukun in Benue and Taraba States, unknown gunmen attack in Katsina, Kaduna, Bauchi, Borno and Yobe States. These plus bombings linked to Boko Haram insurgency in Abuja, Kano, Kaduna, Suleja, Jos and other northern cities (See Figure 1). The security situation went from bad to worse when over 200 school girls were abducted from their hostel at Government Girls’ College Chibok, Borno state. It was later discovered that the girls are being kept in Sambisa forest (Bakare, 2014).

This has brought to limelight how forests and even forest reserves are used by groups who cause insecurity in the northern region. A recent study on conflicts in the continent of Africa has observed that armed groups have taken shelter in forests areas and forest reserves in Central African Republic, Democratic Republic of Congo, Southern Sudan and Nigeria (Ladan, 2014). It is against this background that this paper seeks to examine forests and forest reserves as security threats in northern Nigeria.

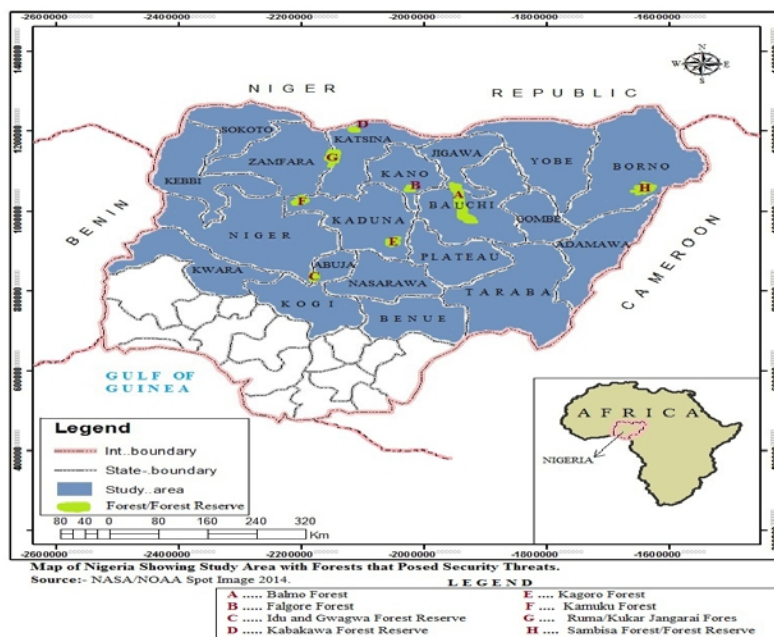


Figure 1: Map of study area Northern Nigeria with the forests/forest reserves.

Objectives of the study

The objectives of this study are:

- 1) To identify and examine the forests and forest reserves posing security threats in northern Nigeria.
- 2) To identify the reasons why forests and forest reserves can be security threats anywhere in the world.
- 3) To identify examples of forests becoming security threats in different parts of the world.
- 4) To examine the security threats posed by forests and forest reserves in northern Nigeria.
- 5) To make recommendations on the way out of the situation.

Literature Review

There are several studies that were carried out on forests and forest reserves in Nigeria in general. These studies are focusing on various issues that concerns forest and forest reserves in the country.

Some of these studies focuses on analyzing the tree species, conserving the trees or general vegetation, analysis of the forests reserves. Okpiliya (2013), analyzed the flora species abundance in the tropical rain forest ecosystem of Boki, Cross River State which still remains one of the few ecosystems that have been highly valued for its species diversity despite the spate of indiscriminate logging. The study recommended that government and conservation agencies should swing into action with a view to protecting the integrity of the spies that are of low and moderate abundance which if steps are not taken they may face extinction.

Ihenyen et al (2009) evaluated the tree composition of Ehor Forest Reserve in Edo state, southern Nigeria. The study observed that several tree species are under threat of extinction from the reserve which is quite alarming and calls for a more resourceful and sustainable management techniques. The study further suggested that the reserves should be protected from further timber and fuel wood exploitation in order to allow it to regenerate itself fully.

Akinsoji (2013), carried out a vegetation analysis of Ngel Nyaki Forest Reserve on the Mambilla Plateau Nigeria. The results indicated that the vegetation of Ngel Nyaki forest reserve is stable and self-sustaining. The more dominant species based on importance values are *pouleria altissima*, *polysciasfulva*, *carapa grandiflora* and *entandrophragma angolense*. The study observed that most of the forest is relatively undisturbed but the edges are subjected to burnings by incursions of grasslands fires.

Several studies focuses on decline in forest reserves, changes in forest tree species, depletion of forest reserves and forest degradation. Kankara (2010), noted that over the years there is decline in forests in Katsina state,

northern Nigeria caused by neglect and human interference which results in the disappearance of wild animals that once roams through the forest across the State. The study recommended establishing tighter control on fuel wood extraction from forest and encouraging community involvement in the management of forests across the state.

Ati et al (2010), assess the changes in Kagoro forest, Kaduna State using remote sensing and GIS, the result of the study reveal that settlement and cultivable area increased between 1987 and 2005 by 72% and 17.77% respectively while undisturbed forest decreased by 24.06%. This shows significant depletion of the Kagoro forest due to clearance for settlement and farming. The study finally observed that the forest is in danger of being destroyed and laid bare in the nearest future which has implication for global carbon dioxide loading and temperature.

Omale (2011), observed that in Nigeria, there is the depletion of forest reserve through improper wood harvesting methods. This is alarming and threatening the reserves, which gives all stakeholders serious concern and it has become imperative for a research to be undertaken to find an alternative and better logging that is environmentally sound and acceptable.

Abubakar et al (2014) describe an effort to estimate the amount of forest degradation and carbon sequestration for Effan forest reserve, Kwara State using remote sensing/GIS techniques. The results show that there is a significant amount of carbon sequestered at the forest reserve and the sequestration capacity increases as the size of forest stands also increases. The study suggested the use of *Gmelina aboree* tree species in reforestation programme to help mitigate global warming.

Other studies are centred on the effects of human activities on forests and forest reserves. Oduntan et al (2013), evaluates the degree of pressure from human activities on protected areas in Yelwa division of Ogun State, Nigeria. The study randomly sampled four forest reserves as representative samples. The findings reveal that all the reserves were severely threatened by logging and grazing while other reserves were severely threatened by conversion of land use. The study recommends adoption of policies that will help in prioritizing strategies in protected areas management.

Mmon and Mbee (2014), carryout a study on Gele Gele forest reserve, Edo State and the results show that there is a steady growth of the population of the communities around the reserve which leads to rapid decline and depletion of the rich biodiversity and biological resources in the reserve due to overdependence on the forest resources. The results also shows that besides population pressure, lack of indigenous people's participation in the conservation strategy has contributed to poaching as the people feel alienated from the conservation efforts and as such develop apathy towards the reserve.

A similar study was carried out by Okipiliya (2014) on the rain forest and he observed that the forest is being destroyed by man for various purposes such as agriculture, urbanization, fuelwood gathering and logging among others. Also the increasing trend in the population structure of the people inhabiting the rain forest has contributed to significantly to its destruction.

Olaniyi et al (2014) study determines the intensity of anthropogenic activities that took place within the Chimpanzee's distribution area in Oluwa forest reserve, south west Nigeria. The study observed that anthropogenic activities are having significant influences on the occurrence of this species and recommended control measures such as encouragement of forest guards to intensify anti-poaching and encroachment patrol.

Malabo (1999), conducted a study on Mau Mau and Kenya: An analysis of a peasant revolt and observes that the Mau Mau are freedom fighters that have their bases in the Mau forest, a forest complex in Rift valley of Kenya. They carry out their operations from the dense forest attacking the British colonial administrators and their native collaborators from 1952-1956. The British had to carry out ground military attacks and aerial bombardments in the Mau forest that killed, injured the fighters while a few managed to fled the forest.

This is one instance in the literature where forest posed security threats to the settlement that are found around the forest.

The present study is different from those reviewed above but only similar to that of Malabo (1999) as it seek to examine the security threats posed by forests and forest reserves in the northern part of Nigeria

Research Methodology

This research is both empirical and theoretical in nature as both primary and secondary sources of data were collected and analyzed to write the paper. The primary sources of data involved interview with people who lived around the forest and forest reserves such as those who are living in the settlements of Batsari, Runka and Safana that are bordering Ruma/Kukar Jangari Forest Reserve in Katsina State. The questions asked were on the motives of the attacks, places attacked, frequency of attacks, fatalities/valuables lost, presence of security personnels and how best to make the forests/forest reserves safer. Students of Al-Qalam University Katsina that were from different states in northern Nigeria were used as research assistants to gather adequate data from other parts of northern Nigeria for the study. Forest officers of some states such as Katsina and fuel wood collectors from forest reserves were interviewed which provided additional data for the study. The forests and forest reserves included in the study were purposively sampled as they are those that have become security threats to the people of the region. A map of Nigeria showing the study area

with the forests/forest reserves was drawn and incorporated in the study for proper identification of the locations.

The author made use of his personal observations while travelling on some roads that passes through forests such as Birnin Kudu-Ningi-Bauchi road for Balmo forest and Kano-Falgore-Jos road for Falgore forest. Field visits to Kabakawa forest was made to collect data and also a photograph of the remnant of the forest was snapped which is also incorporated into the study.

The secondary sources of data include published journal articles, presented conference papers, textbooks and internet source literacy materials which were used to complement the primary sources of data. The data collected was then edited, analyzed and presented using descriptive analysis in form of tabulations and discussions.

Results and Discussions

Forests and Forest Reserves in Northern Nigeria

The vegetation of northern Nigeria is made up of savannah which comprises grassland with scattered trees and bushes covering an extensive area. There are three types of savannahs which are Guinea, Sudan and Sahel. The trees growing close to one another over a large area forming forests are found in the Guinea and Sudan Savanna. These two types of savannas cover large parts of the north with the Sahel savannah covering only the extreme north east and north west (Dingba and Adamu, 2007).

Trees are more plentiful in the Guinea savanna with heights averaging 10 – 20 meters or more due to higher amount of rainfall than in the Sudan savanna. In the Sudan savanna the trees are more scattered and are shorter usually about 5 – 10 meters. The two savannas are sometimes characterized by gallery forests along the river banks where the soil is moist (Dingba and Adamu, 2007).

The forests and forest reserves to be examined in this study are found in Guinea and Sudan savannas. The forests can be referred to as forested areas that are not under strict management by the State Forestry Departments (SFDs) but permission to exploit trees have to be obtained from the SFDs (FAO,2004) The forest reserves are forested areas set aside for preservation or controlled use which are owned by the state governments and managed by the SFDs who have professional and technical staff including uniform guards for performing their various responsibilities(FAO,2004).

The forests and forest reserves to be studied for this paper include Balmo Forest, Falgore Forest, Idu and Gwagwa forest reserve, Kabakawa forest reserve, Kagoro forest, Kamuku forest, Rumah/Kukar Jangarai forest reserve, and Sambisa forest/forest reserve. These forests and forest reserves can be seen on the table below.

Table 1: Forests and forest reserves posing security challenges in northern Nigeria.

S/N	Name of forest/forest reserve	Location	Vegetation type
1	Balmo Forest	Bauchi/Jigawa States	Sudan savanna
2	Falgore Forest	Kano State	Sudan savanna
3	Idu and Gwagwa Forest Reserves	Abuja FCT	Guinea savanna
4	Kabakawa Forest Reserve	Katsina metropolis Katsina state	Sudan savanna
5	Kagoro Forest	Kaduna State	Guinea savanna
6	Kamuku Forest	Kaduna state	Guinea savanna
7	Ruma/Kukar Jangarai forest Reserve	Katsina State	Sudan savanna
8	Sambisa Forest/Sambisa forest Reserve	Borno state	Sudan savanna

Source: Data analysis, 2014

Balmo Forest

This forest is located in Bauchi and Jigawa States precisely along the Birnin Kudu-Ningi-Bauchi road covering an area of about 350 square kilometers. The forest is traversed by River Bunga that joins the river Jama'are from the Hadejia – Jama'are wetlands downstream. The forest is thick in some sections where a variety of wild animals are found and the relatively low density of population in the area means that there is minimal to moderate degradation of the forest trees and other forms of vegetation. There are sign posts indicating cattle routes are found along the Ningi-Kafin Madaki-Bauchi road that traverses the forest. The forest is within the Sudan Savanna ecological zone and the tree species in the forest include *Anogeissus leiocarpus*, *Azadirachta indica*, *Tamarindus indica* some of which were cut and used as fuel wood in the towns of Bauchi State. (Yilwa, 2007).

Falgore Forest

This forest is located in southern part of Kano state and is part of the Falgore Game Reserve, a protected ecosystem designated for game/wild life protection. The forest is found about 150 kilometers away from Kano city lying on Tudun Wada, Doguwa and Sumaila local governments covering an area of about 1,000 square kilometers. The forest is traversed by the River Kano that was dammed some kilometers away to create Tiga Dam (Assoka and Abubakar, 2005). The forest is within the northern guinea savanna ecological zone and the trees found include *Parkia biglobosa*, *Tamarindus indica*, *Acacia nilotica*, *acacia albida*, *anogeissus leicarpus* etc. However, the forest is totally dissected by a highway that links the commercial city of Kano with Jos the capital of Plateau state. The interstate highway has opened the forest to illegal exploitation such as collection of fuel wood, fishing, hunting, grazing and settlement (Marguba, 2011).

Idu and Gwagwa Forest Reserves

These two forest reserves are located in Abuja Federal Capital Territory (FCT). They are among the reserves which the present FCT inherited from Niger state. These forest reserves are found in the western parts of the FCT in the rugged and less accessible parts of the Gurara River covering an area of about 15 square Kilometers. The reserve lies in the southern Guinea savanna with mixture of trees and luxuriant grasses in some sections. The dominant tree species include *Afzelia*, *Africana anogeissus*, *Albizia zygia*, *Khaya senegalensis*, *Leicarpus*, *Prosopis africana* and *Vitex doniant* (NWE, 2014). The reserves are presently encroached upon and turned into mechanic workshops, places for selling alcohol and restaurants; in addition parts of the reserves were burnt during bush burning (Aduge-Ani, 2014). A road passes between the reserves which people and motorists uses in travelling to other parts of the FCT.

Kabakawa Forest Reserve

This forest reserve is located in Katsina metropolis, the capital of Katsina State covering an area of about 8 square kilometers. The forest reserve was created in 1948 by the British Colonial Administration. The reserve is one of the four forest reserves that surrounds Katsina city for many years until their recent degradation. The reserve is traversed by Ginzo stream that had its source from the reserve flowing northwards close to the city gates. The reserve is within the Sudan savanna ecological zone and the dominant tree species that grows in the reserve is *Azadirachta indica*. There are also different species of shrubs that are growing below the trees. The reserve was de-gazetted in the years 2006 and 2009 with sections being converted into political party office, housing units and industrial plots (Ladan, 2013). However a small section of the reserve could still be seen covered by trees and shrubs along Dutsinma road near Ulul Albab Science Secondary School.

Kagoro Forest

This is a natural rain forest type of vegetation within the savanna due to the location of the forest on the windward side of the Jos Plateau experiencing more rainfall of more than 1550mm than the surrounding areas (Ati et al., 2010). The forest is located in Jemaa and Kaura local government areas of Kaduna State covering an area of about 200 square kilometers. The forest is within guinea savannah and the vegetation is a mosaic of savanna and forest occurring mainly in river and stream valleys but also elsewhere due to high annual rainfall. Some of the tree species include *Isobertina tomentosa*, *Nauclea latifolia*, *Parkia biglobosa* and other species found in the rainforest. According to At et al (2010), parts of the

Kagoro forest is endangered as local industries especially carpentry has engaged in felling of trees to make furniture. There is also the cutting of trees for fuel wood and to make charcoal to keep warm during the cold dry season. However the low population density around the forest has resulted in minimal degradation in certain parts which account for its thickness in those parts. A major road passing through the forest moves through Riyom in Plateau State to Jema'a, Kagoro, Zonkwa, Kachia, Kujama, Makira and then Kaduna all in Kaduna state.

Kamaku Forest

This forest is part of the wider Kamuku National Park located in western Kaduna State covering an area of 1,121 square kilometers precisely around Birnin Gwari though part of the forest extends up to Sabuwa in Katsina State to the northeast. The Funtua-Birnin Gwari (Kaduna state) – Kagara (Niger State) road passes through sections of the forest and the road is used by people from Katsina and Zamfara States for travelling to Ilorin, Ibadan and Lagos. Several tributaries of River Kaduna that merged and flows into Shiroro reservoir crosses the forest. The forest is within the northern guinea savanna ecological zone with some transitional Sudan savanna elements in some areas. The dominant trees include *Isobertina doka*, *Terminalia avicennioides*, *Detarium macrocarpum* and *Daniellia Oliveri*. The animals found in the forest include elephants, lions, leopards, monkeys, baboons, buffalos, roan antelope, hippopotamus, crocodiles and variety of wild birds. A study by Osunsina et al (2008) shows that the forest is rich in fauna, flora and cultural resources which needs to be further developed to enhance the ecotourism potentials of the forest. However, people around the forest are traditional farmers, hunters, pastoralists and craftsmen whose activities posed threats to the forest resulting in partial forest degradation.

Rumah/Kukar Jangarai Forest Reserve

These are two forest reserves that were merged into one forest reserve in 1959 and today are lying north west of Katsina state in Batsari and Safana local government areas. The reserve covers an area of about 800 square kilometers extending up to Zamfara State and is about 80km south west of Katsina city (Jari, 2011). The reserve was once famous for its wildlife such as lions, hyenas, gorillas, zebras and other wild animals with river, dams and rocks that makes it a beautiful tourist site (Sunday Trust, 2012). River Bunsuru and its tributaries traverse the reserve and the damming of the river upstream affected water supply in the reserve as water becomes scarce during the dry season. The density of the forest has over the years reduced in many sections and it is now a camp for cattle rustlers, thieves and armed robbers. The reserve is within the Sudan savanna ecological zone and tree

species still present include *Acacia nilotica*, *Adansonia leicarpus*, *Azadirachta indica*, *Adansonia digitata*, *Combretum glutinosum*, *Feidherbia albida*, *Sclerocarya birrea* etc (Jari, 2011). There are many lorries and trucks that goes regularly to the forest to collect firewood for sale to fuel wood wholesalers and retailers in Katsina, the State capital which has presently resulted in deforestation of large parts of the forest.

Sambisa Forest/Sambisa Forest Reserve –

This forest/forest reserve are located in Borno State south of the capital Maiduguri occupying a large area of 518 square kilometers between Maiduguri, Damboa, Bama and Goza (Olugbode, 2014). In the 1990s, a game reserve exists with birds and wild animals such as ostriches, pelicans, baboons, elephants, gazelle and some facilities for tourists that later fell into state of disrepair. The forest/forest reserves are within the Sudan – Guinea savanna ecological zone, but human activities have degraded areas of the reserve to be more of Sahel savanna. The dominant tree species include *Acacia* spp, *Balanites aegyptiaca*, *Combretum* spp, *Adansonia digitata*, *Tamarindus indica*, and *Terminalia* spp. In many areas short trees and thorny bushes forms the dominant form of vegetation. Sambisa is one of the few patches of forests in a vast land of north eastern Nigeria where there is sparse vegetation. The Boko Haram insurgents took over what remains of the game reserve in the forest on 5th February, 2013 by attacking the base station killing two rangers and forcing other staff to flee (Olugbode, 2014).

Security threats posed by Forests and forest Reserves

In general forests anywhere in the world by their nature as areas of land with the collection of trees and other forms of vegetation can be security threats as thieves, criminals, armed groups, rebels, insurgents and terrorists can use them in carrying out their activities in one way or the other. This is because:

- a) Forests provide cover as forests consist of plant communities of plants especially trees growing close together which can be use by hideouts or for launching attacks in an ambush.
- b) Forests are isolated areas where nobody lives and as such can be used by those who oppose the government or societal values and carry out activities that are against the law such as theft, armed robbery, attack on security personnel etc.
- c) Forests are areas that are usually far away from the watchful eyes of the members of community and thus can be used as places for criminal activities such as drug abuse, ritual killings, hiding of weapons etc.

- d) Forests are areas where there is least of presence of security personnel especially in developing countries and as such crimes can be committed and help cannot easily come to the victims.

In different parts of the world there are examples of forests becoming security threats as some people use the forests abusively to carry out their unlawful activities. These examples are found in regions of some countries from different continents.

- In Kenya, gunmen believed to be members of Al-shabab hiding in two forests in Lamu county carried out attacks that kills 60 people, destroyed people houses and farmlands in July 2014. The Kenyan military deployed jets and security personnel to hunt down the attackers that are hiding in Gorji and Balasange forests (Daily Nation, 2014).
- In India, a guerilla war is going on between the militants and Indian troops stationed in Indian controlled Kashmir since 1989. The militants who have been hiding in Gungerpat, Dhanni and Zab forests and in August 2014 launch an attack that kills four soldiers. Fierce battles usually take place intermittently across the region as the military tries to defeat the militants (Xinhuanet, 2014).
- In Colombia, the greatest concentration of FARC guerilla forces is in south eastern region of Colombia's 50,000 square kilometers of forests. The rebels have their bases in the forests from where they launch attacks on government forces, capture people used as soldiers, hostages and engage in illicit drug trade to finance their war. The rebels also hide in remote areas of the forest whenever they lost control of territories under the control (CRFARC, 2012).
- In Democratic Republic of Congo, various armed groups having their bases in the forests have been fighting the national army and United Nations forces for many years in the east. The armed groups from their forest bases ambush government troops and also launch attacks on the civilian population in the vast forests of the country. Besides thus, the series of wars waged in the country armed group took control of national parks where some endangered species are kept and forest rangers were kicked out which results in the death of the species. The armed group also engaged in the deforestation to produce charcoal to finance their illegal activities that serve as security threat to the country. According to UNEP (2010), the Garamba forest has been a rebel stronghold for nearly two decades which has negatively affected the plants and animals that are found there.

Security Threats Posed by Forests and Forest Reserves in Northern Nigeria

In particular northern Nigeria is covered by forests and forest reserves which presently have become security threats to the people of the region. This can be seen on table 2 below.

Table 2: Security threat posed by the selected forests and forest reserves

S/N	Forest/Forest Reserve	Security threat	Present status
1	Balmo Forest	- Base of insurgents used to launch attack. - Underground weapons armoury location	Slightly degraded
2	Falgore Forest	- Base of armed robbers who attack travelers and traders.	Sections of the forest degraded
3	Idu and Gwagwa Forest Reserves	- Hideout for thieves who launch attacks especially at night	Part of forest encroached, other side burnt
4	Kabakawa Forest Reserve	- Hideouts for criminals - Security threat to people around it.	De-gazetted and land are built-up
5	Kagoro Forest	- Camping site for gunmen - Used by gunmen to move through undetected	Sections of the forest is endangered.
6	Kamuku Forest	- Armed robbers hide in forest along the road to attack travelers.	Partially degraded.
7	Rumah/Kukar Jangarai Forest Reserve	- Camps for thieves, armed robbers and cattle rustlers.	Large parts were degraded due to deforestation.
8	Sambisa Forest/Forest Reserve	- A notorious den, attack launch point and hideout for insurgents	Partially degraded.

Source: Data Analysis, 2014.

Balmo Forest in Bauchi and Jigawa States from the table above is used by Boko Haram insurgents as bases and hideouts for launching attacks. For example for their base in the forest the insurgents launch an attack on the Bauchi township prison and managed to free 721 inmates some of which are their captured members awaiting trial on September, 7th July, 2010(Allafrica,2010). On 5th to 6th July,2014,the Nigerian military raided the Balmo forest and discovered a stockpile of weapons at underground armories, also discovered are motorcycles, motor vehicles, communication equipment, food stuff and kitchen utensils (TV360 Nigeria, 2014). During this raid by the security forces at the forest a senior member of the group believed to be the “chief butcher” was arrested while fleeing from the intensive counter insurgency operations. There were also widely circulated reports that the security forces captured foreign mercenaries in the forest which to some extent goes to confirm the belief of some people of collaboration with other countries to cause insecurity in northern Nigeria.

Falgore forest in Kano State has over the years been sued by robbers to launch attack on travelers and traders who are travelling to or from Jos to the commercial city of Kano. In 2007, a gang of 14 robbers who specialize in cow theft along the Kano-Falgore road were paraded at the Emir's palace in Kano as they came to hand over themselves and repent. In 2010, Kano traders staged a protest against the withdrawal of army from the Falgore forest due to security concerns over the cases of armed robbery along the road (Musa, 2010). In 2012, armed gunmen attempted to rob a filling station at Tudun Wada of the sum of N2.65 million. The gunmen were later arrested in the Falgore forest with the assistance of local hunters at Kwanar Dangora (Madu-West, 2012).

Idu and Gwagwa Forest Reserves in Abuja FCT are fast becoming haven for criminal activities. Many residents who lived around these reserves feel insecure as the reserves have become places where criminals occasionally come through the forest to attack residents of the area, especially at night (Aduge-Ani, 2014). Even people who pass-by are also not left out of these attacks as they are frequently waylaid by criminals who have turned the reserves into their abode. It has now become risky to live in residential areas around the reserves due to fear of being attacked by criminals who have taken over the forest from where they come and attack the people. Even when the police were called, the criminals always escape through the forest without being caught (Aduge-Ani, 2014).

Kabakawa forest in Katsina, the capital of Katsina state is the only forest reserve that is located within the residential quarters. Part of this reserve along Kano road posed security threat as thieves that attempted to steal belongings of residents around the reserve quickly ran into the reserve to hide after being chased. There are also other cases of drug addicts and criminals engaging in consumption of drugs and raping in the forest. One of the respondents interviewed in the metropolis narrated the case of a girl who was carried on a commercial motorcycle along a road that passes through the reserve and was then stabbed with a knife, with the attacker trying to alert his gang to come and cut part of her body probably for ritual purposes. The Katsina State Government in December 2009 decided to de-gazetted the Kano road section of the reserve for security reasons (Ladan, 2013). The area is presently occupied by political party offices and commercial buildings. This is the only forest reserve sampled for the study whose section was degazetted and is vegetation cleared. However a small section is still found relatively intact along Dutsinma road near Ulul-Albab Science Secondary School Katsina which can be seen below.



Plate No. 1: Remnant of Kabakawa Forest Reserve, Katsina metropolis

Kagoro forest is southern Kaduna state, precisely along Kaduna-Kagoro-Jos road in Kaura local government. The forest posed security threat as it is the place where gunmen camped and launch their attacks from there. For example gunmen numbering over 40 armed with dangerous knives, guns and other sophisticated weapons invaded three villages in Kaura local government on 21st March 2014 shooting and setting houses ablaze. The gunmen reportedly killed 119 persons including women and children (Bashir and Suwo, 2014). Again on 23rd June 2014 gunmen suspected to be Fulani herdsmen camping in the Kagoro forest attack several communities in the neighbouring Sanga local government reportedly killing more than 150 people in 12 villages (Buhari, 2014). Most of the gunmen wear camouflage uniforms that enable them to move through the forest without been detected easily as they more to carry out these attacks on innocent people.

Kamuku forest in eastern Kaduna State posed security threat particularly to the people who travel along the Funtua-Birnin Gwari-Kagara road. This is due to armed robbery attack on defenseless travelers which resulted that many people fear to travel through the road. The gang of armed robbers occasionally set up road blocks to rob and terrorize unfortunate travelers along this federal highway as they have ample cover to hide in the

forest. According to one of the respondents who travelled from Minna to Katsina along the road, they were attacked by a group of armed robbers in broad day light around 10.00 a.m. They were robbed, beaten and the robbers then escaped into the forest with no security personnel in sight to chase them. It is to bring under control the robbery attacks, teams of mobile police personnel and the army was occasionally deployed along the road, who also camp in the forest in a move to capture or kill the robbers.

Rumah/Kukar Jangarai forest reserve in Katsina state has for many years become a camp for thieves, armed robbers and cattle rustlers that attack nearby villages or travelers that pass through the forest along the Safana-Batsari road. According to one of the residents of the villages Chambala that is around the forest, thieves and armed robbers used to stay in the forest and launch attack on nearby village settlements such as Ruma, Runka, Wagini, Batsari up to Safana. The robbers also attack travelers along the Runka-Batsari road especially on Thursdays which are market days for Batsari and along Batsari-Kurfi road on Saturdays for those travelling to Yargamji market. The traders and buyers were robbed of their money or items they are carrying to sell or have bought at the market such as goats, sheep, fowls, food stuffs etc.

The State Forest Officer in charge of Dutsin-ma zone that covers the forest reserve in an interview confirmed the security threats arising from the activities of criminals in the forest which has limited their forest protection and conservation efforts. Inspire of the provision of one number brand new Toyota Hilux vehicle and eleven number motor cycles to carry out their assigned duties. Fuel wood collectors from the reserve also face serious threats from the criminals as they also rob them of their money, cooked food and cell phones. On 17th November, 2014 the criminals fought and burn the lorries and trucks of the fuel wood collectors as they realize that cutting the trees expose them.

Additional interview conducted with residents bordering the forest reserve from Batsari, Runka and Safana reveal that the motives of the attacks are economic gains due to unemployment and abject poverty, perceived injustice on Fulani herdsmen and sinister plans aimed at perpetuating insecurity in northern Nigeria for political manipulations during 2015 general elections. The attacks are carried out in various locations such as along the roads, at the markets on market days and even at homes in the towns and villages. The frequency of attacks is every week and the valuables lost include money, domestic animals such as cattle and sometimes food stuffs, stored grains were burnt or destroyed and young women were taken away. In the attacks people also loss their lives when they attempt to defend themselves or their properties as the attackers are well armed. There is security presence in form of Divisional Police Office at Safana and Batsari

which are Local Government Headquarters. But according to the respondents the presence of security personnel in the areas is not adequate enough to combat the incessant attacks this despite the permanent stationing of Special Security Task Force comprising Mobile Police, Army and Civil Defense at Runka which is the closest settlement to the forest reserve. Below is a Table showing the interview questions with the summary of the responses with the group of people who participated in the interview.

Table 3: Result of Interview with Respondents from Settlements Bordering Ruma/Kukar Jangarai Forest Reserve in Katsina State

S/N	Interview Question	Respondents answers
1	Are you aware of the security threats posed by the forest reserve in your area, if yes what do you think are the motives?	Yes, am aware. The motives are for economic gains due to unemployment and abject poverty. Sinister plants to cause insecurity in northern Nigeria.
2	Where are the attacks being carried?	Along roads at the market especially on market days and at homes.
3.	What is the frequency of the attacks?	Every week at least one attack will be carried out.
4	What are the valuables that are lost to the attackers?	Money in cash, domestic animals especially cattle, food stuffs, stored grains and young women.
5	Is there any security presence around the forest?	Yes, there is in front of Divisional Police Office and Special Security Task Force at Runka but they are inadequate and not well armed.

Source: Data Analysis, 2014.

Sambisa Forest/Forest Reserve since February 2013 has become the strongest base of the Boko Haram insurgents. The forest is believed to be the main base of the insurgents as they have well fortified camps with their food supplies, weapons, motor vehicles and motorcycles that they use to launch attack on settlements in Yobe, Borno and Adamawa states. Indeed the forest has become a notorious den of the insurgents that people dread coming close to it. Most of the villagers around the forest have left the area to neighbouring Cameroun and Niger Republic due to the high rate of insecurity. It is believed that there is a bunker and an underground detention hole used by the insurgent to terrorize captured victims. One of the respondents from Maiduguri Borno State described the Sambisa forest as a war zone where bullet shells, ammunition waste and burnt vehicles used by insurgents could be sighted (See Plate No.2 below). Furthermore, Boko Haram kept abducted Chibok girls inside this forest. The over 200 girls were kept in three different camps in the forest and the camps were large enough to accommodate the abducted girls (Frestgist, 2014). The fact that the

insurgents created different make shift camps in the forest which they use and later abandoned means those parts of the forest is partially degraded.



Plate No. 2: Nigerian troops in Sambisa Forest

The way out of the situation

Based on the discussions on the security threat posed by forest and forest reserves, the study recommends the way out of the present situation.

- The Nigerian security forces should launch an attack on all the forest/forest reserves to ensure that the insurgents, armed robbers, thieves, unknown gunmen and any other criminals are dislodged and their make shift camps destroyed so that none of them ever return to the forests..
- Once the forests and forest reserves are cleared completely of any criminal, the forests should be adequately protected through effective legislations, fencing and use of forest guards that are trained and adequately equipped to deal with any armed threat from any group. Furthermore, it was recently suggested that forest guards should be integrated into the Nigerian security system.
- There should be effective measures that will ensure the reversal of the present status of the forests and forest reserves. In line with this there is the urgent need to carry out reforestation of the degraded sections or parts of the forests and forest reserves throughout northern Nigeria.
- Afforestation programmes should be further carried out in the areas that surround the forests and forest reserves. This afforestation

should be armed properly to provide additional protection to the forests and can result in the successful regeneration of deforested areas thereby creating ecologically stable resource use.

- The forest reserves should be reverted to game reserves with facilities for accommodation, transport and entertainment provided for domestic and foreign tourists. The Sambisa game reserve should be reactivated, the Kamuku forest should be fully integrated into the wider Kamuku National Park which can be further developed into a full pledge national park. In fact, not only Sambisa all the other forest reserves too need to be rehabilitated
- Also the other forests such as Balmo forest, Falgore forest, and Kagoro forest have natural attractions such as rivers/streams, wildlife and rock formations which could be harnessed and developed for recreational purposes through establishing recreational parks for the use of Nigerians particularly during weekends, ceremonies and festivities.
- State governments in the northern region should rise up and solve problems of forest reserves are facing such as lack of regular maintenance, encroachment into the reserves and bush burning. In line with this adequate forest officers and forest guards should be employed and equip with modern means of communications and weapons to maintain the reserves, stop encroachment and bush burning in and around the reserves.
- Adequate funds should be allocated to the forestry sector in order to allow the sector to perform its duties and ensure that criminals and insurgents do not ever attempt to take over the forests and forest reserves.
- Local communities around forests and forest reserves should be actively involved in the efforts towards reforestation and conservation efforts. This is important so that they do not feel alienated which will make them develop favourable attitudes towards the forests and forests reserves. They should also be adequately empowered to curtail cutting down of trees as fuel wood for home consumption.
- There is the need to set up air surveillance to periodically carry out surveillance of the reserves to enable the detection of encroachers in the forests. After which prompt action should be taken to halt the encroachment. The air surveillance can also assist to detect the movements and other activities of the criminals in the forests with a view of taking action against them.

- The Federal Government of Nigeria should establish a well equipped military barracks around the forests that posed security threats with the military regularly carrying out combing operations of the forests with full force to flush out the criminals and destroy their bases and hideouts. The military from their barracks should be always ready for action to intervene when the criminals attack any road, market or settlement bordering the forests. The mere stationing of Security Task Force as is the case at Runka in Katsina State has not being effective in stopping the incessant attacks. This is the position of indigenous people inhabiting areas bordering these forest reserves on how best to make the forests safer.

Conclusion

The forestry association of Nigeria (FAN) has recently lamented that insecurity in the country as one of the challenges confronting the forestry sector as no management activities can take place and forestry activities have been stalled in most of the northern region (Orondo, 2014). It is a manifestation of the insecurity that many forests and forest reserves have been taken over by criminals and insurgents. The way out of this situation is not through clearing these forests and forest reserves but through carrying out operations by security personnel to dislodge these criminals and insurgents and then effectively taking control of the forest and forest reserves. These forests and forest reserves with their potentials and resources need to be properly harnessed and developed into recreational parks and tourist resorts that will yield revenue to the State governments of northern Nigeria

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