



## **A Visual Language of Communicating Ecological Issues in Nigeria**

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### **Abstract**

*Ecological problems have remained a global pandemic. Everyone is entangled, not only in the consequences of it but also in seeking a solution. For long ecological change problem has been a science-based problem requiring 'scientific' solutions. But now, non-scientists are variously attempting to bridge the science-action gap using diverse professional capacities. In visual arts, some artists are making vehement attempts around the issue, but visual design methods are yet to be potently enabled in communication and engagement. This vacuum has been identified. My practical explorations lends a creative voice and language, especially in Nigerian's context. The outcome of the explorations are reproduced for functionality while their dissemination are extended to socio-virtual platform for audience engagement.*

**Keywords:** Ecological problems, Visual language, Art, Visual Communication, public engagement, Nigeria

### **INTRODUCTION**

For a sustained human, plant and animal life, the terrestrial environment and its climatic conditions such as temperature, humidity, elements cycles, and so on, should of necessity be optimum. Where these are not so, there would be a number of problems such as disease infestations, flooding and erosion, desertification, ozone depletion and other related effects. The condition becomes that of environmental and climate change. Historically, while issues of climate change began to draw noticeable concerns as early as about 18th century, human environmental problems have remained an age-long phenomenon as a result of the denaturalizing exploration of the earth and its resources. Environmental and climate change in the recent time has drawn a global attention due to the several menacing effects it confers on the terrestrial ecology.

Currently, there is an increasing concern over the issue of climate and environmental problem. While sociologists and natural scientists are conducting researches, governments, non-governmental and world institutions are raising programmes and funds towards the management, mitigation or adaptation of global ecological problem. However, it seems that a neglected but important aspect of the environmental and climate change 'researches' are those being conducted by visual artists. Visual artists have over the years used art to speak on humanistic subjects and as such have employed art as a means of social change. Supporting this, Gormley (2010, p. 13) in his article 'Art in the time of global warming' writes that "there is a strong connection between the desire for survival and the art of a people and a time".

### **STATEMENT AND OBJECTIVES**

Generally, responses to ecological problems have been science-based, and artists responding to the dilemma have mostly worked in fine arts (sculptures and installations) rather than the applied, and art of everyday use. Such efforts reserve an opening for designers of visual imageries to communicate and engage on environmental issues, especially for Nigeria as representative of Africa. There is need to fill the openings in both



creation of design projects and in writing as this study does. In discussing designed works as visual language of communication, the key thing is the possibility of application and reproducibility of such works towards audience engagement. This initiates a demand to explore dimensions of visual design campaign on the change challenge. Moser and Dilling (2011) writing about the need to close up the science-action gap of climate change underlined that adaptation skills are not to be sought in the vacuum—the most essential aspect of communication of climate, environmental change adaptation would be in public engagement. Griffiths (2010, p. 7) puts it thus “the issue of climate change needs persuasion rather than propaganda and art understands the psychology of persuasion.”

This study therefore focuses on the pertinence of creating consciousness in the public to be part of desirable ecological adaptation skills. Factors which equally brush on the change challenge such as human activities of deforestation, degradation, oil spillage waste management, erosion, are also part of the concern of this project. For proper understanding of the question of this study, to what extent can visual art and designs serve as a language for communicating social and environmental problems? How can visual communicators raise concepts and designs that are capable of eliciting awareness, response and engagement of the public towards the adaptation of the environmental change? These questions give the aim of this study as: identifying visual art and design as a creative language of communication through exploration, production and interpretation; showing the potential of engaging such visual concepts and designs in creating awareness, eliciting response and participatory engagement; demonstrating how they can be translated and functionally employed through various mediums in raising an ecological adaptation practice.

### **ART AS SOCIO-VISUAL LANGUAGE OF MEANING-MAKING**

Through the years, art in its diversity has pointed and proffered solution to many human challenges. In considering art as a sine qua non for human existence, its functions are multilateral—spiritual, psychological, social, environmental, educational, economic, commercial and so on (Onuora, Ikwuemesi, Okpara, & Aniago, 2021). Art interweaves into the complex network of human society and experiences (Morgan, 2016). In its diverse potentials is both aesthetic and functional, “people use art to add meaning and richness to their lives” Lazzari and Schlesier (2008, p. 118). The position by Lazzari and Schlesier support this understanding that “people use art to add meaning and richness to their lives” (p.118). Art in its various media and forms developed as a response to seeking answers to human questions. It begins as human expression and a meaning-making process and/or product. It is a language—a visual language.

The same way alphabets, words and sentences are organised into a composition, so do artists organise elements of design towards the construction of visual composition. This understanding of artistic composition would as well lead to understanding our social space. Art, defined as visual language in this study suggests that there are other kinds of languages. Hall identified various kinds of languages such as spoken or verbal language, written language, body language, musical language, and so on. As a representational system, language is used in meaning-making process (Hall, 1997). In the case of visual language, the codes or principles of art or design are organised to form interpretive forms as outcomes of visual practice (Eubanks, 1997).

As a brief review, Eubanks provides a useful insight in comparing the language of the verbal and that of the visual. He suggested that although certain visual literacy is required to make sense of visual symbols, the making of communicative designs affords expressive ideas and symbology to basic viewers of art while the designer as a speaker does his work with fluency and eloquence. As such, it is easy to underscore how visual language is less coded than the verbal, albeit, depending on the audience. Unlike in



verbal representation, the reading of visual forms does not require formal tutoring. In all, art as visual language is both receptive and expressive. In this way, artist and designers can organise communication and produce meaning through personal and social interaction in which they take part (Hall, 1997). By communicating through the visual the artist is posed with this questions asked by Hall "Does visual language reflect a truth about the world which is already there or does it produce meanings about the world through representing it? (p.2). Before discussing my practice, I want to highlight relevant works of selected artists who have tried to bridge the action-gaps of scientific research of the change problem.

### **ECOLOGICAL ARTISTS AND BRIDGING THE SCIENCE ACTION-GAP**

Stepping beyond scientists' and sociologists' observations, practitioners and researchers in the liberal studies have advocated for bridging the science-action gap of climate and environmental problem through their specific fields. For the visual artists, studies show that artists are vehemently playing roles by translating ideas into visual forms and tangible works of art, which have the capability of 'speaking' on ecological issues. In his work, 'Speaking from the Gut: The Role of the Artist during Climate Change' Rivett-Carnac (2008) writes that "artists have the skill, vision and capacity to create the dreams of the next generation and change the patterns of this one" (p. 35). The idea underscores the artists' ability, creativity, functionality and foresight in developing futuristic solutions beyond the public opinion about art and artists.

In his position above, Rivett-Carnac publicizes the capacity and capability with which artists can contribute to societal issues of ecological problems. Many artists over the years have used their artworks to investigate issues of society. Examples are found in the classic works of the French Eugene Delacroix (*Liberty leading the people*), the Mexican David Alfaro Siqueiro's (*Echo of a scream*), the Zimbabwean Chaz Mariyane-Davies' (*Right 29*), the Nigerian Obiora Udechukwu's (*Exile train*) and many others. And the same humanistic approach, spirit and machine have continued with artists today. This reference is to underscore the possible place and impact of artists in environmental problems. Onuzulike and Obodo (2012) in 'Environmental and Climate Change: Issues in the works of some Nigerian Visual Artists' underscored the efforts of artists like Bright Eke, Thaddeus Ochiebo, Ekene Anikpe and Teju Olarenwaju amongst others. These are experimentalist sculptors and environmental artists who trained at Nsukka Art School under the tutorship of such acclaimed artist as El Anatsui. Obodo and Anikpe (2014); Obodo, Anikpe, and Chukwumezie (2014) have explored works of some of these artists regarding ecological issues but it is important to note how most of works dwell on sculptures and installations.

On ecological art, several creative approaches exist. One is through creative photo-journalism with the example of Gary Braasch. In an exhibition project titled "Climate Change in Our World," Braasch used large-scale colour photographs to reveal his decade long documentary on Climate change. This exhibition was held at the American Association for the Advancement of Science HQ Atrium, Washington DC in 2009 (McElroy, 2009). On his part, the Brazilian artist, Nele Azevedo has been widely noticed based on his installations of frozen men. His sculpture of melting men speaks of the "dissolving Artic village" which is a seminal issue of the time. His work is a thought-provoking visual metaphor that shows a number of "figures carefully sculpted out of ice, these men seem to sit in contemplation as the midday heat slowly erodes their bodies" (Beitiks, 2008 n.p.). By this he sends alert on the effects of global warming on the rest of us.

On the local scene, Bright Eke's work environmental and climatic dilemma manifested in his work titled *Acid Rain* series, which he began in 2005. As one of his early experiments, Eke engaged several transparent plastic water 'sachets' discarded around the environment. He tied them with small amount of water inside and suspended them on



trees and roofs with twines to create the illusion of water drops falling from the sky. In one of the versions of the Acid Rain, Eke using the same material created works similar to large umbrellas and raincoats. Here, he speaks of the need to get concerned about the aftermaths of global warming and to protect against acidic rainfall, which kills plant life, pollutes water bodies, erodes stone works, and hurts humans, in parts of Nigeria.

With 'Strata series', Ekene Anikpe in 2008 joined the group of artists who are investigating the global change dilemma after understudying El Anatsui's work titled *Erosion*. *Erosion*, he said triggered up his interest in exploring the issues of environment. In his artistic response, Ekene employed synthetic straws as his sculptural element of 'design.' Packs of straws of different colours were graphically arranged in triangularly constructed Plexiglas frames—as an object of metaphor for earth's balance. Anikpe speaks of his Strata series as an attempt to instigate the desire to "restrawcture" and to conserve the earth ecology as well as to check its gradual depletion through erosion and flooding, just like straws are channels of flow and siphonage (Obodo & Morgan, 2014). He has also used other inorganic materials generated from the vast mismanaged environmental wastes to create artworks that touch on global and environmental distress. His works shows an enormous comparison with Teju Olanrewaju's explorative pattern.

Beyond individual efforts of artists, institution are playing on the visual orchestra of ecological change campaign. Such institutions are found sponsoring and facilitating seminars, workshops, talk shows, exhibitions and other awareness programmes. Onuzulike and Obodo (2012) identify few artists of European origin who have been commissioned by their government to raise awareness through sculptural and installations on the climate problem. But this is not limited to Europe only. In 2009, University of Nigeria, Nsukka for instance hosted a two-week workshop organised by Goethe-institut, Nigeria, in the Department of Fine and Applied Arts on art as a means for communication while trying to break free from the traditional art approach to interacting with the environmental and public spheres.

Facilitated and curated by a Nigerian-born German-based artist, Emeka Udemba, this workshop titled 'In Dialogue' opened a new vista for a large number of students and graduate artists from different places to explore possibilities of environmental art as tool for addressing phenomenal, national and global issues. The workshop which involved preliminary researching, concept ideation, participation and collaborative execution of projects drew artists of the Nsukka Art School—Uka Godwin, Ozioma Onuzulike, Eva Obodo, Chijioke Onuora, George Odoh, George Agbo, Emelogu Chinenye, Teju Olanrewaju and many other artists into exploring divers aspects of the problem in Nigeria which include environmental pollution and degradation, deforestation, death and the Niger-Delta environmental saga that resulted from unguided oil exploitation. Group projects took outdoor (environmental) installations and demonstrative approaches. The workshop provided an avenue through which artists could give birth to their ideas with proper interaction within an environment and public space. We must acknowledge the shift in such presentations as the post-COVID era has led a number of these activities into virtual spaces.

### **PRACTICE-BASED METHODOLOGY**

As a means of interpretation and communication of ecological issues, I employed a practice-based methodology design exploration. This is a qualitative study whose methods are largely informed by visual art exploratory framework. It involved studio research processes as explicated in such authors as Gray and Malins (2004); Sullivan (2010); Vincs (2007). Practice-based study affords its contribution to knowledge through the artifacts generated (Candy, 2006; Candy & Edmonds, 2018). Further details on the process and stages of practice is shown below in 'General Design Approach' section.



## **General Design Approach**

Before I present the outcome of my visual exploration I do provide here a general information on the production processes. This will help to better appreciate the conceptualisation of the works. The processes and the tools of production are a combination of both the traditional and digital. By taking the traditional route, I utilised the practice-based procedures such as sketching, journaling and ideation procedures. Yet the need to include the digital is informed by the fact that modern visual communication designs are digitally simulated in order to advance them for different media platforms and for certain aesthetic appeals. Frank (2006, p. 159) captured this idea in writing that "the multipurpose characteristics of the computer have accelerated the breakdown of boundaries between media specialisations". However, notwithstanding the tools or techniques that is employed, the artist's creativity and capability in handling a design software application is a major determinant in choosing a method.

### *Reconnaissance and my visual data*

Following the fundamental processes of studio working as underscored by Gray and Malins (2004), I worked through a preliminary research or reconnaissance of the subject of ecological issues in Nigeria. It is important to note how studio practice afforded the chance to generate researcher's own data. By creating works, data for the study is created, which is different from other forms of research data such as 'found data' (Pauwels, 2011). Design processes lead to the production of images used as visual data. Various primary and secondary sources of data collection have been used. As a purely primary source, most images were captured as still images with digital camera from the environment. So I do highlight the place of photography in the process.

The pre-designing stage also involved a number of methods which include sorting of images, cropping of images, among others. The next directions included ideation of concepts and themes through sketching or journaling, development of thumbnails and chromatic simulation. Owing to exploratory and innovative nature of studio practice as underscored by Hannula, Suoranta, and Vaden (2014) the working process is not regimented. Beyond the pre-conceived ideas of the artist, the nuances of studio exploration as a back-and-forth process can give rise to new outcomes.

### *Production stage*

Generally my method in this project largely involved the use of digital apparatuses that afford exploratory potentials such as creating and replicating shapes, discarding and re-creating forms, and choice of various colour schemes. Through digital techniques the images were translated into partially or totally new hybrids of visuals. Most works were explored as raster or bitmap, while few others were purely created as vector images using relevant computer applications. Practical steps in the production stage include layout of design, generation, replication and organisation of shapes, layering, superimposition or montaging, and other manipulation of elements which in general would entail addition and subtraction of design elements at one point or the other.

Following the potentials of digital studio process, third-party plug-ins (such as smoke and spill brushes) were also employed for visual effects. Part of the manipulating process include the use of creative filters experimentally applied on raw images until desired simulations are achieved. Some of such filters were applied to realize such effects like smoke, vegetation, rumbling flame of fire or explosion. The fire effect was created using an image of fire captured with the camera. By this, "photography is a strong tool with which to prove a point..." and it possesses the "ability to communicate" (Arntson, 2007, pp. 170,171) Further direction of the creative process included the change of colours for the background and other forms as well as inserting text forms.





### *My Stance on visual outcomes*

My practice depended largely on the functionality of the works. The rationale for working with functional approach hinges on the practicality of creating and using resulting designs for use in didactic and awareness campaign for ecological problems. This highlights the fact that graphic designs are functional tools for communication. The resulting design pieces can be employed as functional bills, posters, web banners. They could also be used in media production and other forms of communication. They are also reproducible on various surfaces for daily domestic or social practices and for branding cars, cards, dresses, clocks, hardback journals and many others. My framework here covers exploration of both the functions and themes of the visual imageries. In the next section I present and explain the selected works from the project.

### **VISUAL OUTCOME AND INTERPRETATION**

It is important to note that in a practice-based study the process is as important as the outcome (Biggs, 2010; Borgdorf, 2012). While some of the works emerged as simple designs, others were developed as visual metaphors (indirect allusion) to speak on the ecological themes they represent. For better understanding of the study I have grouped my interpretations into three strategic ecological issues under which my visual language emerged. They cover the aspects of burning and emission, environmental degradation through misguided wasting as well as on general deforestation and its effects on animal species. Before I provide visual interpretation of the works,

#### **The Rainbow Damage**

Figure 1 is a creative work on the environmental subject of various gaseous emission in Nigeria. The title, Rainbow Damage, is itself antithetical in considering the combination of a 'colourful rainbow' and the possible damage that comes from fire incidence. By this piece, I engage with the idea that emission resulting from burning of different kinds can be subtly cumulative and dangerous. The idea of rainbow alludes to the different colours produced by flames during burning, signifying the 'beautiful' advantages that accrue to certain activities that cause gaseous emission. In other words it ironically underpins the fact that while people and nations enjoy their natural resources and industrial activities, they are certain disadvantages that usually follow.

For instance, Nigeria, as the largest crude oil producer in Africa, has ecological challenge resulting from gas flaring. Coupled with the huge financial losses on the government and the people, gas flaring is ecologically harmful. In a recent report Omontuemhen et al. (2018) underscores that "gas flaring is commonplace during production or industrial activities on oil rigs, refineries, chemical and coal plants. In the process of flaring, excess amounts of carbon dioxide and methane are release into the atmosphere, resulting in a depletion of the ozone layer, acid rain and global warming." Beyond, these basic ecological problems, gas flaring poses serious hazards to human health such as air pollution capable of causing cancer and lung damage, and reproductive and neurological issues (Anjorin, 2020).



**Fig. 1:** Rainbow damage, 2x3ft



**Fig. 2:** Ozone Layer, 4x6ft

My visualisation of conflagration and emission as subtle and dangerous affordance of economic and industrial development is further revealed in the concept of Ozone Layer (Fig. 2). This piece emerges from a photographic image of inferno from an explosion as its primary visual data. Within my digital studio the pillar of smoke was copied in duplicate layers and adjusted differently using Photoshop Filter>*distortion*> *wave* effect. A *lens flare* filter was equally added on a black background which was superimposed above the first two layers to form the new image hybrid. Smoke effect was added using the brush tool while the piece was finished as a poster design by adding a representation of cityscape and text.

Ozone Layer (Fig. 2) expresses the cumulative effect of both domestic and industrial burnings and emissions which are evident in both developing and developed nations. Rainbow Damage (Fig. 1) was designed from a photograph taken from a pile of half burnt booklets and paper materials. It was digitally worked to reveal its artistic flavour and aesthetic, and to produce a new hybrid image by using Photoshop *flare* effect at different stages. By placing a dark tone on a top layer, the *flare* effect was added on a pin light mode. Transparent gradient effects with light tones were drawn over and across portions of the dark piece revealing the lower layer containing the main image, thus, giving rise to this hybrid piece. In all, the theme of 'rainbow damage' as a visual language warms of a 'comeback' that follows times of seeming national prosperity and boom and Nigeria holds such understanding in the fabrics of its nationhood. The comeback is ecological disaster and change among others.

### **Consumers' Theory and other stories**

Everyone is a consumer and possesses a certain degree of environmental sense. Consumer's Theory (Fig. 3) is a design that addresses the disturbing issue of strewing the environment with the materials of the modern day packaging. Our degrees of understanding and application of environmental sense especially in waste management are part of the growing 'theory.' In a general sense, the idea is that many consumers are not usually conscious of how to deal with their environment especially in handling discard, especially when in transit. So it seems to be consumer's way of life to indiscriminately litter discards after uses.

On their parts, Nigerians are known for huge and elaborate delivery of alimentary provision during social events. Onuzulike and Obodo (2012) discussing Olanrewaju's effort in engaging numerous plastic grocery packages in his work notes that such materials are "sourced from the streets and refuse dumps..." (p. 106). Cans of beverage and soft drink seem to be abundant amongst packaging materials. Plastic bags also form the bulk of wrapping and packaging materials used by consumers in the market. Such materials are non-biodegradable and thus constitute much of the environmental degradation across Nigeria.



**Fig. 3:** Consumers' Theory, 2x3ft

In Consumer's theory, a heap of soft drink cans in litters was captured, and using *Cutout* filter from Photoshop, they were transformed into an artistic impression. The Brush tool was employed in adding effects of spatters, splashes and droplets at different levels of shades and opacities to increase the visual representativeness of the piece. This design is a metonymy of a kind as refuse cans represent the rest of mismanaged refuse bins that cover several towns and cities in Nigeria (Morgan, 2018). Ultimately, such environmental degradations inform many disease outbreaks especially in urban centres, or rural where medical attention may be limited. This discourse is further highlighted around ecological problem that move from humans to animals and the general need of conservation.

### **Eco-Defence System**

Here, the concepts deal with the demand for conservation of the wide life. Inclusive Preserve (Fig. 4) was composed of black and white (charcoal and ash) remains of burnt and smouldering woods. The design is enlivened by primary and secondary hues superimposed at the upper part. The Photoshop brush tool was used to (a) improve the smoke effects (b) add colours and (c) 'spatter' transparent grey leaves.

With my digital tools, the image was adjusted for contrast, duplicated and superimposed with different opacities. The background colours of the pieces shows how green representative of growth and life is being pushed out of the space. In the design, beyond speaking about increase in carbon, and the modification of the ozone layer consequent upon wild fires, and deforestation, I am concerned about how many other species apart from man are pushed towards extinction. Animals are eradicated, trees are 'murdered' in 'cold blood' (Figs. 4 and 5).



Fig. 5, What the Eagle Saw continues the narrative. It is a visual metaphor on the conservation of wild life. It suggests the corrosion and decay of the vegetative life that leaves the wildlife species homeless or hovering. Only the 'sharp-eyed,' light-footed or tough-winged species can 'foresee' the dangers and make a timely escape. The challenges behind 'the erosion of vegetative life' also means exposing the earth to ozone activities, thereby losing varieties of animal species and many sources of medicinal plants (Busari, 2005). Deforestation means abundance of carbon dioxide in the earth atmosphere. Hence, in another sense, the call for no flames is symbolic in the demand to forestall the degradation of the ecosystem by the integration of green economy of living.



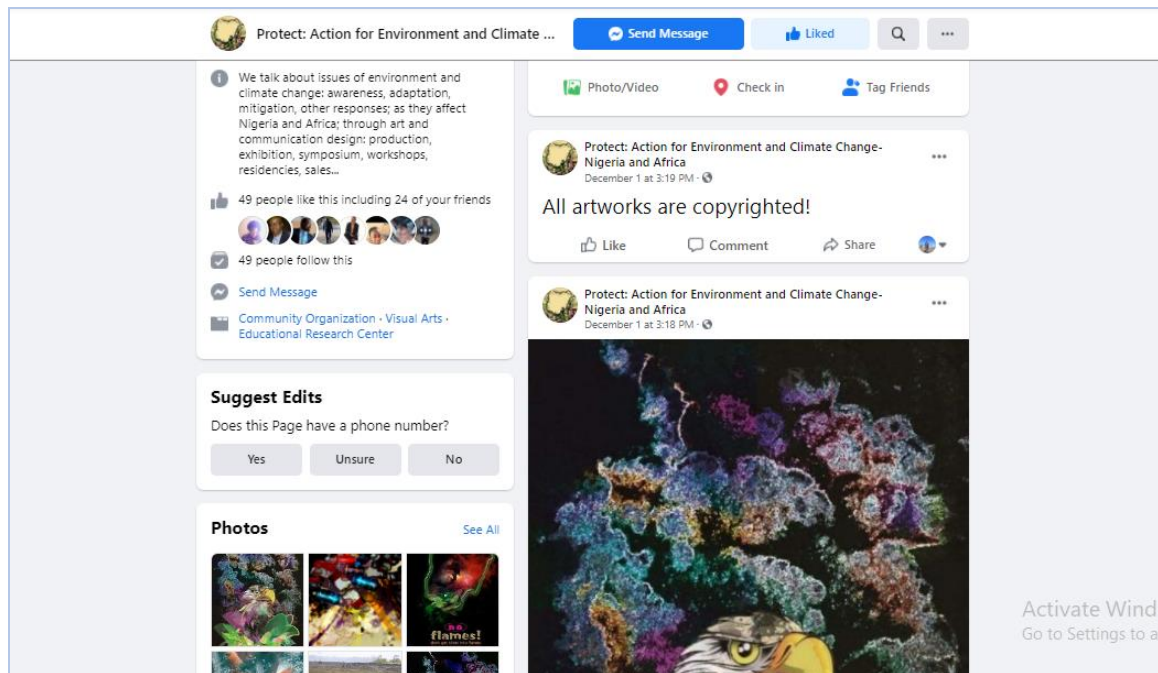
Fig. 4: Inclusive Preserve, 6x4ft



Fig. 5: What the eagle saw, 2x4ft

#### **DISCUSSION AND CONCLUSION: TOWARDS A PARTICIPATORY ENGAGEMENT**

The call I have raised through this visual imageries has been translated to the virtual space on the social media. This is to further create an avenue for participation. I created a Facebook page titled 'Protect: Action for Environment and Climate Change-Nigeria and Africa'<sup>i</sup> and a supplementary Facebook public group, 'Environment and Climate Change Nigeria.'<sup>ii</sup> Both are to allow users interact and integrate their understanding, and to share relevant information from other sources. The engagement for the time being has received comments while gaining from the affordances of Facebook, which allows participants to like and share. It is also important to note that part of the engagement may not involve a participant clicking and sharing, rather, he gains insight from the expansive potentials of the creative pieces. This is also to corroborate the different protests or campaigns that seek to engage the government and the people on ecological distress in both physical and online spaces.



**Fig 6:** Facebook page: 'Protect: Action for Environment and Climate Change-Nigeria and Africa' [<https://web.facebook.com/Protect-Action-for-Environment-and-Climate-Change-Nigeria-and-Africa-157218991296409>]

I am aware of #climatestrike global campaign in 2019, also known as Global Week for Future which saw millions of young people pour out to the streets to stand against negative responses around climate change (Laville & Watts, 2019). As part of School Strike for Climate movement this took place across 4,500 locations in 150 countries. Yet, it important to note that such a campaign experienced a low turnout in Nigeria. This, perhaps, shows that Nigeria needs a localized input or approach to such campaigns in order to drive home this ecological agenda which is highly essential. Another of the ecological campaigns was the Extinction Rebellion which took place in UK (Otte, 2019). The target of the 'rebellion' was on climate change mitigation, nature conservation, and environmental protection. The visual language of graphic design should play important roles in ecological mass actions no matter the country where it is organized.

Nigeria's position on ecological issues is not equivocal. While Nigeria has a huge potential and opportunity for development through green economy (Oghifo, 2019), the reality is still farfetched owing to a number of factors (Dawon, 2016) which for me are more intrinsic and systemic rather than external or overt. For instance, Nigeria's process of documentation across institutions still maintain the antique and traditional, and cares less about the wild consumption of eco life and green economy. Attention to issues of ecological economy seems to be lacking frontal approach. Low power sourcing, traditional form of domestic power generation remains are still concerns. Misguided oil exploration is still real, among others (Elum & Mjimba, 2020; Ndukwu et al., 2020). Hence, this visual call.



**Fig 7:** Samples of designs reproduced on functional products

In all, this project, with its materials, and procedures has shown design outputs which form a visual language on issues of climate and environmental problem facing Nigeria. It has further provided insight into the cognitive interpretation and analysis of the ideas and values they connote as visual language for Nigeria. The design elements such as colour and forms are potently engaged in these works to signify the dangers and changes we face while the use of words on this art works serves as anchors to buttress the message expressed. The works therefore, as visual language, connect strongly with Frank's (2006) assertion that "the ideas, values and approaches that constitute the basis of the visual arts can continue to enrich our lives and surrounding. We form art. Art forms us" (p.475).

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<sup>i</sup> The url of the page is <https://web.facebook.com/Protect-Action-for-Environment-and-Climate-Change-Nigeria-and-Africa-157218991296409> with the description: "We talk about issues of environment and climate change: awareness, adaptation, mitigation, other responses; as they affect Nigeria and Africa; through art and communication design: production, exhibition, symposium, workshops, residencies, sales..."

<sup>ii</sup> <https://web.facebook.com/groups/171684363173753>. This is an open group which anyone can see and access. Both the page and group have been used to share news, information from diverse sources that connect with ecological issues.