



RESEARCH ARTICLE

Colonialism and the Igbo Struggle With Climate Change

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ARTICLE INFO	ABSTRACT
Received: May 23, 2024	<p>Climate change has severely compromised the livelihoods of people that are overwhelmingly dependent on the natural environment, particularly those in developing countries that are usually the least able to cope with the associated social and environmental risks. Sub-Saharan Africa is the region most vulnerable to climate change since warming will be greater than the global average, and agriculture, mainly rain-fed, is the primary source of subsistence for rural communities. A cursory glance at available literature reveals that several researches have been done on climate change in Africa, but with no clear-cut attention on the consequences of colonialism and neo-colonialism on climate change among the Igbo of South Eastern Nigeria. This paper, therefore, studies the impact of colonialism on the Igbo struggle with climate change. It discovered that the colonial period in Igboland was marked by the alteration of indigenous methods of mitigating ecological disasters. Colonial powers also extracted natural resources for their economic benefits, often with little or no regard for the local environment. With neo-colonialism changing baton with colonialism, the exploitation of the environment through the activities of former colonial powers and multinational companies still endures. This research tells the story of the Igbo experience of climate change in relation to colonialism. While the historical and hermeneutic methods of inquiry will be used for the analysis and presentation of data, the Igwebuiké theoretical framework would be employed for the understanding of Igbo eco-spiritual traditions and the connection between colonialism and the Igbo struggle with climate change. The paper, therefore, establishes a nexus between the activities of the colonial powers and the present ecological crises in Igboland.</p>
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INTRODUCTION

In the past two decades, climate change issues have been treated as a western phenomenon, and less as an African or Nigerian problem. From a distance, the stories of ice melting in Antarctica, Iceland, etc., flood in Britain, damage of crops and animals in Bangladesh, fires in California forcing hundreds of residents to flee their homes, devastation of vegetation areas by catastrophic inferno in Australia, hurricane havoc on homes and cities in Dominican Republic, New Jersey, Connecticut and New York, deforestation in Scandinavia, the rise in floods and drought around the world driving hunger and poverty, have been heard (Awake, 2008). However, recent studies have revealed that climate change is having disproportionate effects in Africa and the Igbo land in particular (Oko, 2016). It is manifesting itself in frequent erosion, unpredictability of raining or dry seasons, the decrease in the existence of plant and animal species, or their complete disappearance, floods, increase in heat levels and deforestation, among others.

Human emissions and activities are at the centre of climate change crisis, and over the years have significantly contributed to almost 100% of climate change and ecological issues (Housefather, 2017). The burning of fossil fuels releases large amounts of greenhouse gases (GHGs) such as carbon dioxide (CO₂) into the atmosphere, which trap heat and warm the surface of the earth (IPCC, 2018). Deforestation, which involves the clearing of forests for agriculture, urbanization, industrialization and other uses, also contributes to climate change by reducing the amount of carbon stored in trees and increasing greenhouse gases emissions through activities such as burning and decay. Deforestation accounts for around 10% of global greenhouse gases emissions (FAO 2016; Adejuwon, 2019; Jam et al., 2010; Kanu 2019; Kanu, Omojola, Bazza 2020). Agriculture also contributes to greenhouse gases emissions through the use of fertilizers and machinery (IPCC, 2019). The consequences of these are changes in rainfall patterns, drought, sea level rise, spread of diseases and pests, exacerbation of conflicts over natural resources such as water and land (WHO, 2018; UNEP, 2018; D'Odorico et al., 2018; Kanu and Emoit 2019).

In Igbo land, human activities are deepening the effects of climate change. While acknowledging the contribution of agriculture, urbanization, industrialization, etc., to the present predicament in South Eastern Nigeria, this paper distinguishes itself by attempting to unveil the link between the present experience of climate change in Igbo land and the activities of the colonial government. It will, therefore, study the impact of colonialism on the Igbo struggle with climate change. This will be done in relation to two events in Igbo history: the colonial alteration of indigenous methods of mitigating ecological disasters, and the indiscreet extraction of natural resources by the colonial government for economic benefits. With neo-colonialism (1961-2024) changing baton with colonialism, the exploitation of the environment through the activities of foreign agencies and multinational companies still endures. This research will, therefore, tell the story of the Igbo experience of climate change in relation to colonialism and neo-colonialism.

METHODOLOGY

For the purpose of this research, the qualitative method of investigation would be employed given its appropriateness for the present study. The document study or document analysis approach will be used for the purpose of reviewing written materials on this subject and using their critical findings for the development of the present piece. Thus, primary and secondary materials will be consulted during the course of this research. To demonstrate concretely the effects of colonial activities on the present Southeast Nigeria, case study approach will also be employed with particular attention on oil spillage, deforestation and mining. The study will be primarily limited to Imo, Abia, Anambra, Enugu and Ebonyi states, and other places adjoining to Igbo land and with high Igbo population. While studying these places, questionnaires will be used to get feedback from the indigenous people. These perspectives will be presented and studied alongside other findings in the same area.

Igwebuiké Theoretical Framework

This research is based on the *Igwebuiké* conservation theory which is an indigenous holistic approach to the understanding and preservation of the environment. It holds that reality is complementary, interconnected and interrelated. *Igwebuiké* is an Igbo proverb and a typical Igbo name. It is a combination of three words: *Igwe*: number; *bu*: is; *ike*: power or strength. From the foregoing, literally, *Igwebuiké* means *there is strength in number* or *number is power*. Beyond the linguistic and literal expression of the word *Igwebuiké* is a deeper meaning, which provides an ontological horizon that presents being as that which possesses a relational character of mutual relations (Kanu 2021; Kanval et al., 2024). It means *otu obi* (one heart and one soul) – *cor unum et anima una* (Kanu 2023), describing the core or operative condition of the African reality. As a conservation theory, it understands the exploitation and mismanagement of any dimension of the environment as having

consequences on the entirety of reality and time. Thus, whatever a person does to a dimension of the environment also echoes on other parts of nature. Furthermore, it understands the past as having consequences on the present and the future, given the interconnectedness of reality and the unity of time.

The *Igwebuiké* conservation theory is based on the thermodynamics of the Igbo worldhood. It is a world in which the relationship between the people and the environment is organic and holistic: a world that interacts with itself. The sky, the spirits, the earth, the physical world, the living and the deceased all act, interact and react in consort (Tempels, 1969; Stayne, 1990; Turaki, 2000; Mbiti, 1970; Adibe, 2008; Enekwe, 1987). It is also a world in which time: past, present and future interacts within itself. The human person understand trees, animals, plants, water bodies, etc., as part of the human world, and give profound spiritual interpretations to this relationship.

The Igbo of South Eastern Nigeria

The Igbo are found in the Southeastern geographical zone of Nigeria, which is made up of five states: Abia, Anambra, Enugu, Ebonyi and Imo States. This notwithstanding, there are Igbo people overflowing from the major Igbo states and living in neighboring states like Delta, Rivers, Benue and Kogi States. The Igbo people are bounded by the North Central Region to the north and by South South Region to the west and south. The zone has a population of over 40 million people, spread across 30,991.1km² (Nnakamm, 2008). The area lies in the tropical rainforest zone characterized by high rainfall density, which is more pronounced in the southern part (Nwaiwu, et al., 2013; Afigbo, 1981).

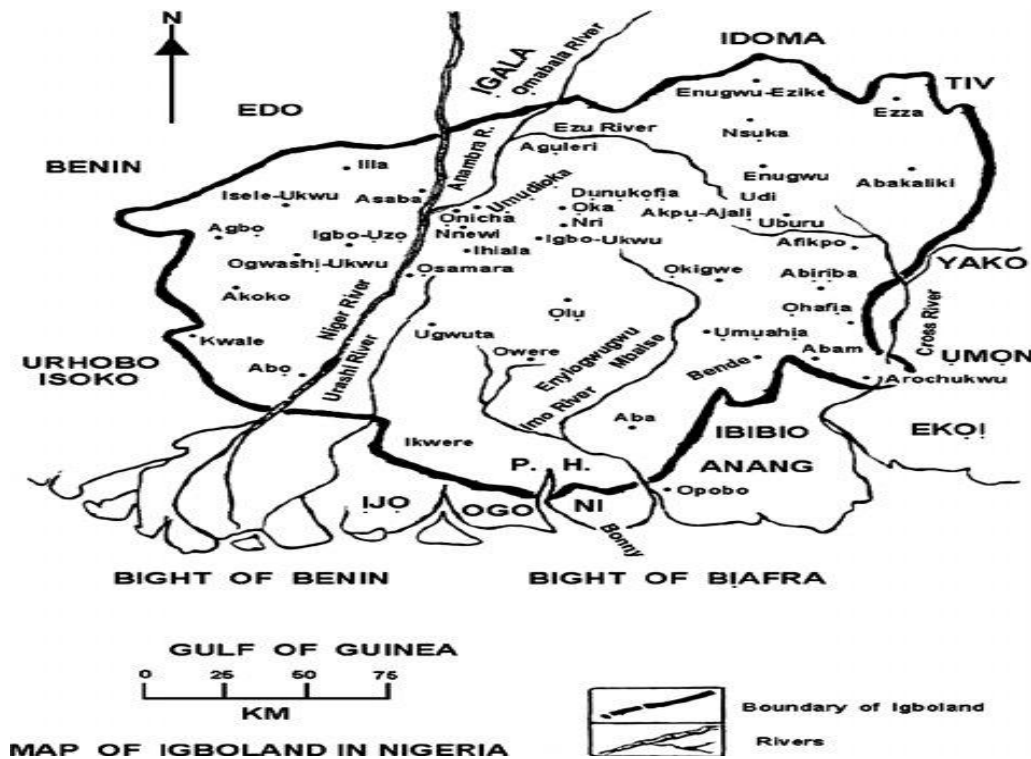


Figure 1: Map of Igbo land *Ogochukwu (2010)*

Before the advent of colonialism in Igbo land, the utilization of biodiversity was marked by a subsistence attitude, which was mainly to meet basic needs such as food, clothing, shelter, religious needs, recreation, protection, cultural needs, etc. (Oguakwa, 2009; Iwu, 2002).

Chinua Achebe, an Igbo-African scholar and the founding father of modern African literature, in his first novel *Things Fall Apart*, uses this title to describe the effect of the colonial gaze on the Igbo traditional society. They were the years of denigration and self-abasement, when the Igbo society fell apart.

Colonialism and Neo-colonialism in Africa

Colonialism is taken from the Latin word “Colonus”, which was used to describe tenant farmers in the Roman Empire (Kohn, 2017). These tenant farmers usually started as tenants of landlords, but as the system evolved they became permanently indebted to the landowner and trapped in servitude. However, generally, it denotes a situation in which one political entity pursues, establishes and maintains direct political and economic control over a people and their resources in another part of the world not contiguous to it (Roger, 2005; Walter, 2018). It also refers to a movement or set of ideas designed to bring about or justify such a relationship.

The historical prototype from which the phenomenon of colonialism gets its name is the practice of the Greek City States of sending excess population abroad to areas where new city states composed of Greek inhabitants were established, largely independent of the mother city. However, modern colonialism differs fundamentally from its Greek prototype; and refers to an aspect of the expansion of European civilization and political power over the whole world that began in the 15th century and had since assumed a variety of forms (Kanau, 2012; Ferkiss, 1987; Rashid et al., 2023). The motivations for colonialism was largely economic, springing from the desire – especially strong in the Iberian powers to find the sources of precious metals (Turner, 1983); there was also political motivation, aimed at acquiring colonies where surplus populations loyal to the mother nation could allegedly flourish, forming a man power reserve (Kanau, 2012).

Around 1830, European settlements in Africa were for the most part restricted to small coastal trading stations (Mountjoy and Embleton, 1966). But during the mid 19th C, European explorers began to make significant advances into tropical Africa, extending further inland. As a result of numerous explorations, many of the great puzzles of African geography for Europeans, notably the course of the Nile, Niger, Congo and Zambezi rivers, were solved within the space of half a century (Hodder, 1978; Kanau, 2012).

All the explorations frequently led to trade, and they soon realized that profitable trade depended on maintenance of peace and that this peace could not be assured without administrative intervention and control in the hinterlands. Africa, therefore, became a field for the conflicting ambitions of the major European colonial powers: Spain, Portugal, France, Britain, Belgium and Germany. By the early 1880's these conflicting ambitions were beginning to be expressed territorially. The stage was now set for the European scramble for Africa, which occurred at the Conference and Treaty of Berlin in 1884-5.

The Berlin Treaty laid down that European colonial claim to territory could only be secured by what was termed ‘effective occupation’, and therefore, that European powers with interests on the African coast should move inland to secure their hinterlands. This took place so rapidly that within a decade Africa was divided into a patch-work of European interests (Hodder, 1978; Kanau, 2012).



Figure 2: The Map of Africa showing the scramble for Africa after the Berlin Treaty

Figure 2 below presents the map of Africa indicating how Africa was divided into colonial territories without putting into consideration the culture, religion and traditions of particular peoples.



Figure 3: The Map of Africa showing the scramble for the resources of Africa

Figure 3 presents the resources in the different parts of Africa that was the major attraction of the colonial masters, and therefore, led to the disregard for cultural identities and important peculiarities.

Modern colonialism: Neocolonialism

Though the traditional practice of colonialism has ended, the years following World War II saw the rise of “neocolonialism,” a term describing the post-colonialism practice of using globalisation, economics, and the promise of financial aid to gain political influence in less-developed countries instead of the traditional methods of effective occupation. This practice has resulted in colonial-like exploitation in regions, especially Africa (Longley, 2021). Thus, the United Nations Secretary General Ban Ki-moon holds that the true eradication of colonialism remains an “unfinished process,” that has been with the global community for too long (Ki-moon, 2011).

Indices of neocolonialism include:

- a. The continued unbalanced relationship between France and its former African colonies- described as French Africa, which allows for the monopoly of French multinationals to exploit the natural resources of the African people (Wallerstein, 2005; Graf, 1981).
- b. Investment by multinational corporations which enriches few in underdeveloped countries and causes humanitarian, environmental and ecological damage to their populations.
- c. Alongside French Africa is the Belgian Congo, a name that suggests that Congo is still a property of Belgium. Despite its independence, Belgium has continued to control not less than an estimated 70% of the Congolese economy through the Dutch General Bank (Starnard, 2018).
- d. Unaffordable and unending debt-servicing by African countries to the World Bank and the International Monetary Fund (IMF).
- e. The support of dictatorships and terrorism with economic assistance and military hardware.
- f. The establishment of military bases in African countries (McGilvray, 2014).

Colonial business models

The colonial administration in Africa operated according to the following colonial business models:

✧ **Exploitation**

Exploitation as a business model of colonialism describes the colonial situation where it uses force to control other countries for purposes of exploiting their population by using the indigenous people as low-cost labor or extracting indiscriminately their natural resources (Longley, 2021). The exploitation of Africa in diamonds and other precious stones or minerals to world markets degraded the land, reduced air quality and polluted local water sources. The result is an overall loss of biodiversity and significant environmental impacts on human health (McQuade, 2019).

✧ **Domination**

A key approach in colonialism is the practice of domination, which involves the subjugation of the people of a colony by the colonial masters. The relationship is that of a dominant group and the subordinate people. It is expressed in the subjugation of the culture, religion, identity, etc., of the colonized to that of the colonizer, most times with the use of force. It is in this sense that colonialism is understood as the combination of territorial, juridical, cultural, linguistic, political, mental, epistemic and economic domination of one group of people by another (external) group (Murrey, 2020; Das, 2020; Hodder-Williams, 2001).

✧ **Discrimination**

Colonialism expressed itself in the forms of racism, racial discrimination, xenophobia and intolerance of the culture, religious identity, language, political and juridical settings of the colonized people. In this process human rights are violated. The report presented at the 54th session of the Human Rights Council of the UN in September 2022 establishes an intrinsic link between colonialism and contemporary forms of racism, racial discrimination, xenophobia and intolerance faced by Africans, and people of African descent (UNJR, 2023). UN Deputy High Commissioner for Human Rights, Nada Al-Nashif observed that: "No State has comprehensively accounted for the past or the ongoing consequences of systemic racism, including the socioeconomic and political marginalization that shapes the lives of people of African descent in some countries".

✧ **Mercantilism**

One of the unifying features of African colonial world was mercantilism, an economic doctrine that held that a nation's power depended on the value of its exports. Under mercantilism, nations

sought to establish colonies to produce goods over which the home economy had monopolistic control. Britain and France embraced mercantilism, hoping to run trade surpluses, so that gold and silver would pour into London and Paris. Governments took their share through duties and taxes, with much of the remainder going to merchants (Belshaw, 2015). The export of minerals, timber and opium expanded enormously, therefore, placing unprecedented strain on local resources. Unfortunately, today, these exploited regions are some of the poorest in the world and home to widespread human rights abuses and environmental disasters` (McQuade, 2019).

✧ **Paternalism**

Paternalism developed as justification for the domination of indigenous people. In a general sense, it understands government as a benign parent. This, therefore, confers on the parents the right and obligation to overrule the preferences of the those deemed incapable of knowing what their true interests are. Three essential elements are involved in paternalism: an interference with a person's choice and opportunity to choose; this interference is done with the objective of furthering a person's interest, good or welfare; and this can be done without the consent of the person (Thomas and Buckmaster, 2020).

These colonial models are the basic structures and the substratum on which the colonial project stood and the neo-colonial project stands. Each model had a role to play in the relationship between the colonial government and the Igbo traditional society, and in the achievement of the colonial aim and objectives.

Traditional Igbo-African Societies and Environmental Conservation

African societies have a long history of managing their environments sustainably, which has helped them adapt to climate variability and maintain soil fertility (Mortimore and Harris, 1998; Kanu, 2021). Traditional African religions and beliefs achieved a lot of these through her emphases on the importance of respecting and protecting the natural world (Adepetun, 2019). These were developed in response to the environmental challenges that these indigenous societies faced, including climate variability, desertification, and soil erosion (Mortimore and Harris, 1998; Kanu, 2023). The major practices that helped traditional societies manage her environment include:

- ✧ Sacred days: There were particular days during which farming, fishing, hunting, and other human activities that have the capacity to affect nature negatively were prohibited or regulated (Kanu, 2021b);
- ✧ Sacred animals: There were animals that were considered sacred and thus no one was allowed to kill them (Kanu, 2021c);
- ✧ Sacred forests: There were forests that were not entered or exploited because they were considered the abode of great spirits (Kanu, 2021d);
- ✧ Sacred trees: There were trees that were considered sacred as a result of their association with particular deities and as such were not cut down (Kanu, 2021e);
- ✧ Land as sacred: Land was considered sacred as a result of its association with "Ala", the land deity. Land was regarded as a mother. This afforded the land respect and love (Kanu, 2021f);
- ✧ Water bodies as sacred: They were considered sacred because they were seen as the abode of water spirits. This afforded water bodies respect (Kanu, 2021g);
- ✧ Inorganic fertilization: The fertilization of the land was not done with fertilizer that contain chemicals that destroy the land. The wastes of animals or plants were used (Kanu, 2021h);
- ✧ Mixed cropping/Polyculture Agriculture: This involves planting of different crop types with different root levels, leading to soil and biodiversity protection (Kanu, 2021i);

- ✧ Agroforestry: Trees were planted by plants which helped in the protection of the soil from hazards (Kanu, 2021j);
- ✧ Tree planting: Trees were planted at virtually every important occasion. During marriages, sacrifices, taking possession of a land, etc., trees were planted (Kanu, 2021k).
- ✧ Terrace cultivation: This is used to maximize arable land areas in variable terrains and to reduce erosion and water loss.

The ecological value of the Igbo-African conservative strategy

The traditional Igbo-African conservation strategy has several values in terms of environmental sustainability. These values include:

- ✧ The Igbo-African concept of the earth as mother, source of life, nourisher, supporter and teacher brings a new perspective to the understanding of nature. The land is not simply a human property.
- ✧ The description of nature as mother introduces the concepts of respect, love, care, empathy, support, patience, etc., which are indispensable in environmental sustainability.
- ✧ The concept of the land and water bodies as manifestations of great spirits, means that they are not just properties but spiritual personalities worthy of respect.
- ✧ The spiritual understanding of the land and water bodies helps the human person to tread with caution as a deity is involved.
- ✧ This spiritual concept provides protection for nature. The crabs, crocodile, tortoise, snakes, water birds, frogs, etc., were seen as children and messengers of spirits living within them and so were not to be harmed.
- ✧ There were no tree planting campaign announcements in traditional Igbo-African societies, but some particular social and religious events and times went with the planting of trees.
- ✧ The African perspective introduces the idea of an interrelated, interconnected and complementary universe, with the implication that the destruction of the environment has consequences.

Colonialism and Environmental Exploitation

The colonial period in Africa (1880s-1960s) was marked by environmental exploitation and degradation. European powers: Spain, Britain, France, Belgium, Germany and Portugal, extracted natural resources such as gold, timber, minerals and wildlife for their own economic benefit, often with little regard for the local environment and communities. Colonial policies also encouraged the conversion of forests and grasslands into commercial agriculture and plantations, leading to deforestation and loss of biodiversity (Okafor-Ozughu, 2017).

The European powers implemented policies that facilitated the exploitation of Africa's natural resources, leading to severe environmental degradation. In the Congo, King Leopold II of Belgium authorized the extraction of rubber and ivory through forced labor, leading to widespread deforestation and loss of biodiversity (Kanu, 2012, 2013; Klein, 2014). The British colonial administration in Kenya encouraged the conversion of forested land into commercial tea and coffee plantations, leading to significant deforestation. In addition to resource extraction and commercial agriculture, colonial powers engaged in large-scale hunting of wildlife, contributing to the decline of many species (Okafor-Ozughu, 2017).

Colonial governments imposed Western environmental values and practices on African communities, often disregarding the local knowledge and practices that had sustained the

environment for centuries (Coombe, 2018). Additionally, colonial policies led to the displacement of communities from their ancestral lands, leading to environmental degradation as people were forced to migrate and settle in new areas, bringing about the overuse and degradation of natural resources in those areas (Okafor-Ozugh, 2017).

The legacy of colonialism continues to impact Africa's environment and development, highlighting the importance of addressing historical injustices in current efforts to promote environmental conservation and sustainable development.

Case Studies

Three case studies will be focused on in the discussion on the colonial exploitation of South-East Nigeria, and these will include the cases of coal mining in Enugu State, oil drilling in the Niger Delta and the falling of trees in South Eastern Nigeria.

a. The Case of Coal Mining and Environmental Pollution

Coal as a natural resource is an essential conventional source of energy and the backbone of the national economy of many countries (Omotehinse and Ako, 2019). This explains why it attracted the interest of the colonial powers who came to Nigeria. It was discovered by British geologists in 1906, however, coal mining in south-eastern Nigeria, precisely Enugu, began with vehemence with the establishment of the Coal Corporation which started mining in 1916 at Onyeama Coalfield, Enugu (Onwukeme, 1995), and in October 1977, their operations became highly mechanized (Asogwa, 1988). This was done without any research work on the environmental impact of mineral exploitation on south-eastern Nigeria. In some cases, the extraction required the destruction of rocks using explosives, which generated intense noise pollution at Iva area (Kitula, 2006; Ajakaiye, 1985).



Plate 1: Coal Mining Site at Awhum in Udi Local Government Area. *Vanguard* 2023

In preparing the soil for mining, the overlying soil layer with existing vegetation is removed and deposited in another fresh area. Thus, million tons of excavated soil are lifted and dropped in the form of rocks, shale and coarse tailing on another ground. This results in barren, biologically inert overburden dumps called mine spoils and the destruction of species (Hazarika et al., 2006; Ogbonna et al., 2012; Down, 1974). A good number of the plant species that produced fruits and seeds for medicine, eating, dancing, reception of visitors, opening ceremonies, making of vows and pledges at marriages, were destroyed (Meregini, 2005).

Even though mining at the time brought wealth and employment opportunity in the Iva area, it led to extensive environmental degradation and changes in the traditional values of the people (Sarma, 2002; Ogonnaya et al, 2015). It also affected the scenic values and cultural heritage of people through the removal of sacred forests/groves, and therefore, leading to their extinction (Moody and Panos, 1997; Akabzaa, 2000).

The use of heavy metals in mining sites also had great consequences not only on the immediate soil but also on the future of the soil in terms of long term toxicity, on the plant, microorganisms, animal species and human beings through food chain circle (Turkdogan et al., 2003; Liu et al., 2009; Aigbedion and Iyayi, 2007; Hilson, 2002).

After Interviewing 30 persons in Enugu state concerning the effects of mining on the environment and the people, these perspectives in the table below are a summary of their views on the impact of mining.

Table 1: Effects of Mining on human beings and the environment

S/N	Description of Activity	Hazards on environment/Biodiversity	Hazards on Human Beings
1.	Mining	a. Air pollution (dust) b. Noise pollution c. Water pollution d. Erosion e. Loss of animal species f. Loss of plant species g. Toxicity of nature h. Land degradation	a. Blindness b. Impaired Hearing c. Broken Limbs d. Respiratory complications e. Poverty f. Death g. Food toxicity h. Food insecurity i. Devastation of religio-cultural values

Author created

b. The Case of Oil Drilling and Environmental Hazards

The case of oil drilling focuses on the experience in the Niger Delta region. It is one of the largest wetland regions in the world, covering 70,000 square kilometer area, roughly 27,000 square miles (Alogoa, 1972). It is made up of fresh and salt water swamps, tidal pools, beach ridges, and mangrove forests. Okonta and Oronto (2001) hold that the Niger Delta is:

...one of the world's richest areas. Apart from its substantial oil and gas deposits, there are extensive forests, abundant wildlife, and fertile agricultural land where rice, sugar-cane, plantain, beans, palm oil, yams, cassava, and timber are cultivated. The Delta is also famous for its fish resources. It has more freshwater fish species than any other coastal system in West Africa (p. 63).

The physical attributes of the Delta region have been shaped by the nature of the water flow and the type of soil that is deposited. The Niger and Benue Rivers both drain into the Delta and thus, the area is inundated with water. The physical features of the Delta Region are divided into three distinct sections, sandy beach ridges, salt water swamps, and fresh water swamps. The fresh-water swamp section is where the population density is the highest, and farming and other agricultural practices prevail over fishing as the main dietary source among local groups.

The environment of this area is extremely sensitive and relies on consistency and regularity to maintain environmental balance (England, 2012). Before the emergence of colonialism, this people had their indigenous ways of maintaining balance in their environment. Describing the Niger Delta region before the colonial era, Habila (2011) writes: "Once upon a time they lived in paradise, in a

small village close to Yellow Island. They lacked for nothing, fishing and hunting and farming and watching their children growing up before them, happy” (p. 38).



Plate 2: Oil Spillage site in Niger Delta. Nwafor (2022)

The colonial conquest of Nigeria in the early 1900s brought about British economic policies which were designed to facilitate the exploitation of raw materials. British colonial policies and institutions, supported the monopolistic control of crude oil exploration in the Niger Delta region. Oil exploration began with the activities of the Nigeria Bitumen which was a British oil company with a listing on the West African Market of the stock exchange in London. With sophisticated technology, the exploration of oil in the Niger Delta region became the domain of large, integrated oil companies, in particular Royal Dutch/Shell and British Petroleum, who had the financial resources to fund the expensive search for oil and the technological expertise and equipment to achieve success over the long term (Steyn, 2009; Feldner, 2018).

Consequently, Nigeria, as an independent nation, transited from colonial rule deficient in technology and appropriate skill sets to effectively exploit its oil resources. This left Nigeria dependent on foreign economies and multinational oil companies that possessed the equipment and technological capability to extract and produce Nigeria’s oil resources. This was such that even after the colonial rule, a neo-colonial regime continued with the exploitation of the oil in the Niger Delta region (England, 2012).

Despite the rich resources that this region has been blessed with, it is today “one of the poorest and most underdeveloped parts of the country” (Okonta and Douglas, 2001,19). Farming and fishing, the main livelihood for many in the Delta, have been made impossible due to the pollution caused by oil production. Rivers have been polluted and rendered useless for fishing. According to Habila (2011), “the land grew only gas flares and pipelines” (p. 39), with her displaced villagers living in poverty and wandering without a home.

After Interviewing 30 persons from the Niger Delta Region concerning the effects of oil spillage on the environment and the people, these perspectives in a table emerged as a summary of their views on the impact of oil spillage.

Table 2: Effects of Oil spillage on human beings and the environment

S/N	Description of Activity	Hazards on environment/Biodiversity	Hazards on Human Beings
1.	Oil Spillage	a. Water pollution b. Air pollution c. Loss of plant species d. Loss of animal species e. Reduced soil fertility f. Food insecurity g. Childhood malnutrition (reduction ascorbic acid content of vegetables and the protein content of cassava) h. Animal, plant and organism toxicity i. Land degradation j. Land exploitation	a. Forced migration b. Aesthetic issues c. Poverty d. Contamination of food e. Contamination of water f. Irritations (skin) g. Damaged immune system h. Damaged respiratory system i. Cardiac issues j. Cancer k. Devastation of religio-cultural values l. Human exploitation

Author created

c. The Case of Falling of Trees and Erosion in the South East

The Igbo-African traditional holistic and organic attitude towards biodiversity was affected by the colonial materialistic and consumerist concept of the environment, and thus, trees were seen more from an economic perspective than from a holistic or organic point of view.

The 1901 Forest Ordinance reveals the economic interest of the colonial powers. It was designed to consolidate British Administration and to gain control of the resources of Nigeria (Omonisi, 1978). Section 9 holds that:

The Commissioner of Forestry shall receive the moneys to which the State may be entitled by virtue of the sale of any timber, or by virtue of any leases or contracts relating to the disposition of minerals, as herein before provided, and he shall immediately pay the same over to the State Treasurer as a part of the revenue of the Commonwealth.

The Colonial Land Tenure System was also designed to give advantage to the colonial administration as regards the use and acquisition of the lands of indigenous people.

The period between 1830 and 1960 was marked by rapid exploitation of biodiversity to meet the needs of international trade. The monetization of the economy by the colonial government encouraged over-exploitation in an attempt to reach distant insatiable international markets. To make the movements of these resources easy, roads, railways and water ways were constructed. In addition, the introduction of lumberjack and the mechanization of logging in place of pit sawing increased utilization of rainforest, especially timber for exportation. The effects of overseas demand for timber was aggressive during this period (Ukaegbu, 2002; Phil-Eze, 2010). Thus, several trees were cut down in the South East of Nigeria without efforts to replace them.



Plate 3: Loggers sawing a freshly felled tree in Cross River State, Nigeria *Ogunyale (2022)*.

Ayeton (2016) observes that smart Chinese businessmen are exploiting a lax regulatory and enforcement environment, loopholes in existing laws, lack of government policy and direction as well as official corruption by government officials to drive an illegal trade in and export of the country's forestry resources that have grave consequences for both the environment and the economy. He also reported that in 2011, rosewood exports from West Africa to China were negligible but by 2014, the sub region rivaled South East Asia, constituting more than 40% of imports to China with a total volume of 738,772 m³ worth nearly half a billion dollars. The consequence of this is increased erosion.

Table 3: Showing the places seriously affected by erosion in the Southeast

S/N	States	Affected areas in the state
1.	Imo	Ideato North and South Ikeduru Umuaka Abba Mbaise Ihiagwa Nekede Amaifeke
2.	Anambra	Ekwulobia Agulu Nanka Okoko Okija Obosi
3.	Abia	Uturu-Ahaba-Imenyi link Road Amafor-Isingwu Aba Abiriba,Item
4.	Enugu	Obolo-Afor Obolo-Eke Nike Obinagu Emene Ngwo-o
5.	Ebonyi	Edda Ohaozara Afikpo

Author Created

Okoli (2016) makes a connection between the falling of trees in the past and the high rate of erosion on roads and farmlands in the South-east of Nigeria. A research carried out by Sanda (2015), reveals that out of the 4,000 known erosion sites in Nigeria, South East has 75%. In another research by Egboka (2008), he noted that out of 3,200 erosion sites identified in Nigeria, majority are in the South-east zone, with Anambra and Imo as the worse hit.

Table 4: Hazards caused by deforestation

S/N	Hazard	Description
1	The Loss of vegetation cover	Cutting down of trees contributes to the loss of vegetation cover that protects the soil from flooding, wind, and other erosive forces, therefore, exposing the soil to atmospheric elements and making it more susceptible to erosion (<i>Chongjun, et al., 2021</i>).
2	The Reduction of soil organic matter	The presence of trees and other vegetation contribute to the building up of organic matter in the soil. However, when trees are cut, the organic matter content of the soil decreases, making it less able to hold water and more susceptible to erosion.
3	The Increment in runoff	The indiscriminate falling of trees leads to an increase in runoff, as water is no longer absorbed by the vegetation and, thus, runs off the surface of the soil. The result of this is an increase in the erosive power of the water, leading to gullies and other erosive features.
4	The compaction of the Soil	The loss of trees can also lead to soil compaction, as heavy machinery is often used to clear the forest. Compacted soil is less able to absorb water and more susceptible to erosion. It reduces the air spaces between soil particles, densifying the soil (<i>Mintek, 2020</i>).
5	The Loss of biodiversity	With soil erosion, there is loss of biodiversity. Ecologically and economically, biodiversity loss is substantial, especially for species whose populations are declining.

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CONCLUSION

The pre-colonial Igbo-African society was one in which nature was understood as a part of the human society, and thus was treated with respect and love. Human activities capable of denigrating environmental sustainability were regulated using traditional approaches. Water bodies, lands, the sky, etc., were not just understood as cosmic dimensions, they were considered the abode of deities, requiring respect, not only for themselves but for the maintenance of ontological balance. However, with the advent of colonialism, a new perspective came into the picture. It was one in which nature was now perceived with a mechanistic, consumerist, materialistic and economic eye.

This development did not only alter the Igbo traditional understanding of the environment, but also brought about the enforcement of an entirely strange perspective of nature. The colonial powers saw the colonized territories simply as places with unlimited resources to be exploited, with little consideration for the long-term impacts on the immediate community and the world at large. As they exploited these colonies, they considered them unending frontiers at the service of early modern state-making and capitalist development. The colonizers were ruled by the belief that the world was theirs for the taking, and understood the indigenous people as disposable, and believed that nothing mattered more than the currency in their pockets. With this mind-frame, greater attention was paid to the natural resources of the colonized without paying attention to the question of sustainability. This work has looked at the ecological crises in Igbo land with the advantage of hindsight. It is not saying that colonialism is the only cause of the environmental crises in Igbo land; it is rather saying that colonialism played a part in two ways: the alteration of indigenous approaches towards environmental sustainability and the exploitation of resources which has left behind a trail of far-reaching ecological degradation and resource depletion. It is in this sense that it can be concluded that colonialism did not only exploit the environment, thus damaging it, but also prepared the people for the further destruction of their common home: the environment.

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