

## **The Need for Sustainability of Depleting Clay Resources in Calabar**

**Clement Emeka Akpang**

School of Art and Design, University of Bedfordshire LU1 3JU

Email: [clementakpang@yahoo.com](mailto:clementakpang@yahoo.com)

**Elizabeth Elemi Esege**

Department of Visual Arts and Technology,  
Cross River University of Technology CRUTECH

Corresponding Author: **Clement Emeka Akpang**

### **Abstract**

Clay is an invaluable natural resource, vital in almost all works of life. Its uses range from functional, decorative articles, to electrical/electronic appliances. Calabar is endowed with abundant clay types in large deposits at Adiabor. However, these clay resources are rapidly depleting. This study was tailored to investigate the causes of such clay overexploitation, and its adverse implications on the state. Two main factors responsible for clay wastage were identified. The first being infrastructural development during TINAPA construction, and secondly, private building and farming. This research establishes that, if not checked, this rapid clay depletion will adversely affect the ceramic unit at the Cross River University of Technology and jeopardize contemporary ceramic practice. This study further opined that, the onus of curtailing this depletion, lies with the government. Recommending that, government should enact policies that control clay exploitation, and encourage ceramic production by establishing a ceramic industry in the state.

*Keywords:* Sustainability, Clay, Resources, Calabar, Depleting, Adiabor, TINAPA

### **1.0 Introduction**

Countries are endowed with a variety of natural resources and minerals which to a large extent constitutes the bulk of a nation's wealth. Such natural resources can be regenerative resources like

land etc., or non-renewable resources such as oil, natural gas, minerals etc. (Ding 2009). The occurrence of these resources have for a long while been the defining semiotic code in reference to nations where there are found. For such nations, these natural resources become valuable national assets and an indication of their riches (Highly et al 2004, Akhtar 2005). This is because, when these natural resources and minerals are properly exploited and utilized, it will create wealth through industrialization and contribute to the socio-economic structure and development of any country (Akhtar 2005).

Clay is one of such rich natural resources which if endowed with as a nation, could contribute immensely to socio-economic development. Clay has been defined as, “an earth that forms a coherent, sticky mass when mixed with water; when wet, this mass is easily mouldable, but if dried it becomes hard and brittle and retains its shape” (Worrall 1986, p.1). Clay has played a vital role right from prehistory as chief raw material for a variety of purposes. On the significance of clay as a signifier of advancement even during prehistoric times, Wagner et al have argued that, working with clay and developing pottery techniques was a key achievement of prehistoric man and a signifier of ancient civilization (Wagner et al 1998). The importance of this natural resource has served various generations and civilisation in the creation of different human functional needs and appliances. Clay is not just important in art, and architecture, but contributes immensely even in petroleum industries. According to Crockford, clay is used in the petroleum industry for decolouring oils produced in petroleum industries and for treating vegetable and animal oils (Crockford 1947, p. 15)

Clay exploitation has proven to contribute heavily to world economy and for some countries, clay products have become their signature export goods which generates huge income for their treasury. A recent study by the Associated Chambers of Commerce and Industry of India (ASSOCHAM), shows the increased economic importance of ceramic and clay production in world economy and how nations which specialised in ceramics productions have made a fortune from such effective utilization of clay resources. The report opines that, the total world production of ceramics stands at over 9,500 million squares meter (sq. m. Mill.) with China being lead producer (4,200 Sq. m. Mill.) followed by Brazil (753 Sq. m. Mill.) and India (550 Sq. m. Mill.), and that, "With a total import value worth way over \$497 million, China leads the countries importing ceramic products into India alone not to talk of their import to other countries of the world (ASSOCHAM 2013). This is just to reiterate the income generation per year from the effective exploitation of clay by a nation and why it is necessary that such resources be protected for sustainability.

Calabar the capital of Cross River State Nigeria, is endowed with some of the finest of clay resources in large deposit which has often served as raw materials for local potters and freelance traditional artists. The clay resources in Calabar come in two distinct types; Dark grey and Brown colours. This large clay deposits are scattered around Adiator community in the Ikot Efanga area of Calabar. Unfortunately, these clay deposits have come under intense threat occasioned by human activities which as a result is leading to rapid depletion. This eminent scarcity of clay as a result of its continues depletion over the past two decades, is generating adverse multiplier effect by ruining local pottery industries and triggering ripple muddle on contemporary ceramic practices.

This study is tailored towards investigating the level of clay depletion in Calabar and the various factors responsible for the rapid reduction in clay resources in the state. Furthermore, this study will ascertain the various ways in which this continues clay exploitation, affects contemporary society and the ceramic industry particularly. At the concluding phase of this investigation, recommendations will be made on how clay resources in Calabar and its environs can be preserved, stressing the prime role government has to play in ensuring clay sustainability.

### **1.1 Causes of Clay Depletion in Calabar**

As aforementioned, the major clay deposit in Calabar are those located at Adiator community and these clay deposits have come under intense threat over the past two decades. From the late 1980s various human factors have contributed to the depletion of these clay resources which at the moment is near extinction. The major cause of clay wastage has been infrastructural development which came with the emergence of the 4<sup>th</sup> republic in 1999. Adiator is the region where the TINAPA Business Resort is located. In the cause of developing this monumental infrastructural enterprise, various road networks were constructed leading to the resort which encompasses gigantic buildings, warehouses, parks and theatres that all give the TINAPA its identity. However, these roads cut across clay deposits while some of these infrastructures now sit on sites that were formerly major clay deposits. This infrastructural developmental attainment has invariably on the downside, led to massive destruction of clay resources and deposits in the state capital. In the same light, privatebuilding projects around the Adiator community as well as farming activities contribute to the state of clay exploitation in the area adding to the adverse effect on clay deposits, which the colossal TINAPA project occasioned.

These cataclysmic activities have impacted adversely on clay in Calabar as such overexploitation and wastage has led to continues dwindling in quantity and quality of clay available to those who work with it. Local pottery industries, as well as freelance artists are affected by such ugly trends which is even beginning to affect the ceramic unit of the Visual Arts department at the state owned Cross River University of Technology (CRUTECH), and seemingly, squashing any chances of a ceramic industry in the state. It is more worrisome to note that, though faced with such rapid depletion, there is complete neglect from all quotas in insuring the protection of clay resources in the state and other parts of Nigeria.

## **1.2 Reasons for Checking the Rate of Clay Depletion and Preservation of Clay Resources in Calabar**

Clay is very important and functions prominently in almost every aspect of human endeavour. Its uses cut across household utensils, interior and exterior decorations to electrical / electronic appliances. This shows that, its use potentials are boundless. There is therefore urgent need to check the rapid depletion and wastage of clay resources in Calabar. Because, its sustainability will ensure the following gains in the state:

### **a) Ensure Continuous Supply of Clay for Ceramic production**

As mentioned above, the current rate of clay depletion, is leading to a condition of scarcity in the state, which in turn affects local pottery industries and freelance artists by reducing their productivity. What this problematic entails is, reduced yearly turnout of pottery products as well as reduced income for such freelance artists and local potters who cannot afford to import clay from other states or regions as raw materials for the practice. However, checking clay exploitation in Calabar will mean, protecting these resources and thus, ensuring continues clay availability. Such availability will go a long way in boosting local pottery industries in villages around the outskirts of the state capital and promote freelance artistry. Most importantly, such a protective strategy will enable availability of raw materials for the Ceramic unit of the Visual Arts department at (CRUTECH), which since its establishment in 2003 has engaged rigorously in the production of fine quality ceramic products in the state. Howbeit, if clay wastage is not checked, the clay scarcity the department is already experiencing, will increase and get to a point where the ceramic unit will be grounded as a result of clay lack or on the other hand, will entail that, for the ceramic unit to

continue training and production in such condition of scarcity, the University will incur huge expenses to import clay from other part of the country.

#### **b) Wealth and Job Creation**

If clay is preserved to ensure its sustainability, it will entail the availability of more raw materials for ceramic production. If this becomes the case, that is clay wastage curtailed, it will provide the right avenue for local pottery industries to up their productivity thereby, maximising profit in their trade. Such profits will be attained, as a result of cheap and readily available naturally occurring raw materials for these potters to use without having to invest any capital in buying clay from other parts of the state or country. If this happens, this local potters will not be out of work neither will their staff in the distribution chain of their products. If their production increases, they are kept gainfully employed, and can employ or engage the services of more workers which will in turn impact gainfully in their individual income, the economy of their communities and by implication the state large. The sustainability of clay will further have greater impacts in contemporary society by creating jobs for the graduates of the Visual Arts department who specialised in ceramics as they will have raw materials readily available to establish and continue their ceramic practices.

#### **c) Promote Ceramic and 3D Training**

Increased number of primary and secondary schools in Calabar, now offer fine art subject for its pupils and students. This subject equally involves training them in the making of 3D forms and designs. Clay is the most commonly (naturally) occurring material used for such training. Checking the current rate of clay depletion in Calabar, will enable the continuation of art training in schools involved in three dimensional design tuition, it will further enable the continuation of ceramic and sculptural training at the Cross River University of Technology. Without clay resources, such trainings will be brought to abrupt end.

#### **d) Contribute to State Income and Economic Development**

Fadahunsi has opined that, in the process of national development, only nations who make effective use of their natural resources attain high level developments (Fadahunsi 1986). This underpins the reasons for this urgent call for the control of depleting clay resources in Calabar. If clay like other natural resources Nigeria is endowed with are protected from wastage and extinction, it would contribute immensely to the economic and financial development of the state. This is because, clay

like other natural resources “play central roles in promoting sustainable development, and long term financial enrichment of a nation” (De Beers 2012, Grynspan 2012). If clay resources are sustained in Calabar, it will enable increased pottery production for local and national consumption as well as the production of sculptural ceramic products for exportation as tourism art forms. This in turn will considerably generate revenue for the state and if this recommendation is followed nationwide, ceramic production will contribute to the financial and economic development and sustainability of Nigeria. China for instance has shown how such effective usage of clay in ceramic production can create jobs and wealth as the marketing of clay products has for long time constituted about 70% of her (China’s) annual national income (Brett 1970).

### **1.3 Recommendations: Strategies to Curtail Clay Exploitation in Calabar**

Having stated the problematic of clay wastage and depletion in Calabar and its effects on local pottery industries and contemporary ceramic practices, this study opines that for clay resources to be protected and sustained, allowing for its maximum usage to generate income, job opportunities and contribute to the economic development of the state and Nigeria at large, the following actions need be taken post-haste:

- a) Government has an overarching role to play in controlling and ensuring the sustainability of clay resources in Calabar. Government should enact policies which will prohibit clay wastage and overexploitation by private individuals who build on clay deposits in Calabar and its environs by either providing them with alternative spaces or excavating and storing up clay recovered from such lands. Furthermore, where government constructs roads through areas of clay deposits, it will be ideal for a clay warehouse to be built to house such displaced clay, from whence local pottery industries and contemporary ceramic practitioners can tap from as a resource bank for their raw materials. Such has been the steps taken by most developing countries who, knowing the importance of natural resources to their overall national economic development, have enacted laws which control the exploitation of their natural resources in order to provide for its sustainability. Clay deposits in Calabar will benefit from such government regulations, which is the most efficient way of enabling its sustainability and avoidance of high level scarcity.
- b) Government should also help encourage increased ceramic production in the state to make maximum use of clay resources which is also a measure of curtailing wastage and exploitation. Firstly, local pottery industry should be encouraged by government through SMSE government empowerment funding to enable continuous production of indigenous pottery products, and secondly, government should think of establishing a ceramic industry

in the state or equipping the Ceramic unit of the visual arts department for full industrial productivity. This way, clay resources will be properly and maximally used, it will raise income for the state and equally create job opportunities for the youths.

- c) This third recommendation is not just for Cross River State alone but for Nigerian as a whole. Government should encourage consumption of indigenous ceramic products and goods. One major factor affecting Nigerian economy is the overarching reliance, consumption and preference for foreign goods. What this trend has led to over the past 6 decades, is the destruction of indigenous local industries and businesses. The ceramic industry faces this ordeal in Nigeria which has virtually led to total neglect of indigenous pottery and ceramic products in favour of those from the West especially China. If government encourages the use of indigenous products, it will enable the maximal use of clay resources in Nigeria to boost individual and national income, this way wastage and exploitation of clay will be curtailed.

#### **1.4 Conclusion**

The effective exploitation of a nation's natural resources can lead to income generation, economic empowerment and long term sustainable development for that country. While Nigeria is endowed with many of such natural resources as oil, natural gas etc., clay also occurs in abundance in many parts of this nation. In cross River State Calabar to be precise, this study has identified that, the largest and finest of clay deposits are located in Adiahor community, and that such clay deposits are currently under intense threat. Human activities and infrastructural development have been identified to be the main sources of threat to clay resources in the state which has led to rapid depletion in quantity. This study has recommended that for this adverse trend to be curtailed, the onus lies on the government to take cogent and swift steps in sustaining such resources. To achieve such task, this research has opined that, government should put legislation in place to prohibit wastage and wrongful exploitation of clay in the state, or build warehouses to store up displaced clay where it becomes very necessary that structures be built on clay deposits. Furthermore, government should encourage continues clay production by empowering local pottery industry and establishing a ceramic industry in the state. If this measures are not taken into cognisance and acted upon, with the fast rate of clay depletion in the state, it will lead to scarcity which will in turn impact adversely on the ceramic unit in the department of Visual Arts and Technology in (CRUTECH), and will affect 3D training in secondary and primary schools in the state capital. Yifan Ding has observed that, overexploitation and adverse destruction of natural resources by developing countries often leads to economic disaster and even destruction of the environment

(Ding 2009). Against this backdrop, this study was focused to bring to limelight the current depleting state of clay in Calabar and stating how if such is not abated, could lead to even greater adverse consequences on contemporary ceramic production. Summarily, controlling and sustaining clay resources in Calabar will lead to financial and economic development but, if depletion is not checked, even the environment would be put at colossal risk.

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