

## RESEARCH PAPER

# The arts of converting waste to wealth: towards environmental sustainability in Nigeria

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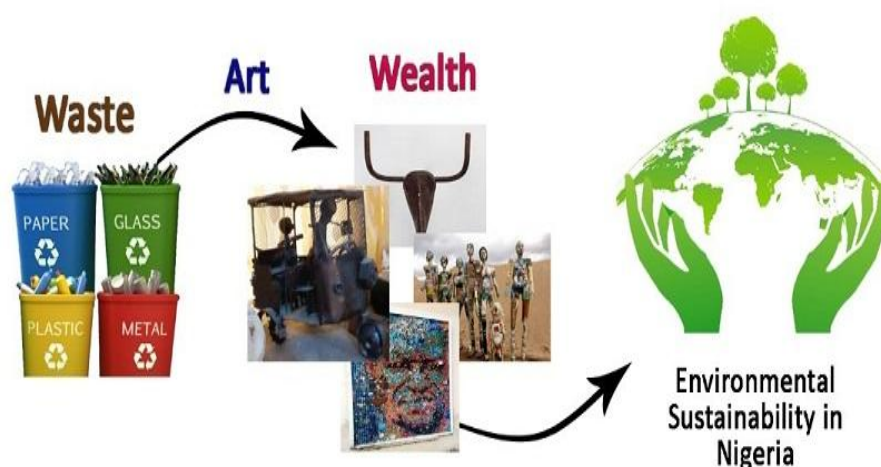
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## Highlights

- Art as a concept and how artistic activities help to convert waste to wealth.
- Junk collection and assemblage compositions are viable approaches to ensure a safe and sustainable environment.
- Visual artists should be involved in decision making, environmental policy formulation.

## Graphical Abstract



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## Abstract

The present research examined the Arts of converting waste to wealth, towards environmental sustainability objectives in Nigeria. The concepts of waste and waste management of reduce, re-use and recycle through various processes, particularly artistic processes were analysed. Art as a concept and how artistic activities help to convert waste to wealth as well as invaluable contributors of some artists in the waste management and environmental sustainability were also analysed. The efforts of the Federal Government of Nigeria were also acknowledged through promulgation of decrees and establishment of various agencies and other legal frame works. This study aimed to curbing the menace of poor waste disposal and ensuring a safe and sustainable environment. Results concluded that, artistic activities, through junk collection and assemblage compositions are viable approaches to ensure a safe and sustainable environment. It was recommended that, visual artists should be involved in decision making, environmental policy formulation as well as planning, designing, redesigning and construction of urban renewal projects and programmers.

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## 1. Introduction

The environments are rather enriched with an uncared attitude of human activities, which result in the littering of unwanted materials called waste. These-called waste is rather unexploitable potentials that can become a source of pleasure and wealth. Unminded resources have earned the name of environmental waste instead of untapped natural wealth. The word waste in a passing evokes the feeling of negativity, degradation, and unwantedness. A common understanding of waste is the unwanted by-products of human activities generated from and within the Environment (Ivanova et al., 2016). Waste could be domestic, industrial, chemical, biological, or toxic, depending on the source. Suffice to mention that the world is full of human activities that have a significant impact on the Environment, negatively or positively, depending on the mode of utilization, expression, or exploitation. The human activities' effect increases waste production, arising from rapid population growth, exploitation, and utilization of human and natural resources (Seik, 1997). Man lives in an environment that posed complex problems. However, for him to survive in this Environment, he must be able to solve several problems. This may include overcoming the threats posed by environmental waste (Hilson, 2002). One such complex problem is environmental waste, which threatened human health and survival. It is worthy of note that efforts have made efforts towards curbing the menace of waste for environmental sustainability (Courchamp et al., 2017).

These may take different dimensions and approaches, notably, waste management. Waste management is the activities and actions required to manage waste from its inception to the final disposal, from the collection, transportation, treatment, and disposal of waste, together with monitoring and regulation of the waste management processes (Ivanova et al., 2016). It intended to reduce the adverse effect of waste on human health, the Environment, or aesthetics. Waste management processes are approached at different levels. Governmental, municipal solid waste is the government handles the bulk of the waste created by household, industrial, and commercial actions. The Federal Government of Nigeria has also placed a legal framework aimed at curbing environmental degradation. In 1987, the Nigerian Government promulgated the Harmful Waste Decree (HWD), which provides the legal framework for the effective control of the disposal of toxic and hazardous waste into any environment within Nigeria's confines. This was immediately followed by creating a regulating body, the Federal Environmental Protection Agency (FEPA), in 1988 (Parry, 1998). FEPA is charged with the overall responsibility of protecting and developing the Nigeria Environment. To put this into action, a National Policy on the Environment (NPE) was developed as the principal document for preserving and protecting the Nigerian Environment. Also, local Government Councils and States were encouraged to establish their environmental regulations to achieve good environmental quality as it applies to their particular terrain (Lovarelli and Bacenetti, 2017).

The task of maintaining a safe and sustainable environment requires much more than the government alone. It calls for creative approaches by the individuals or groups. Cycling and recycling domestic and industrial waste and their products should become a way of life, while virgin materials should be used to manufacture goods (Seik, 1997). The safe Environment will demand waste reduction and waste recycling industries, which must have to replace garbage collection and disposal companies largely. Recycling as the process of putting unwanted materials in the Environment into continuous use, beneficial to the ecological Environment. Another refreshing approach to waste management is junk collection by Artistic expression called Assemblage. Indeed, this is the core of the present research (Ivanova et al., 2016). Assemblage is an artistic expression, defined by the arts of recycling or converting waste or discarded materials into a noticeable, appreciable, and adorable piece, capable of generating economic, utilitarian, and aesthetic values, aimed at a safe and sustainable environment.

## 2. Materials and Methods

### 2.1. The concepts of arts

Scholars have attempted to define "Arts" in different ways based on their viewpoints. The word Arts is a generic word that expresses various methods of artistic or creative endeavors. In this context, arts refer to the

artistic expression in visual forms that appeals to such sensory stimuli as vision, tactile, and emotions. It is a medium of expression, it has the power to both represent reality and express it. Arts is something that people feel has value because it is beneficial and expresses ideas. It has so many directions, serves so many purposes in such a variety of ways (Ardoin et al., 2018; Dahlman, 2007).

A work of art is simply a creation made by human hands, not by nature. It is part of man's inner nature to create, communicate, use symbols, and seek approval for these activities while satisfying the inner need to make something out of inanimate materials. The author added that the artist makes things that are reflective of his desire rather than the demands of the audience. The artist makes works that both serve his or her own need to express an idea through the use of particular materials and uses a visual language requiring the audience to interpret the usage and the skills of the artist (Muhonen et al., 2018). The numbers of materials, processes, and delivery systems turn personal visions and ideas into tangible, copyrightable, and marketable creations that others can view, share, and buy (Stirling, 2007). The arts promote the understanding and sharing of culture; social skills enhance the awareness and respect of others and perceptual and cognitive skills (Dahlman, 2007).

Art is a study and practice of both letters and forms. A practice that involves all human activities, yet some people are ignorant of their abilities and extent of their involvement in art activities. Indeed, of all human studies and practices, art is the most diverse in its usefulness to man and his Environment (Nelson and Groom, 2012). The scope of art touches mankind at several points; it is an integral part of all human activities. Therefore, to streamline art to a few masterpieces of geniuses is to deprive its salient spices' human nature, which gives the vitality we deserve. Individuals use their school knowledge in their daily lives with the help of the skills and knowledge they have acquired in the field of Art.

It is often said that an artist creates order out of confusion, turn undesirable to desirable. These assertions express in practical terms that the path way into converting junk collections into valuable pieces through assemblage composition that ultimately converts waste to wealth is for the Environment's sustainability.

## 2.2. The concept of waste management

Waste management is of different concepts, approaches, and hierarchy. Waste management involves scientific, artistic, and technological approaches to waste control, disposal, and conversion to other useful materials beneficial to man and the Environment. The principle of waste management revolves around the "3 Rs", namely, reducing, re-use, and recycling. They are classified according to their desirability in terms of waste minimization. The waste hierarchy aims to extract the maximum practical benefits from products and generate the minimum amount of end waste (Reduce). The next step is to seek alternative uses for the trash that has been generated (Re-Use). The last stage in the hierarchy includes composting (Recycle). This hierarchical approach is also considered as a material recovery or waste-to-energy strategy. The waste hierarchy represents the progression of a product or materials through the sequential stages of the pyramid of waste management. It represents the latter parts of the life-cycle for each product. Waste can be recycled by converting waste products and unwanted water through various technological processes into drinking water and other domestic, industrial, and agricultural uses (Seik, 1997).

(Laftah, 2016) confirmed that studies in the laboratory were shown that the discarded pseudostem and fiber of Musa species could be utilized or converted into papermaking and bio-alcoholic. Through a systematic approach to waste management, waste products can be converted to wealth. Wealth created through the conversion of waste has to do with harnessing and sensibly packaging waste resources at one's disposal. In other words, discarded waste could be as well be utilized to produce more useable items. Also recently, animal feeds are produced from discarded periwinkle shells, bones of animals and fishes, and other calcium-related materials (Nelson and Groom, 2012). In the field of art, collected waste items are also creatively designated as found objects. An artist constantly looks more deeply into any object used or unused, and with a third eye to make more appreciable and acceptable objects from them. The found objects are obtained from the ground,

forest, old or new areas. The essence of evaluating waste in the Environment through whatever approach is for safe and sustainable Environment (Hilson, 2002).

### 2.3. Waste management in arts

Humans are products of their Environment (society). What affects one, affects all. Therefore, the adverse effects of waste management and solutions should concern all who reside in an environment. There is no gain emphasizing that the government at all levels in Nigeria is making frantic efforts through legislation and other pragmatic approaches to ensure a safe and sustainable environment. There is, however, a clarion call for all and sundry to take an active part in environmental protection and sustainability. Artists, as part of the Environment cannot be an exception. It is worthy of note that artists have been sustaining our Environment through his professional practices. Others see discarded materials as waste, while artists see them as found objects. Waste dumps or disposals are rather a super shop for an artist where he goes shopping for found objects otherwise called junk collections. Found items discarded mechanical parts, household cans, plastics, electrical unwanted, factory condemnns, abattoir throw-away, supermarket empties, electronic use lessees, etc. (Ivanova et al., 2016).

Also, founded objects can be organic or manmade. Such as scrapes of wood, stones, old shoes, backed beans cans, and discarded baby buggy or any of the other 84,000,000 items not have mentioned by names all quantity for inclusion in an assemblage. The author added that, whatever catches the artist's eye and fits appropriately into the composition to make a unified whole, is fair game.

All people know that you are supposed to reduce, reuse, and recycle, but for artists, reuse and recycle often have different meanings than they do for the rest of us (Seik, 1997). The contributions of arts to environmental protection and sustainability can not be overemphasized. The gathering of found objects, otherwise called fund collection, is a pragmatic approach towards waste management in our Environment. The aim of junk collection is inert to the artist, but will soon be expressed through an artistic composition known as Assemblage. The artists' way of waste disposal, better-called waste, exposes definitive and infinite. The artists do not discard waste items; rather, he fantastically sustains them. The artist gives a more active life to once lifeless, discarded, and forgotten objects through assemblage composition.

## 3. Results and Discussion

### 3.1. Waste to wealth

An Assemblage is a form of sculpture comprised of found objects arranged so that they create a piece. Assemblage is a contemporary artistic expression and technique which is definitively original. No assemblage work can be successfully copied because of the principles governing its production and rendition. Junk collection of found objects is the first stage in the rendition of assemblage sculpture. Most of the rendition of assemblage composition occurs unconsciously (Dahlman, 2007). The artist may not need to conceive the work before gathering the materials. Often he conceptualizes the piece by a flitching of eyes or a second look into an object or objects. This will then be followed by a journey to no where that may end up in a waste dump, road sides, market square, mechanic workshops, and anywhere. The second stage will be the display of the found objects in the studio or workshop. At this stage, the artist will embark on a journey to the world unknown, where he immersed himself into deep contemplation, soliloquy, and mental interaction, with himself and the found objects.

The third stage will be assembling the various collections through welding and other methods to form a piece of his dream resulting from the mental interaction. Finishing, installation, and display or exhibition concludes the process. Assemblage pieces adorn private homes, hotels, cottages, and other public spaces, both indoors and outdoors as well as in the collections of famous Museums and Art Galleries in the world.

### 3.2. Treasures of wastes

It takes only the artist to turn waste into treasures. Whoever attempt it is carrying out artistic activities, then he or she is an artist. Despite our ignorance, it does not preclude us from what we do. We are by our actions

artists in our own right, though our talents are latent. Many contemporary artists have made impacts in the art of waste to wealth. A few will be mentioned in this paper (Goldsmith and Matherly, 1988).

### 3.3. The legendary Pablo Picasso

Pablo Picasso must have long gone, but his masterpieces live on. Picasso's works express covertly or overtly, the prevailing circumstances of his time, his inner being, his emotions and thoughts in his works. His assemblage piece *Death's Head* (Fig. 1), a bronze sculpture of a pitted, scabrous skull, *Joie de vivre*, etc, which he did during the world war II expressed his bleakest moment. Picasso's most famous assemblage work, entitled: *Bull's Head* (Fig. 2), was done during one of his wittiest periods. *Bull's Head* is a sculpture made from a discarded bicycle saddle and handlebars. The work consists of two elements. The identity of the found objects, though not disguised, isn't emphasized. There is no attempt to play down the real-world identity of the constituent parts. The *Bull's Head* sculpture reductiveness and simplicity draw attention (Segura et al., 2016). Concerning the sculpture, the author opined that At once both childlike and highly sophisticated in its simplicity, its stands as an assertion of the transforming power of the human imagination at a time when human values were under siege.



Fig. 1. Death's Head, (1943).



Fig. 2. Bull's Head, (1942).

### 3.4. Michelle reader

The reader is noted for her famous work, "*Seven Wasted Men*" (Fig. 3). The piece was made from one month of household waste from the family. The work is a portrait composition of a family from where she collected the junks. The material not only highlights a need to address the amount of waste each of us produces but also tells



the story of each individual through the things they discard: a child's drawings, a shopping list, a birthday card etc. The artist enjoys working with discarded household waste, recycled them into sculpture, also incorporating mechanical elements such as the working part of toys and clocks. To turn wastes into treasures, reader also source her materials from city dumps, roadsides, and thrift shops. Her popular quotes: I try wherever possible to use reclaimed materials, things with a history that have been discarded and might otherwise end up in the landfill.



**Fig. 3.** Amanam, popularly called Immortal by his Seven Wasted Men.

### 3.5. *Kebreab demake*

Kebreab is an Ethiopian artist noted for his assemblage piece titled: "jerekina" a word coined from his local dilate, which means jerry can (Fig. 4). The artist was bothered about the ubiquitous nature of discarded cans, which littered every nooks and cranny of his nation's landscape. To the artist, it was time to gather the once waste, to make them treasures, not just as a waste management approach, but to make them treasurable. In this work, he shows manmade a tree from a collection of Jerekina, now a source of inspiration for much of his works.



**Fig. 4.** Jerekina.

### 3.6. *Stanislaus odinaka*

The artist specializes in painting from the Department of Fine and Industrial Arts, University of Uyo, Nigeria. He is a multimedia artist who has experimented on various materials to express his feelings in art. In this art project, the versatile artist embarked on series of junk collections of thousands of bottle-corks, ranging from plastic to light can corks of varied corks, stock on a two-dimensional surface, to depict a city-sized portrait of a forward-looking advanced man entitled; "Okonofua's Face" (Fig. 5). Okonofua is one of the most favorites

art teachers at the University of Uyo Art School. This is the artist's little way of evacuating the bio-degradable from the streets and neighborhood, towards a safe and sustainable environment.

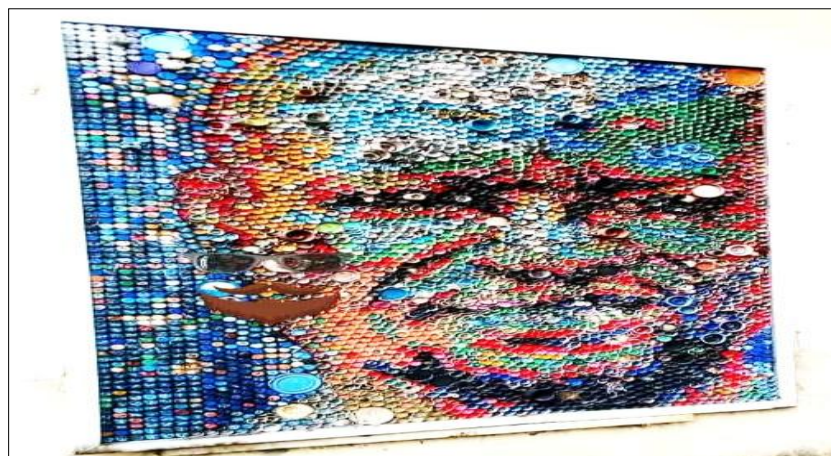


Fig. 5. Okonofua's Face (2017).

### 3.7. Edidiong james

Edidiong is a budding but prolific artist from Akwa Ibom State, Nigeria. He is dexterous in the use of mixed media to render sculptures. Tricycle popularly called (KEKE NAPEP) is a popular means of transportation by the middle class worldwide and major towns in Nigeria today. In this piece, entitled "Keke Rider," the artist tries to render a table-top 3-dimensional sculpture made up of discarded welder' sand mechanical parts, assembled in an assemblage piece (Fig. 6). Collecting discarded materials from the junks and the streets is a practical approach to waste management, ultimately converting waste-to- treasure-to wealth.



Fig. 6. Keke Rider, (2017).

### 3.8. John amanam

Amanam, popularly called "Immortal" by his contemporaries, is an up-coming artist whose mixed-media city-sized sculpture entitled; "Tomorrow" (2017) has earned him a national award and fame (Fig. 7). The piece made up of fiberglass half of the figure and found objects which x-ray the interior anatomy of an energetic, stout, and stained looking middle-aged man. "Tomorrow" projects into the future, where technology will rule the affairs of men. Carefully and proportionately assembled, the artist collected mechanical parts to expose the skeletal half of a living being. The figure concentrated on the found mega electrical bulb reused to present a globe, representing tomorrow's world. In creatures of such work, pieces of discarded materials were collected and reused. This is a significant contribution to waste management and public space beautification.

### 3.9. Other waste management efforts by the artists

Other waste management efforts approach creditable to an artist in waste management; waste-to-wealth processes also include.



Fig. 7. Tomorrow's, (2013).

### 3.10. Waste paper recycling

The old newspapers, waste newsprint, and other papers that litter streets, homes, offices, schools, etc. should be effectively and efficiently convert. The artist collects the waste papers and re-uses them to produce an art piece through a process called papier Mache. Cutout papers and newsprints are also used to make a piece called Collage.

### 3.11. Broken bottle recycling

The process of recycling could be employed into converting broken bottles and glasses into new ones. For example, glass plates, drinking glasses, car screen, decorative glass, flower vase are but a few products done by recycling of broken glasses. The ancient decorative material called Mozaic is one of the fascinating approaches to re-use the broken glasses. Broken colored glasses carefully and artistically mounted are to create decorative pieces on the wall. Today industrial mosaic tiles are available for users to show advancement in technology.

## 4. Conclusions

Waste management can be achieved through diverse processes by different platforms; Governmental, Organizational, Communal, and individuals. From the Harmful Waste Decree to the creation of the Federal Environmental Protection Agency (FEPA) in 1988, the Federal Government of Nigeria developed the national policy on the Environment to put into action the essence of establishing FEPA. FEPA empowered the States and Local Governments to develop their Environmental Protection Agencies, consistent with their terrain's demands, as a follow-up to the federal government's efforts. The 3 'Rs' reduce, re-use, and recycle a sine-quo-non for waste management. It could be approached industrially, mechanically, and or manually. The artists are integral to the process, carrying out the task in an amazing way. The Junk collection of "found" objects is a unique way of ensuring clean and safe environments. The end product, the Assemblage Composition, is the waste-to-wealth outcomes towards a safe and sustainable environment.

## Recommendation

The government of Nigeria and other various countries of the world should embrace, encourage, appreciate, patronize, and include the visual artists in the policymaking concerning environmental protection and public space and urban renewal planning, designing, redesigning, and constructions.



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