SUSTAINABLE FOREST MANAGEMENT STRATEGIES FOR REVERSING THE RAPID TRANSFORMATION OF NIGERIA'S PROTECTED AREAS INTO ACTUAL EVIL FORESTS

Iyiola TELLA PhD
Professor of Ecosystems Management
Institute for Sustainable Development,
First Technical University, Ibadan

The Actual 'Evil' in Our Forests

The concept of 'evil forests' as locations where spiritual and temporal realms are blended and as regions where extra-terrestrials roam freely is well enshrined in Nigerian folklore. The prefix 'evil' is assigned due to the belief that whoever ventures into an area so designated, either willingly or by compulsion, stands to experience a significant level of harm. Several rural communities designate and restrict free access into such areas due to widespread belief that resident animated beings are prone to harming trespassers. In traditional justice systems, it is also the ominous gateway to a painful and shameful eternity where the worst social offenders are banished. This concept is already well illustrated in our homegrown movie industry and more empirically in several scientific reports (Onyekachi et. al. 2019; Green, 2013; Sankawulo, 1971, Njoku *et. al.*, 2017). Several foreign movies also attest to the fact that the concept of evil forests is actually a worldwide phenomenon.

Although usually based on fear, restricted anthropogenic activities in the said areas have helped to keep large swathes of forests in pristine conditions for several decades. However, in recent times, belief in spiritual landlords has rapidly waned to the detriment of biodiversity conservation. In several parts of Nigeria, former 'evil' forests in close proximity to cities have succumbed to infrastructural development. Their erstwhile potency to scare majority of the populace 'into line' has gradually faded with the emergence of younger generations who are more empirical than phantom in thinking. Displacement of so-called evil spirits by humans in traditional reserves and unhindered encroachment into gazetted forest reserves, wildlife sanctuaries, nature reserves and other protected areas, definitely portend multifaceted grave consequences for Nigeria as a whole. While it might be admissible to regard occupation of forests by spirits as fantastic, what is not fantasy nevertheless, is the grim reality facing Nigeria today. Several forest reserves are now best truly described as 'evil'; not because of phantom occupants but because forest reserves are now established bases of terrorists, insurgents, bandits and human-traffickers (Olaniyan, 2018; Olaniyan, 2018; Nsemba et.al., 2021; Popoola, 2014; Freshgist, 2014; Ladan, 2014; Marsai and Tarrósy, 2022, Prinz and Schetter, 2021).

Interestingly, at various fora, I have leeringly advocated for official designation of 'normal' forest reserves as 'evil forests', if only to scare away unrepentant loggers, poachers and their office collaborators from further decimating our common natural heritage. Unfortunately, the normalcy of our forest reserves has been eroded by prevalent violent attacks that are planned and launched from there. Most forest reserves in Nigeria now have a truly evil status. For instance, the very mention of the name 'Sambisa forest' send an immediate shiver down the spine of even the most ardent among field researchers. Several other popular research destinations (**Falgore Forest, Kano; Kamuku Forest, Kaduna; Yan Mangu Forest, Zamfara; Yankari Game Reserve, Bauchi; Sambisa Forest, Borno; several southwestern reserves and Niger Delta Mangroves) are no longer freely accessible or sensible to freely access.** Most researchers and even forest managers have sensibly stayed away from there precious natural estates to the misfortune of other species. As it is, the forests were safer when they were occupied by 'spirits' than now that they are occupied by evil men. Protected areas are no longer managed, and most wildlife have become food for terrorists. As such, we can no longer dutifully pursue the objectives of forest management, famously described by Adeyoju, 2001 and embodied in our National Forest Policy: *Nigeria's natural resources and environment is to be conserved and used for the collective benefit of the people and to be replenished for the benefit of future generations*.

Consequences of Insecurity on Nigeria's Protected Areas

The immediate consequences for biodiversity are that (i) forest managers are denied safe access, (ii) edible resources (flora and fauna) are excessively exploited, (iii) wildlife migration is prematurely triggered, (iv) several ecosystems functions are disrupted (v) the risk of bushfire is heightened and (vi) Access of poachers is made easier. Similarly, in addition to (i) biodiversity loss, other immediate implications for humans are (ii) insecurity of forest guards/managers, (iii) insecurity of life/properties in both nearby communities and urban centres. Concern over ineffective management of forest reserves in different states of Nigeria has taken a different dimension considering the fact that they are now used as hideouts by miscreants who unleash attacks on unsuspecting members of the society as well as public and private properties. Public concern regarding forest management has shifted from the extraction of timber to the preservation of additional forest resources, including wildlife and old growth forests, protecting biodiversity, watershed management, and recreation, protecting areas with fragile ecosystems, maintaining the diversity of life and developing new natural products for medicines (FAO, 2004). Insecurity of forests has dire socio-economic impacts that range from

loss of lives, to biodiversity loss, to environmental degradation to economic sabotage. Nwogwugwu *et al*. (2012) highlighting how militancy in Niger Delta creeks decreased in-flow of foreign direct investment from about $20 billion in 2007 to about $6.1 billion in 2010. Loss of human lives have also been high. Similarly, around the country, forest-based insurgents, terrorists, bandits, drug lords and herdsmen have caused much socioeconomic and environmental damages through murder, rape, arson, man-stealing, looting and robbery.

Although forest reserves are public property governed by laws, the regulations of 1953 were merely designed to conserve the forests from illegal loggers, and harvesting of plants. The regulations did not anticipate the emergence of automatic rifle-wielding poachers or bandits and so need to be strengthened to capture present and future sources of danger to the plants and animals in these forests and to their neighbouring communities. In the past, there were patrol guards, armed with dane guns, which were ineffective against the super-fire of violent intruders. Environmentalists are also concerned about the possible transmission of zoonotic diseases if cattle cohabit with wildlife, possibly triggering a new set of medical emergencies. There is dire need to upgrade the laws and regulations to manage the nation's forest reserves and parks to fit the current reality.

Ladan (2014) reported on the modifications of several forest reserves in northern Nigeria due to occupation by violent groups: Balmo Forest Reserve (Bauchi/Jigawa States), Falgore Forest Reserve (Kano State), Idu Forest and Gwagwa Forest Reserves (Abuja FCT), Kabakawa Forest Reserve (Katsina State), Kagoro Forest and Kamuku Forest Reserve (Kaduna State), Ruma/Kukar Jangarai Forest Reserve (Katsina State) and Sambisa Forest Reserve (Borno State). Similarly, the propensity of terrorists to colonise forest reserves has also been reported for various parts of the tropics. 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. 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.

It is noteworthy however, that apart from insecurity, other challenges of managing forest reserves in nigeria have been described by several authors: (i) Obscure forest tenures/property rights (Adeyoju, 2005; Larinde and Chima, 2014), (ii) Unimplemented forest management plans (Osemebo, 1988, Akachukwu, 1997), (iii) Low community participation in forest management (Larinde and Chima, 2014), (iv) Inadequate manpower (Alao, 2005; Akindele, 2008; Akande *et al*, 2007; Faleyimu and Arowosoge, 2011; Popoola, 2014), (v) Inadequate funding (Famuyide, *et al*., 2005).

Environmental Consequences of Rebels Using the Forest as Hideout

Forests used as hideouts by rebel groups, are subject to degradation from mineral exploitation, hunting, and collection of fuel wood of these groups. When firearms become widely available in times of warfare this often leads to an eruption of wildlife hunting by armed factions but also by individual poachers that have acquired arms of war. Mineral exploitation activities have proven destructive there where chemicals are used to separate precious stones from rocks and dirt. In some cases, however rebels make efforts to protect the forest, and there with their cover, from large scale exploitation. For instance, in Colombia guerrilla groups use landmines and the threat of violence to prevent outsider penetration into forest areas (Alvarez, 2003). Direct environmental damage is likely as a result of combat related activities. Armies store and abandon ammunition in natural settings which risks water contamination (Westing 1992). By defending forest strongholds with land mines, local population and domestic and wild animals are in continuous life-threatening danger even for many years after the conflict. A more serious threat is when forests are destructed as a counterinsurgency measure. In many of the countries where the forest has been used as a sanctuary for rebel groups, forest destruction has been a deliberate strategy of state armies, paramilitary groups and rebel opposing villagers to destroy rebel fighting capacities. Several means have been deployed towards this end. In Myanmar the government has supported timber operations to open up deep forested mountainous areas where rebel forces sheltered. In Sierra Leone and Liberia villagers in some areas cut away tracks of forest along roads and around villages to protect themselves against ambush and village intrusion of rebels and criminals (Ruben and Doris, 2007).

Most negative damages to forest ecosystems are inflicted through chemical spraying campaigns. In Cambodia, defoliation chemicals are reported to have been used during the days of Khmer Rouge government, International Tropical Timber Organization (ITTO, 2005). Spraying chemicals allegedly causes health problems, loss of productive non-illicit crop areas, ecosystem damage in sprayed areas and - interrelated to these - economic impoverishment and migration of farmers (Sum-Ping 2006). In Mexico Zapatista rebels in 2001 suspected the army to use pesticide spraying programs to control the Mediterranean fruit fly as a disguised attempt to destroy the food security of farming communities suspected of harbouring rebel sympathizers. The government, however, maintained that spraying was purely phyto-sanitary reasons (Pimiento-Chamorro and Hammond 2001).

Strategies for reversing the hazardous impact of terrorism on protected areas

Recent reports (Ojo, 2020; Nsemba et. al., 2021; Prinz and Schetter, 2021; Marsai and Tarrósy, 2022) have highlighted the role of lack of proper governance of protected areas in exacerbating the colonization of the forest reserves commonly termed 'ungoverned spaces' by evil occupants. Hence a major route of recovery is to first recover the spaces by a skillful blend of dialogue and military intervention, thereafter, commence proper governance of the reserves. The following strategies are thus recommended:

i. Decisive military operations to dislodge forests of evil humans
ii. Enhancement of real-time satellite surveillance capacities of Ministry of Environment
iii. Integration of forest protection into the National armed security system
iv. Enactment of stronger legislation and implementation of existing ones
v. Extensive reforestation and enrichment of degraded reserves
vi. Extensive afforestation of new areas to offset recent deforestation
vii. Emphasis of recreation and tourist activities around forest reserves and within national parks
viii. Improved funding for management of protected areas
ix. Increased political will to sincerely tackle corruption issues surrounding forest protection
x. Establishment of military outposts contiguous to national parks and embedded within forest reserves
xi. Greater emphasis on urban forestry to augment total natural forest cover
xii. Subsequent management of all protected areas of Nigeria in line with UNEP's **Ecosystem Approach** to **Sustainable Forest Management** (SFM) and implementation of **Forest Principles** in all Nigeria's protected areas

The Convention for Biological Diversity (CBD) postulated **The Ecosystem Approach for achieving Sustainable Forest Management (SFM).** The postulations were agreed upon and adopted by the conference of the parties to the CBD in 1995. As described in UNEP (2004), the Ecosystem Approach for achieving SFM is thus outlined:

a. The ecosystem approach is a strategy for the integrated management of land, water and living resources that promotes conservation and sustainable use in an equitable way. Thus, the application of the ecosystem approach will help to reach a balance of the three objectives of the Convention: conservation; sustainable use; and the fair and equitable sharing of the benefits arising out of the utilisation of genetic resources.

b. An ecosystem approach is based on the application of appropriate scientific methodologies focused on levels of biological organisation, which encompass the essential structure, processes, functions and interactions among organisms and their environment. It recognises that humans, with their cultural diversity, are an integral component of many ecosystems.

c. This focus on structure, processes, functions and interactions is consistent with the definition of "ecosystem" provided in Article 2 of the Convention on Biological Diversity: "'Ecosystem' means a dynamic complex of plant, animal and micro-organism communities and their non-living environment interacting as a functional unit." This definition does not specify any particular spatial unit or scale, in contrast to the Convention definition of "habitat". Thus, the term "ecosystem" does not, necessarily, correspond to the terms "biome" or "ecological zone", but can refer to any functioning unit at any scale. Indeed, the scale of analysis and action should be determined by the problem being addressed. It could, for example, be a grain of soil, a pond, a forest, a biome or the entire biosphere.

d. The ecosystem approach requires adaptive management to deal with the complex and dynamic nature of ecosystems and the absence of complete knowledge or understanding of their functioning. Ecosystem processes are often non-linear, and the outcome of such processes often shows time-lags. The result is discontinuities, leading to surprise and uncertainty. Management must be adaptive in order to be able to respond to such uncertainties and contain elements of "learning-by-doing" or research feedback. Measures may need to be taken even when some cause-and-effect relationships are not yet fully established scientifically.

e. The ecosystem approach does not preclude other management and conservation approaches, such as biosphere reserves, protected areas, and single-species conservation programmes, as well as other approaches carried out under existing national policy and legislative frameworks, but could, rather, integrate all these approaches and other methodologies to deal with complex situations. There is no single way to implement the ecosystem approach, as it depends on local, provincial, national, regional or global conditions. Indeed, there are many ways in which ecosystem approaches may be used as the framework for delivering the objectives of the Convention in practice.

Consequent upon the ecosystem approach for achieving SFM, the following complementary and interlinked **twelve (12) Forest Principles** are also advanced to guide sustainable management of natural resources, especially protected areas:

Principle 1: The objectives of management of land, water and living resources are a matter of societal choice. ***Rationale:*** Different sectors of society view ecosystems in terms of their own economic, cultural and societal needs. Indigenous peoples and other local

communities living on the land are important stakeholders and their rights and interests should be recognised. Both cultural and biological diversity are central components of the ecosystem approach, and management should take this into account. Societal choices should be expressed as clearly as possible. Ecosystems should be managed for their intrinsic values and for the tangible or intangible benefits for humans, in a fair and equitable way.

Principle 2: Management should be decentralised to the lowest appropriate level. ***Rationale:*** Decentralised systems may lead to greater efficiency, effectiveness and equity. Management should involve all stakeholders and balance local interests with the wider public interest. The closer management is to the ecosystem, the greater the responsibility, ownership, accountability, participation, and use of local knowledge.

Principle 3: Ecosystem managers should consider the effects (actual or potential) of their activities on adjacent and other ecosystems. ***Rationale:*** Management interventions in ecosystems often have unknown or unpredictable effects on other ecosystems; therefore, possible impacts need careful consideration and analysis. This may require new arrangements or ways of organisation for institutions involved in decision-making to make, if necessary, appropriate compromises.

Principle 4: Recognising potential gains from management, there is usually a need to understand and manage the ecosystem in an economic context. Any such ecosystem management programme should: (a) Reduce those market distortions that adversely affect biological diversity; (b) Align incentives to promote biodiversity conservation and sustainable use; (c) Internalise costs and benefits in the given ecosystem to the extent feasible. ***Rationale:*** The greatest threat to biological diversity lies in its replacement by alternative systems of land use. This often arises through market distortions, which undervalue natural systems and populations and provide perverse incentives and subsidies to favour the conversion of land to less diverse systems. Often those who benefit from conservation do not pay the costs associated with conservation and, similarly, those who generate environmental costs (e.g. pollution) escape responsibility. Alignment of incentives allows those who control the resource to benefit and ensures that those who generate environmental costs pay.

Principle 5: Conservation of ecosystem structure and functioning, in order to maintain ecosystem services, should be a priority target of the ecosystem approach. ***Rationale:*** Ecosystem functioning and resilience depends on a dynamic relationship within species, among species and between species and their abiotic environment, as well as the physical and chemical interactions within the environment. The conservation and, where appropriate, restoration of these interactions and processes is of greater significance for the long-term maintenance of biological diversity than simply protection of species.

Principle 6: Ecosystems must be managed within the limits of their functioning. ***Rationale:*** In considering the likelihood or ease of attaining the management objectives, attention should be given to the environmental conditions that limit natural productivity, ecosystem structure, functioning and diversity. The limits to ecosystem functioning may be affected to different degrees by temporary, unpredictable or artificially maintained conditions and, accordingly, management should be appropriately cautious.

Principle 7: The ecosystem approach should be undertaken at the appropriate spatial and temporal scales. ***Rationale:*** The approach should be bounded by spatial and temporal scales that are appropriate to the objectives. Boundaries for management will be defined operationally by users, managers, scientists and indigenous and local peoples. Connectivity between areas should be promoted where necessary. The ecosystem approach is based upon the hierarchical nature of biological diversity characterised by the interaction and integration of genes, species and ecosystems.

Principle 8: Recognising the varying temporal scales and lag-effects that characterise ecosystem processes, objectives for ecosystem management should be set for the long term. ***Rationale:*** Ecosystem processes are characterised by varying temporal scales and lag-effects. This inherently conflicts with the tendency of humans to favour short-term gains and immediate benefits over future ones.

Principle 9: Management must recognise that change is inevitable. ***Rationale:*** Ecosystems change, including species composition and population abundance. Hence, management should adapt to the changes. Apart from their inherent dynamics of change, ecosystems are beset by a complex of uncertainties and potential "surprises" in the human, biological and environmental realms. Traditional disturbance regimes may be important for ecosystem structure and functioning, and may need to be maintained or restored. The ecosystem approach must utilise adaptive management in order to anticipate and cater for such changes and events and should be cautious in making any decision that may foreclose options, but, at the same time, consider mitigating actions to cope with long-term changes such as climate change.

Principle 10: The ecosystem approach should seek the appropriate balance between, and integration of, conservation and use of biological diversity. ***Rationale:*** Biological diversity is critical both for its intrinsic value and because of the key role it plays in providing the ecosystem and other services upon which we all ultimately depend. There has been a tendency in the past to manage components of biological diversity either as protected or non-protected. There is a need for a shift to more flexible situations, where conservation and use are seen in context and the full range of measures is applied in a continuum from strictly protected to human-made ecosystems.

Principle 11: The ecosystem approach should consider all forms of relevant information, including scientific and indigenous and local knowledge, innovations and practices. ***Rationale:*** Information from all sources is critical to arriving at effective ecosystem management strategies. A much better knowledge of ecosystem functions and the impact of human use is desirable. All relevant information from any concerned area should be shared with all stakeholders and actors, considering, inter alia, any decision to be

taken under Article 8(j) of the Convention on Biological Diversity. Assumptions behind proposed management decisions should be made explicit and checked against available knowledge and views of stakeholders.

Principle 12: The ecosystem approach should involve all relevant sectors of society and scientific disciplines. ***Rationale:*** Most problems of biological-diversity management are complex, with many interactions, side-effects and implications, and therefore should involve the necessary expertise and stakeholders at the local, national, regional and international level, as appropriate.

Sustainable Forest Management (SFM) offers a holistic approach to ensure activities deliver social, environmental and economic benefits, balance competing needs, maintain and enhance forest functions now and in the future. SFM aims to ensure that forests supply goods and services to meet both present-day and future needs and contribute to the sustainable development of communities. SFM stipulates that forest managers do the following:

- Maintain a stable forest land base
- Maintain or increase forest biodiversity
- Maintain diverse forest size structure and species composition on the landscape
- Maintain or increase the quality and quantity of water from forest ecosystems
- Maintain or increase soil productivity and minimize soil erosion and contamination
- Maintain or increase the capacity for sustained yield of timber and non-timber forest products
- Maintain or increase forest-based employment and community stability
- Maintain and enhance the quantity and quality of forest recreation and other opportunities for people to experience forests
- Maintain a system of institutions, policies, regulations, and incentives that support forest sustainability at multiple spatial scales
- Increase environmental literacy and engage a wide range of stakeholders in sustainable forest management

Similarly, national SFM projects require the following:

- Maintenance, conservation and enhancement of ecosystem biodiversity
- Protection of ecologically important forest areas
- Prohibition of forest conversions
- Recognition of free, prior and informed consent of indigenous peoples
- Promotion of gender equality and commitment to equal treatment of workers
- Promotion of the health and well-being of forest communities
- Respect for human rights in forest operations
- Respect for the multiple functions of forests to society
- Provisions for consultation with local people, communities and other stakeholders
- Respect for property and land tenure rights as well as customary and traditional rights
- Prohibition of genetically modified trees and most hazardous chemicals
- Climate positive practices such as reduction of GHG emissions in forest operations

Good forest governance would enhance peace building and socioeconomic activities

The instrumental role of the forest in conflict for both government and opposition parties calls for their inclusion in peace-negotiations, for the sake of peace-building and for the sake of sustainable forest management. The importance of granting of forests management rights to opposition groups may form an important part of their accommodation in a peace agreement has been discussed by some authors (Kaimowitz, 2005, McNeely, 2007). Kaimowitz (2005) however opined that inclusion of forest management in peace-negotiations is however, no guarantee for their sustainable management. Where management and exploitation rights are granted to former military leaders and ex-combatants, as has been the case in Myanmar and Nicaragua, the new situation of relative stability led to uncontrolled logging and further deprivation of forest dependent indigenous communities. The challenge in such contexts is to carry considerations related to local livelihoods and nature conservation into early stages of peace negotiations and reconstruction activities. Besides conflicts, banditry and terrorism that pose challenges to the nation, the multiple benefits of SFM cannot be over emphasized. The rural poor use forests in many ways, including for subsistence (e.g. fuelwood, medicines, construction wood, bush meat, fodder, mushrooms, honey and edible leaves, roots and fruits); revenue generation (e.g. art, craft, food and wood); formal and informal employment; and other purposes such as security (e.g. as a refuge in war or civil unrest), cultural and spiritual customs, and recreation, (CBD, 2011). Many urban dwellers also derive income from forests, and forests play an essential role in watershed protection and the prevention of land degradation, especially in montane ecosystems, all the benefits mentioned in one way or the other serve as key to improving national security. The multiple demands on forest goods and ecosystem services are unprecedented, but they are set to intensify with the increasing impacts of climate change, population growth and economic crises.

Conclusion

The current morphology of forest reserves into ‘evil forests’ must be halted. There must be decisive military operations to dislodge forests of evil humans via genuine political will and sustained enhancement of relevant government environmental agencies and apparatus. It is pertinent to enact stronger legislations, implement existing protection policies and integrate forest protection into the National armed security system. The renewed conservation efforts can benefit greatly from technological possibilities such as real-time satellite surveillance, even after sunset. As soon as the forest lands are recovered and access is safe, extensive reforestation, afforestation and enrichment should commence to offset erstwhile deforestation and degradation. It is also crucial to

inject significantly higher funds to accommodate the extensive restorative work to be done. Recreation and tourist activities around forest reserves and within national parks should be enhanced to provide funds for sustainability. In the same vein, there must be increased political will to sincerely tackle issues of corruption surrounding forest protection. To forestall resurgence of insecurity and violence, military outposts that are contiguous to national parks and embedded within forest reserves should be established and adequately equipped and funded. To increase forest cover nationally, greater emphasis should be placed on urban forestry, community forestry and participatory forest management. It has become very pertinent to ensure that in actuality, subsequent management of all protected areas of Nigeria should be done in line with UNEP's Ecosystem Approach to Sustainable Forest Management (SFM) and full implementation of Forest Principles.

References

Adeyoju, S.K (2001). Forestry for national development: A critique of the Nigerian situation, pp. 55-67. In: Popoola, L, Abu, J.E and Oni, P.I. (Eds.) *Forestry and National Development*. Proceedings of 27th Annual conference of Forestry Association of Nigeria held in FCT. Abuja, Nigeria.

Adeyoju, S.K. (2005). Institutional Arrangements in Support of Sustainable Forest Management in Nigeria. pp: 590-598. In: Popoola, L; Abu, J.E. and Oni P.I. (Eds.) *Sustainable Forest Management in Nigeria: Lesson and prospects*. Proceeding of the 30th Annual Conference of the Forestry Association of Nigeria held in Kaduna, Kaduna, State, Nigeria. 07th to 11th November, 2005.

Akachukwu, C.U (1997). Status of forest food plant species and environmental management in southern Nigeria, pp. 21-29. In: Oduwaiye, E.A, Obiaga, P.C. and Abu, J.E. (Eds.). *Evironmental and Resource Development.* Proceeding of the 25th Annual Conference of Forestry Association of Nigeria.

Akande, J. A, Larinde, S.L, Ntabe, E, Adu-Anning C. and B.O. Agbeja (2007) Towards Forest Industrial Reform in Ghana, Nigeria and Cameroon. *Discovery and Innovation Journal* Volume 19 of AFORNET Special Edition No 3: 181-189.

Akindele, S.O. (2008). Forestry Practices in Nigeria: An Overview. https://www.readkong.com/page/forestry-practice-in-nigeria-an-overview-2448198. 30p.

Alao, J.S. (2005). Capacity Building Modules in the Nigerian Forest Services. A Ph.D Thesis submitted to the University of Ibadan, Ibadan.301p.

Alvarez, M. D. (2003). "Forests in the time of violence: conservation implications of the Colombian war." Journal of Sustainable Forestry. 16(3/4): 47-68.

Convention on Biological Diversity, 2011. UNEP/CBD/SBSTTA/15/7. www.cbd.int/forest,

Daily Nation (2012), *Military Jets Hunts Down Attackers in Lamu Forest*. www.nation.co/<e/news/military

Food and Agricultural Organization (2004), Forest Resource Situation Assessment of Nigeria. www.fao.org/docrep/004/ab578e/AB578E06.html

Faleyimu, O.I. and Arowosoge, O.G.E. (2011). Status of forest policy implementation in Kaduna State, Nigeria. *Australian Journal of Basic and Applied Science*, 5(8): 995 – 1001.

Famuyide, O.O., Bagarawa, A.J., Owonubi, J.J. and Usman, J.M. (2005). Funding of Forestry Sector in Nigeria between 1999-2004. *Nigerian Journal of Forestry* 35(1): 8-16.

Freshgist (2014*), Boko Haram Kept Chibok Girls Inside Sambisa Forest – Arrested Member Confesses* www.freshgist.com.ng/boko-haram-chibokgirls-sambisa-forest

Green Jared (2013). Preserving Nigeria's Evil Forests. *The Dirt.* American Society of Landscape Architecture. https://dirt.asla.org/2013/05/22/preserving-nigerias-evil-forests/#:~:text=Throughout%20history%2C%20cultures%20around%20the,attacked%20the%20lone%20passer%2Dby.

International Tropical Timber Organization (ITTO-2005). African Forests and Climate Change. ITTO Technical series no.30.

Kaimowitz, D. (2005). "Forests and Armed Conflicts." European Tropical Forest Research Network (ETFRN) News 43-44: 5-7.

Ladan S. I. (2014). Forests and forest reserves as security threats in northern Nigeria. *European Scientific Journal.* Vol.10 (35) p120-144.

Larinde S. L. and U. D. Chima (2014). Challenges of forest management and security issues in Nigeria. Proceedings of Forestry Association of Nigeria (FAN) Conference, Nov., 2014. Minna, Nigeria. 13p.

Marsai Viktor & István Tarrósy (2022) The Potential for Violent Extremist Organizations in Africa to Take Advantage of the COVID-19 Pandemic Crisis in Ungoverned Spaces: The Cases of al-Shabaab and Boko Haram, African Security, 15:2, 163-185, DOI: 10.1080/19392206.2022.2077682

McNeely, J. (2007). Addressing Extreme Conflicts through Peace Parks. *Extreme Conflict and Tropical Forests*. W.

Njoku Ndu Life , Chijioke L. Ihenacho, James C. Onyekwelibe (2017). The Encounter with "Evil Forests" in Igbo-land: The Legacy of Nineteenth- and Twentieth-century Missionaries' Interactions with African Culture. *Journal of Social History*, Volume 50, Issue 3, March 2017, Pages 466–480, https://doi.org/10.1093/jsh/shw040

Nsemba Edward Lenshie, Kelechi Okengwu, Confidence N. Ogbonna & Christian Ezeibe (2021) Desertification, migration, and herder-farmer conflicts in Nigeria: rethinking the ungoverned spaces thesis, Small Wars & Insurgencies, 32:8, 1221-1251, DOI: 10.1080/09592318.2020.1811602

Nwogwugwu, N., Alao, O.E. and Egwuonwu, C. (2012). Militancy and insecurity in the Niger Delta: Impact on the inflow of foreign direct investment to Nigeria. *Kuwait Chapter of Arabian Journal of Business and Management Review*, 2(1):23 – 37.

Ojo John Sunday (2020) Governing "Ungoverned Spaces" in the Foliage of Conspiracy: Toward (Re)ordering Terrorism, from Boko Haram Insurgency, Fulani Militancy to Banditry in Northern Nigeria, African Security, 13:1, 77-110, DOI: 10.1080/19392206.2020.1731109

Olaniyan Azeez (2018). Foliage and violence: Interrogating forests as a security threat in Nigeria. *African Security Review.* Volume 27 (1).

Onyekachi C., C. I. Ezeano, J. U. Ezenwenyi and M. A. Adeyemi (2019). Impact of Cultural Belief on the Preservation of Agunabani Sacred Forest in Okposi, Nigeria. *Research Journal of Forestry*, 13 (1), p9-13

Osemeobo, G.J. (1988). The human causes of forest depletion in Nigeria. *Environmetal Conservation,* 15(1): 18-28

Pimiento-Chamorro, S. and Hammond, E. (2001). Addressing Environmental Modification in Post-Cold War Conflict, Edmonds Institute.

Popoola, L (2014). Boko Haram: Blame the Nigerian state, not Sambisa Forest. Punch Newspaper, June 2.

Prinz Janosch and Conrad Schetter (2021) Spatial-Moral Ordering in the War on Terror: Ungoverned Spaces as a Challenge to Humanitarianism, Journal of Intervention and State building, 15:1, 96-113, DOI: 10.1080/17502977.2019.1709771

Ruben, d. K. and Doris, C. (2007). Sustainable Forest Management for Peace Building. Advance unedited version; October, 2007. Accessed online 13th May, 2022. Sustainable Forest Management for Peace Building (un.org),

Sankawulo, W. (1971). The Evil Forest. *African Arts*, *4*(4), 35–66. https://doi.org/10.2307/3345879

Sum-Ping, J. (2006). "A New Approach to Extraterritorial Application of Environmental Statutes? Uncovering the Effects of Plan Colombia." Columbia Journal of Environmental Law 31(12): 139-170.

United Nations Environmental Programme (2004). The Ecosystem Approach. The Convention on Biological Diversity. ISBN: 92-9225-023-x. 53p.

United Nations Environmental Programme (2010), *Forest: A Hiding Place for Fighting Forces and a Refuge for Victims* www.unep.org/vitalforests/report/VFG-05-A-hiding-place

Westing, A. H. (1992). "Protected Natural Areas and the Military." Environmental Conservation 19: 343-348.

Xinhnanet.com (2014), *Indian Military Kills Militants in Gunfight near Kashmir* LOC.news.xinhuanet.com/English/world/2014-08-/19.