

Indigenous Fibre Art: Strategy For Sustainable Development

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Abstract

Indigenous fibre art refers to fibre art works that originate from a particular locality. It implies that the materials used for such works are sourced from the locality and techniques of production often times are peculiar to the environment, with products that satisfy the needs of that environment. Fibre art is an important indigenous activity that has improved the economy and social conditions of different communities where it is practiced in Nigeria. This is because the indigenous fibre artists sell their products and with the proceeds improve their standard of living. It is one of the oldest forms of art practised in various communities in Nigeria. Traditionally fibre art works are produced with fibres obtained from plants or animals. However the irresistible desire to acquire foreign products made with synthetic fibre brought a decline in the patronage of indigenous fibre art works. Consequently the rate of production also reduced. The study concludes that for the present generation to bequeath a healthy environment to the next generation indigenous fibre art need to be sustained.

Keywords: Fibre, eco – friendly, indigenous plant, indigenous fibre products

Introduction

Fibres have played important roles in human lives right from the time of the early man. Generally fibre could be described as a natural or synthetic filament that may be spun into yarn. Legal Encyclopedia (2012) defines fibre as unit of matter which is capable of being spun into a yarn or made into a fabric by bonding or interlacing in variety of methods. These include weaving, knitting, braiding, felting, twisting or webbing which is the basic structural element of textile

products. Fibres come in different forms: short fibres (chopped), continuous single fibres (monofilament) and untwisted bundles of continuous filament (yarn) (Ede et al 2015)

Fibres are generally classified into two: natural and man- made fibres. Natural fibres are fibres obtained from plant source; example of which are seed, stem and leaves of plants, such as cotton, flax, hemp, jute, ramie, sisal, coir and raffia. Natural fibres can also be obtained from animal sources, such as wool, hair from sheep, camel, mohair, cashmere as well as cow, horse, goat, rabbit and silk, among others.

The availability of these fibres may have therefore given rise to fibre art, an age long indigenous activity that has been practiced in Nigeria since before the advent of western education. The indigenous Nigerian communities were predominantly agrarian, and have used indigenous fibres to produce products that satisfy their different needs. For instance fibre from oil palm is used for making baskets used in carrying and storing agricultural produce and for making ropes. Pandanus palm fibre is used for the production of sleeping mats, while raffia palm fibre is used for the production of thatch and foot mats used for interior decoration, hats and bags. Fiji palm fibre is used for making hand fans, rattles used by traditional dancers, amongst others. This shows that indigenous fibre art played important roles in the economy of the indigenous Nigerian communities during the pre and post colonial era. Working with indigenous fibre had therefore empowered the indigenous fibre artist as well as their immediate communities economically.

However, over time, substitutes have emerged of most of these items, now mass produced with synthetic fibre. Because they were available in large quantity, and also cheap most people preferred the synthetic to the locally sourced ones. This has resulted in low patronage of items made with indigenous fibres and consequently the decline in their production. But dependence on synthetic fibre

is not without its consequences on the environment. They are not eco-friendly and are therefore harmful to the environment.

In 1987, World Commission on Environment and Sustainable Development believed sustainable development to be “development that meets the needs of the present without compromising the ability of the future generation to meet their own needs” The desired result is a state of the society where the natural resources and living conditions are managed in such a manner that it continues to meet human needs without undermining the integrity and stability of the natural system. It is therefore obvious that we can no longer overlook the long term impact of our activities on the environment. Israel (2018) sees development as a process that creates growth, progress, positive change or addition of physical, economic, environmental, social and demographic components. The question may be asked: are we progressing if our gains today become loss for the future generation? The answer is certainly no, because for any progress to be sustainable it has to be continued or maintained for a long time without negative consequences on the environment. It is therefore pertinent that indigenous fibre art is sustained because it uses materials and methods that are eco friendly. According to Diogu (2010) all we need today is to fine tune the local techniques of fibre processing to bring them in line with modern best practices. This will not only bring positive environmental change but transform the living standard of the indigenous artist as well as improve the country’s economy since the raw materials are sourced from the environment.

Some Indigenous Fibres

The indigenous fibre artists source their raw materials mostly from local plants. Plant fibres can be grouped into:

- a) High pliable fibres. These are fibres obtained from cotton, jute, hemp, pineapple, among others.
- b) Low pliable leaf fibres. These are fibres obtained from raffia palm leaves, which are of two species. The female raffia palm *nwunye*

ngwo that produces wine and the male raffia plant *okengwo* that is used for building and making thatch because it has longer leaves. Other fibres in this category are Date palm leaves fibre, Fiji fan palm fibre *ubulu*, pandanus or screw pine fibre which according to Nwangwu (2006) is also made up of two species; the upland pandanus palm *ute uno* and the specie that grows in swampy area known as *ute mmiri*. There are also the coconut palm fruit fibres, palm frond, among others. These fibres are processed for the production of functional and aesthetic fibre art works.



Plate 1 Fiji Fan Palm. Okeke (2014)



Plate 2: Pandanus / Screw Pine. Okeke (2014)

Processing fibre

It is pertinent to note that at a time the world is concerned about environmental degradation, indigenous fibre artist deploy techniques and methods that are eco-friendly in the processing of these fibres. The production of items with these fibres is dependent on artisanal craft made in a simpler and cheaper way which can be sustained. This is at variance with the mass standardized fast production methods of the non eco-friendly substitutes which have negative effect on the environment.

Processing of African oil palm fibre

Step 1. The palm frond is cut from the oil palm tree. The cutting of the palm frond does not affect the fruit yield of the palms because they actually need pruning from time to time for better yield. This is carried out by climbing the

palm tree with guide ropes made with fibres from the petiole of oil palm or raffia palm trunk locally called *Ete*. According Nwanneka Ike an indigenous fibre artist from Isseke in Ihiala local Government Area of Anambra State, the matured palm tree is preferred for this purpose because its fibres have higher tensile strength.

Step 2. The leaf sheaths are removed from the petiole or leaf stalk

Step 3. To get fibres that can be used for weaving, the upper part of the petiole or leaf stalk of the palm frond is sliced and peeled off. (See plate 3.) The fibres peeled off from the petiole are called *Ekwele* in Igbo It can be dyed with narula natural dye to enhance its aesthetic.

Step 4. The part of the petiole or leaf stalk that faces the ground can also be sliced off; fibre obtained from this part is known as *obala*. It is flexible but has less tensile strength than *ekwele*.



Plate 3: Processing of *ekwele* fibre from the leaf stalk of African oil palm.

Okeke (2014)

Fibre products that can be made with African oil palm fibres are as follows;

1. It is used for the weaving of baskets used for storing and transporting farm produce like tomatoes, garden eggs, potatoes, cucumbers, carrots, okra, and oranges, among others.
2. It is used for the weaving of a kind of basket with lid used for preserving and smoking fish or meat over the fire place. It is locally known as *Ngiga.*,
3. Hamper baskets used for packaging gift items during festive times like Christmas can also be made with African oil palm fibre. Mgbenwelu, (2009)
4. It is used for the production of wig stand used by hair stylists. The wig stand is also used as a mould in tying head gears.
5. African oil palm fibre is used for the production of *ugbai*, a big woven tray used for spreading and drying grains in the sun and *nyo* a type of sieve used for sieving garri.
6. Decorative flower hanger basket used in decorating homes, hotels and tourist centres. Mgbenwelu, (2009)



Plate 9: Sieve (*nyo*) used for processing grinded cassava before frying. Okeke (2014)



Plate10a: *Ugbai* flat basket used for spreading grains in the sun. Okeke (2014)



Plate 10b: Wig stand used by hair stylists. Okeke (2014)

Processing of *Raffia* palm leaves fibre locally called *Agwo*

Usually the first step is to cut out the leaf stalk from the truck of matured palm tree with a machet. This is carried out by climbing the palm trees with guide ropes.

Step 2 Then cut out the leave sheath or lamina which are pale green from the leaf stalk or petiole, are torn off in parallel lines to yield a long continuous fibre strands.

Step3 The leaf fibres are sun dried for two to three days. Its colour becomes cream after drying.

Step 4 The raffia strands can then be arranged according to their length and texture. Usually the raffia leaf fibre is soft, pliable strong but biodegradable. It absorbs dye readily too.

Step 5 If the leaf fibres need to be dyed, it will be tied into bundles with strands of the raffia fibres.

Step 6 The Narula fibre dye is then mixed in a plastic container with warm water and the fibre bundles immersed into the mixture and allowed to remain for 20minutes.

Steps 7 The fibres can then be removed from dye bath and spread or hung under a shade to dry. It is ready to be used for weaving after drying.

Processing of fibre from the trunk of Raffia palm *Akwala*

Fibres can also be obtained from the trunk of the raffia palm. Nwafor Chidi an indigenous fibre artist from Ndikelionwu in Orumba North local Government Area of Anambra State noted that it is usually carried out when the raffia palm is hewed. He also states that *Akwala* fibre is obtained from the tendrils formed around the trunk of the raffia palm, which is cut out. He went further to state that the extracted fibre is soaked in water for two to three days to make it pliable. The fibre from the trunk of raffia palm has high tensile strength hence it is used in making strong ropes. The fibre strands are collected and twisted across each other to form a rope (See plate 4.) Remarkably, ropes made from fibres obtained from the trunk of raffia palms are used in constructing guide ropes called *Ete* in Igbo used by palm wine tappers for climbing palm tree because of its remarkably high tensile strength. It can support the weight of an adult male while climbing, without snapping. The fibres are used in tying yams to stalk in the ban and also for constructing a strong rectangular shaped basket *Ukpa* used for carrying heavy farm produce like yams, cassava tubers, and palm fruit bunch among others.



Plate 4: Twisting of raffia trunk fibres to form rope. Okeke (2014)

Other Uses of Raffia Palm leave fibre

The indigenous fibre artist uses raffia palm leaves fibre to produce a number of items. These may be household items for everyday use, or items for social functions. Under household or domestic items are raffia bags, raffia hats and foot mats. They also produce table mats used on dining tables. For social activities, the fibre artist produces costumes for masquerades and masking tradition.

Apart from these items as mentioned, the fibres are also used for tying designs in tie –dyeing processes to resist the absorption of dye. Hunters also use raffia leave fibres to make blinds for camouflage. Raffia palm leave fibres can also be used as fillers in packaging as in the ceramics and glass making industries.

Processing of Fiji fan palm leaves for weaving of hand fan

According to Shedrack Okeke, an indigenous fibre artist, interviewed at Nibo in Awka South local Government Area of Anambra State, the first step is to cut off the leaf stalk or petiole from the trunk of the fan palm. He noted that it is easier to cut the leaf stalk from the less matured palm, because the height of the more matured palm makes it difficult to access its leaf stalk.

Step 2: The leaf stalk is spread in the sun to dry for one or two days, this brings a change in colour of the leaves from green to beige.

Step 3: Before it will be used for weaving, little water is sprinkled on it to soften the leaves and prevent breakage. The fresh leave that is not dried usually spread out, but folds up after drying.

Step 4: The tip of the leave is trimmed off before the strands are separated one after the other. Using the stalk or petiole as the frame on which the fan is woven.

Step 5: Count off fifteen strands to the left and fifteen strands to the right, then turn the back and start weaving by interlacing the fibres.

Step 6: After weaving the back, turn it over, weave the right side edge first and complete with the left side.

Step 7: After weaving the selvage, use a craft knife or scissor to trim off excess strands at the edge and the hand fan is ready for use. (See plate 6)



Plate 5: Preliminary stage of weaving a hand fan with the leafstalk of Fiji fan palm.

Okeke (2014)



Plate 6: Weaver trimming off excess strands of fibre at the edge of the hand fan.

Okeke (2014)



Plate 7: Finished hand fan. Okeke (2014)

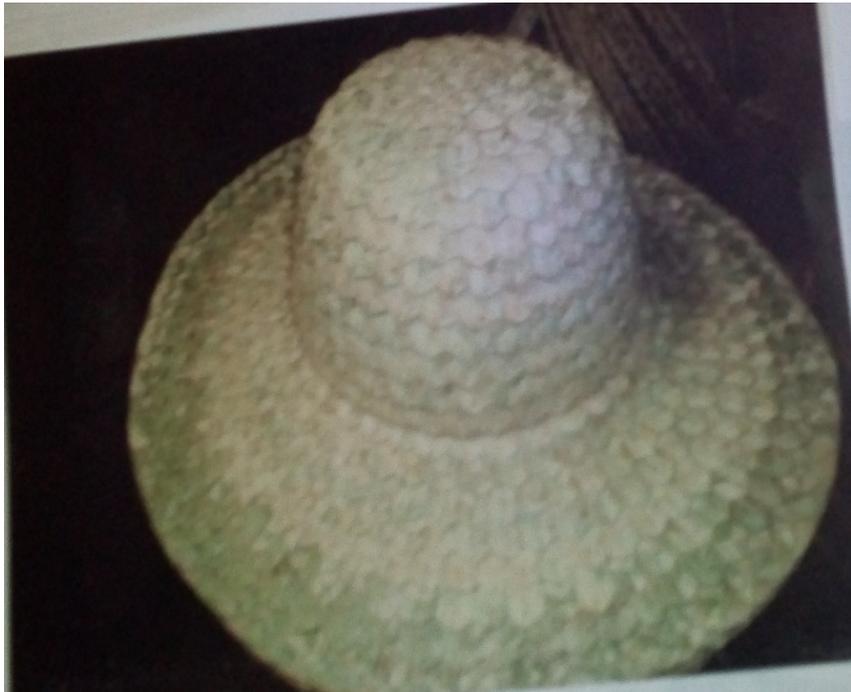


Plate 8: Hat made with Fiji fan palm fibre. Okeke 2014

Other Uses of Fiji fan palm leaf fibre

Apart from production of hand fan, Fiji palm leaf fibre can also be used for the production of leg rattle that is tied on the leg by traditional dancers. It is also used in producing hats used by farmers to protect themselves from the heat of the sun while working on their farms. (See plate 8.) Fiji fan palm leaves can be made into ropes; it can also be used for making baskets.

Processing of coconut palm leaf fibre

The petiole or leaf stalk is cut off the trunk of the coconut palm. The lamina or leaf sheath is then ripped off from the mid rib with craft knife. The mid ribs can be tied together and used as broom for sweeping. The lamina is spread in the sun to make it flexible. After that, it can be used for weaving baskets or window

blinds. Fibres can be obtained from the petiole or leaf stalk of the coconut palm which can also be used for weaving baskets.

Processing of fibre from coconut palm fruit husk (coir)

The fibrous material found between the hard internal shell and the outer coat of a coconut fruits is called coir. The individual fibre cells are narrow and hollow, with thick walls made of cellulose. They are pale when immature but when fully matured become hardened and yellow in colour. According to Hunt (2011) Coconut fibres are typically 10-30 centimeters (4-12 inches long) He states that there are two types of coir: brown and white. According to him, brown coir is obtained from fully ripened coconuts and it is usually thick, strong and has high abrasion resistance; that is, it cannot easily wear out. He noted that mature brown coir fibres contain lignin and less cellulose than such as flax and cotton, thus are stronger but less flexible. He states on the other hand that white coir is processed from unripe coconut and is usually white or light brown in colour. Ede et al (2015) in affirming this states that, there are two types of coconut fibres, white fibres that are obtained from immature coconuts and brown fibres obtained from matured coconuts. White coir is smoother and finer than brown coir but also weaker in flexibility.

Procedures of processing of brown coir

Step1: The fibrous layer (husk) of the matured coconut is separated from the shell manually by driving the fruit down onto a spike or using machete to dehusk it.

Step 2: The detached fibrous husk is soaked in basin of water for about 24hourst to soften the fibres.

Step 3: The fibres are then separated according to their length and texture. The long bristle fibres are separated from the shorter fibres underneath the skin of the nut. Hunt (2011) states that this process is known as “wet milling”

Step 4: The shorter fibres are sifted to remove dust and dirt

Step 5: It is then dried in the sun and packed into bales which are now ready for use.

Step 6: The longer bristle fibres are also washed in clean water, dried in the sun and tied into hanks ready for use. Bristle coir fibre can be dyed with Narula dye to enhance its aesthetics if so desired. This is done by immersing hanks of coir fibre into a container of Narula dye solution. It can be allowed to remain in the dye solution for up to an hour after which it is removed and dried in the sun. It is ready for use.

Products that can be made from coconut fibre

Coir fibres extracted from the husk of coconut is used in producing items such as mattresses, doormats or foot mats. Coir fibre foot mats prevents the tracking in of dirt into the house, because its shrubby bristle effectively removes mud from foot wears. Brown coir fibre is used for the production of bristle brushes for domestic and industrial application, while the white coir fibre is used for making fine brushes. Coir fibre provides a natural, non-toxic alternative for asbestos in the production of cement fiberboard. Myers (2013) Dehusked coconut fibre is used in checking erosion in sites of gully erosion. According to Hunt (2011) it can also be used as fillers for packaging as well as for constructing reinforced composites. He notes that coir can be used as a substrate to grow mushrooms.

Processing of the pandanus palm fibre

The leaves are cut from the trunk and the thorns at the edges removed with craft knife. The leaf fibre is then smoothed by rolling and pulling on a device made of bamboo known as *Obala*. Nwangwu (2006) It is later spread in the sun to dry, for two to three days or hung on a tree branch. When it changes colour from pale green to cream colour it is removed from the sun and it is ready to accept dye. Dyeing pandanus fibre enhances its aesthetic quality.

Dyeing Procedures

Step 1: The pandanus fibre is folded into a bale, tied loosely to hold the fold in place with a small strand of pandanus fibre.

Step 2: Narula dye is dissolved in cold water in a plastic container and poured into boiled water enough to submerge the quantity of pandanus fibres to be dyed.

Step 3: The bale of the pandanus fibre is put into the dye solution and left to stay overnight. It is then removed and spread in the sun to dry. It is then ready to be used for weaving. Pandanu fibre can also be dyed with other natural dyes sourced from bark of trees such as *uhie* and the pods of *uli* plant. Pandanus palm fibre is mostly used for weaving mats for sleeping or for other purposes such as bags or for blinds.

Economic and Environmental Benefits of using Indigenous Fibre

The indigenous fibre artworks give huge economic benefit to the indigenous fibre artists whose source of income improves with proceeds from the sale of the products. The economic benefits also extend to their immediate communities. For instance Ihiala a community in Anambra state where basket weaving is extensively practiced is host to customers from Northern Nigeria who come in their numbers with trailer to buy baskets that they use for transporting their farm produce. The host community benefits from the revenue generated through this business, likewise the government of Anambra state. Corroborating this Mgbenwelu, (2009) states that basket weaving serves as a source of revenue generation and also help in reducing unemployment in the society. The farmers that use the end product also benefit because it enables them to preserve their farm produce and get a good market price for them. On the other hand the indigenous fibre artist's economic power increases with sale of their art works. The proceeds of these sales are distributed among family members as well as other members of the communities through the consumer goods they purchase with their revenue.

This brings an increase in the level and quality of life of the members of the community. Lots of entrepreneurial potentials abound in the use of indigenous

fibre because the raw materials are sourced from within the communities. It is worthy to note that most of these raw materials can be obtained at little or no cost. Therefore working with indigenous fibre is not capital intensive, yet it has great financial benefits. For instance, it creates employment opportunities for the unemployed and also offers means of livelihood to people in related business such as retailers. Production and display of fibre artworks can also boost tourism which would in turn boost the income of the host community.

Apart from the economic benefits of using indigenous fibre there are also the environmental benefits. The world's economy depends largely on the ecosystem to thrive; hence it needs to be protected. The use of indigenous fibre as an alternative to synthetic fibre will help in reducing the environmental degradation brought about by human activity. This is because the methods and technique used for processing and producing these fibre art works are environmentally friendly and so with no harmful chemical addition. It is important to note that sourcing fibre from the plants does not affect their fruiting or their yielding because naturally these plants require pruning from time to time to enable increasing yield. The pruned leaves and fronds are not wasted but instead converted into useful fibre. Apart from this, indigenous fibre art works are renewable and can degrade on their own after sustained usage unlike products made with synthetic fibre that contributes to environmental pollution when discarded or disposed of by burning.

Conclusion

Although industrially manufactured products of synthetic fibres are commonly found in the market in recent times, indigenous fibre art works have remained aesthetically and functionally relevant even in today's modern world. Therefore it is important to stir up the interest of the people about the socio-economic benefits derivable from working with indigenous fibre. Their products are eco-friendly, and so preferable to synthetic fibre products because of the negative impact synthetics have on the environment.

There is the urgent need for diversification of Nigeria's economy as its dependence on oil alone has not been helpful, and really ill-advised. The country is endowed with abundant natural resource of which indigenous fibre is one. The most commonly used indigenous fibre such as African oil palm fibre , raffia palm fibre, coconut fibres among others can be obtained at little or no cost. Therefore it is important to harness these abundant natural resources for the production of eco- friendly items that will bring sustainable development. By using indigenous fibre for the production of aesthetic and functional products, prosperity can be achieved while protecting the environment at the same time. It has become obvious that dependence on oil alone can no longer sustain Nigeria's economy. Therefore it is time to encourage the indigenous fibre artist or manufactures that use indigenous fibre so that this natural resource will not be allowed to waste away. If the indigenous fibre artists are properly motivated, more people will be attracted to the profession. This will lead to competition and the introduction of innovations that will make their products more competitive for local consumption and for export. This has become urgent even now that there is a global call for greener environment. In order to make the products from indigenous fibres more acceptable, the techniques of processing the fibre can be improved upon to bring them in line with international best practices. Innovations can be introduced into indigenous fibre artworks that will bring added value their products both within and outside the country. For instance, the fibres can be dyed with organic dye that is eco-friendly to enhance the beauty of the products. A wide marketability of these products will also re awaken the interest of Nigerian youths in working with indigenous fibre. This will bring about reduction in the unemployed population and increase the country's foreign exchange earnings. The art of working with indigenous fibre will bring sustained development if it is fully harnessed.

REFERENCE

- Alahira, J. (2018) Coconut (General) - Agriculture Nigeria www.agriculturenigeria.com>production
- Dennis, V.J (1998) NON- WOOD FOREST PRODUCTS 10 Tropical Palms FOOD AND AGRICULTURE ORGANIZATION OF UNITED NATIONS Rome, 1998
- Diogu, G.O. (2011) "Development and Growth of Fibre Art in Nigeria", www.academicexcellence.society.com/d2011
- Ede, A.N. and Agbede, J.O. (2015) Use of Coconut Husk Fibre for Improved Compressive and Flexural strength of Concrete International journal of Scientific & Engineering Research, Volume 6, Issue 2, February -2015 ISSN 2229-5518 <http://www.ijser.org>
- Eze, M.I. (1998) "The problem and Prospects of Indigenous Fibres in the Production of Art works", Unpublished BA Thesis Nnamdi Azikiwe University Awka.
- Hallie, F. (1997) "The longest Leaf In Palms" Principles Vol.21:18
- Harmoni J.K (2010) The advantages of Raffia Palm Tree Feb.5 2010 harmonikreasi.com/2010
- Held, S.E. (1978) Weaving A Hand Book Of The Fibre Arts, New York: Holt, Rinehart and Winston.
- Hunt, R. (2011) "Reusing Media: Coco Coir" Urban Garden Magazine Vol.(14)
- Israel, S. (2018) What is Development? Pears Foundation 11th march 2018 www.sid-israel.org>Development-Issue
- Mgbenwelu, P.I. (2009) Basket Industry in Ihiala Local Government Area, Anambra State, Nigeria. MA Thesis, University of Nigeria Nsukka 2009.
- Meyer, C. (2013) "Uses of Coconut Fiber" www.crushers-production.com/cr/images
- Nwangwu, E.C. (2006) Mat Weaving In Uturu In Isukwuato LGA of Abia State. Unpublished BA Thesis, Nnamdi Azikiwe University Awka.
- Nwabana, J. (2009) "One Woman's Mission To Save Nigeria Palm" www.Vanguardngr.com/researcher.
- Obahiagbon F.I (2010) A review of the origin, morphology, cultivation, economic products, health and physiological implications of Raphia. Palm African journal of Food Science, Vol. 3 (13) pg 447-453 Dec.2009 <http://www.acadjourn.org>iajfs

Okeke Ngozi K. (2014) Fibre Art Among The Igbo of Anambra : A Search For New Indigenous Fibre. Unpublished MFA Thesis, Nnamdi Azikiwe University Awka.

Palm and Palm Societies, [www.palmpedia.net/./](http://www.palmpedia.net/) Elaeis-guineensis.Retrieved 3rd march 2014.