

Local Economy and Health: Potatoes Production and Its Implication for Rural Repopulation in Agadama, Delta State, Nigeria

Onyima Blessing Nonye

Abstract

Agadama is an Urhobo language-speaking agrarian community in Uwheru clan, Ughelli-North LGA, Delta state, Nigeria which specializes in production of potatoes and other crops in commercial quantity. Rather than experiencing rural depopulation, Agadama community experiences seasonal rural repopulation due to its conscious concentration in the production of commercial potatoes and the magnitude of this activity conspicuously catches the attention of a new entrant (stranger/visitor) into the society. This is a qualitative ethnographic study targeted at exploring the socio-economic potentials and the health of a potato-producing community in the oil-rich Niger-Delta area, south-south Nigeria. The study employed participant observation, key informant interview, and in-depth interview as data collection methods with content analysis involving 'thick description' anchored on the location theory. The study revealed that, the commercialization of potatoes makes Agadama a melting pot of culture and has potentials of making the community a centre for great economic opportunities, ensuring improved standard of living, healthy population and ethnic integration, if properly harnessed. The study advocates a ruralization of relevant industries that could process surplus agricultural products, provide storage and health facilities which have implication for rural repopulation.

Key words: Rural repopulation, ethnic integration, agricultural production, depopulation, health, local economy.

Introduction

The gradual but steady depopulation of rural communities in Nigeria is best assessed from its fatalistic consequences replete in urban areas like increased unemployment, overpopulation of city centres, hyper-skyrocketing crimes against humanity such as kidnapping, theft, and armed robbery, human trafficking, prostitution, pick-pocketing, among others. On the other hand, the rural areas in Nigeria have a share in the fatalism of depopulation which includes, rupture of existing primordial social networks, existence of a disproportionate population filled with the aged, rape of aged women by youngsters at night, loss of able bodied men and women for agricultural activities. Pinilla *et al* (2008) argue:

Depopulation may be viewed as a specific case of a more general phenomenon, which was the rural exodus caused by

modern economic growth. During the period of industrialization and the subsequent economic growth, cities expanded rapidly, concentrating the location first of industry and then services. This expansion required the recruitment of a large labor force drawn mainly from rural areas, where the increasing substitution of farm machinery for muscle power further encouraged significant rural-to-urban migration (2).

Contrary to the above, what is obtainable in Agadama is urban-rural migration which might be termed repopulation unlike the over-utilized cliché, rural-urban migration. Repopulation in this study implies the conscious mass return of able-bodied population to the rural areas for the purpose of engaging in agrarian activities. Several reasons are attributable for this rural repopulation in Nigeria, like graduate unemployment, inability to secure admission to Nigerian universities, frustrations of city life which make residents to adopt the culture of poverty in cities, recent economic crunch/recession which resulted in the sack of workers in banks and local industries, retirement, and other factors. It is pertinent to point out that rural repopulation is not a common phenomenon in Nigeria. Thus, this accentuates with Pinilla and others (2008:3) that, “until recent times, interesting signs of repopulation may be found, which are associated with a range of causes”. It becomes glaring from numerous studies that repopulation (urban to rural migration) has lots of socio-economic outcomes in places where this phenomenon has been observed. Thus, Pinilla and others (2008:19), reports that in recent decades however, the new phenomenon of urban-to-rural migration has emerged in many countries, affecting the rural environment together with other developments such as changes in the economic functionality of the territory. The case of Agadama community in the Urhobo area of Delta State, Nigeria, is seasonal repopulation where natives return home in large numbers during planting season in order to engage in their traditional local economy (to plant/cultivate potatoes in commercial quantity).

Local economy, therefore, refers to an indigenous population system of production, distribution and consumption of resources (Kottak 2004). Ethnographic reports reveal that the interplay between economy and environment is one of the bases for health concerns among communities (Dao and Brieger 1995; Oyadoke *et al.* 2004; McElroy, and Townsend, 1989). It is therefore, obvious that all communities despite their levels of developments have evolved their common and preferred economic ways of life, shared and accepted among members of the group (Ajala 2009:72). This shared way of life triggers mass return and attracts other ethnic

groups to the community. The reasons for this mass return to Agadama village is often economic inclined, like improvement of personal standard of living and growth, but may not be attributed to commonly rehearsed reasons of unemployment, collapse of business ventures, and the like. The Agadama environment, if complemented with adequate access to quality health care facilities, is conducive for their preferred local economy (agricultural production). According to Embers (2007:230) health is a mirror to culture. A healthy environment is thus, equal to a healthy agrarian population for optimum production output, all things being equal. But observations and life experiences show that all things are never equal as a state of complete health may not be attainable. Hence, Hans and others (2003:4 citing WHO, 1978, WHO, 2004) in their definition of health, capture the above position, “health is therefore a state of complete physical, psychological, biological, social and cultural balance and not a mere absence of diseases”. If the above definition is accepted, then the attainment of a state of complete health is a utopia and therefore not attainable in most rural communities in Nigeria. The attainment of complete health in rural communities is dependent on several factors among which are: location/proximity of health facilities and the ease at which health care services are accessed by those who need them in terms of ‘availability, accessibility, and affordability’ (Massoud, 2008: 15-24). Consequently, the researcher sought to investigate the origin of Agadama community in relation to their primary occupation, in order to establish what category of the population is involved in this primary occupation viz-a-viz the health facilities that are available in Agadama and their accessibility and affordability to the community. This will in turn help determine how economically viable potatoe cultivation is for the people.

Methods and Theoretical Discussions

This qualitative ethnographic study employed participant observation, key informant interview (KII) and in-depth interview (IDI) as data collection methods with content analysis involving ‘thick description’ anchored on the location theory. The study was based in Ughelli North Local Government Area (LGA) of Delta State. Ughelli North is one of the twenty-five (25) local government areas (LGAs) in Delta state. The state has about 2.93% (4,098,391) of Nigeria’s over 140 million 2006 population census figures out of which Ughelli North has about 320,687 inhabitants (FRN Official Gazette 2009: B26).

Specifically, respondents were randomly selected and inter-subjectively interviewed; IDI consisted of open-ended questions covering both the research questions and objectives. KII

involved mainly people who are considered to be knowledgeable or aware of happenings (18 years and above) in the community and how its affairs are managed, like community heads/leaders, among others. The researcher employed participant observation by living with the natives and immersing oneself daily in the activities in Agadama community for about one year, August 2008 to September 2009, and has been embarking on series of verification visits after the field work, the last of which took place in December 2012. Huge qualitative data was generated; content analysis involved routine interaction with the data, which entails transcription and translation of data collected with electronic devices, from Urhobo language to English language. This was subsequently followed with sorting of data according to research objectives to enable report writing and some ethnographic extrapolations to be made.

The location theory was employed as an explanatory framework for this study as it emphasizes how economic factors affect the availability, accessibility, affordability and utilization of public facilities. The central point of the theory is the location of welfare services in areas where aggregate transportation cost is minimized (Asakitikpi 2001:42). The theory focuses on the spatial distribution of economic activities with emphasis on transfer costs, and this refers to both transport and inconveniences of transporting one's self to and from the place where such services are rendered/accessed.

FINDINGS

Origin and Primary Occupation of Agadama Community

Agadama is one of the numerous coastal communities in Ughelli-North LGA of Delta state, Nigeria. Historically, Agadama is associated with a hunter known as Idama, who migrated from Uwheru clan ('main town' as it is often called by the Agadama natives) through a bush path/track. Oral tradition (prehistory) has it that the main town Uwheru gave birth to five children, with the last being a female known as Ohoro, namely:

- (i) Erovie:- Uhwovioro, Uruvwrigbo, Odja
- (ii) Ehere:- main town, Agadama, Okugbe-Owarovwo, Ogode, Uvwriche, Ophororo
- (iii) Urede:-main town, Oreba, Avwon
- (iv) Egbo:-Oro-ohoror
- (v) Ohoro

Kingship formerly resides with the first child 'Erovie' but with enlightenment and education, other sub-clans have begun to agitate, and as a result, leadership of Uwheru clan is now rotated among five sub-clans that make up the main town/clan.

The migrating hunter (Idama) located a space (Agadama) within a forest which was favourable to hunting, fishing and farming occupation than where he came from (Uwheru) and decided to reside there. Idama then invited his brothers and friends to his new-found space and they lived peacefully concentrating on fishing, hunting and farming. It was other people who used the track ('oga') found by Idama that named the space after the founding father as 'Oga Idama' meaning 'track of Idama'. From constant usage, the community derived its name as Agadama. The name Agadama is often mistaken for an ijaw (Izon) town in Bayelsa state known as 'Agudama', this mistaken identity was advantageous to Agadama people for a while, as they secured employment in the Bayelsa state civil service as teachers, police and military personnel; but when it was discovered, the opportunity was blocked (Personal communication, December, 2012). This reflects that and ethnicity plays a great role in job placement or employment opportunities even for the minutest job in Nigeria.

The Agadama community is divided into two quarters (a) Uruvworo and (b) Ururhere. Each of the quarters is subdivided into three (3) streets (as they are locally called among the natives, but may not be same in English meaning of streets). The first quarter (Uruvworo) is made up of Oteka, Ogbijo and Ogbewe, and the second quarter includes Enyerukoni, Etovie and Ogbese. The two quarters in the community often competed during festivals and ceremonies through wrestling matches, etc. (Pers. com. 30/12/2012).

The indigenes of Agadama are predominantly farmers. This is complemented with fishing and hunting. Agadama community numbers about 5000 persons, 70 percent of whom are farmers, 20 percent are learned graduates from Nigerian universities, mostly civil servants, who combine their jobs with farming activities, while 10 percent are trained artisans, shop owners, cyclist/bike riders, and related engagements. The community market day takes place once in every eight (8) days, where farm produce like fresh fish, okra, groundnuts, pepper and potatoes are sold. There is also a special market known as 'Ode market' which opens only during the harvest of potatoes in commercial quantities, where people from various parts of Nigeria come to buy potatoes with trucks, pick-up vans, and buses. The people are so engrossed in the production

of potatoes such that schools and churches record low attendance, especially during planting and harvesting seasons as well as on market days.

Community Labour-Supply and Ethnic Integration in Agadama Community

Labour-supply is an essential aspect of most agrarian communities and its importance to agriculture can therefore not be over emphasized. In a tropical environment like Agadama community, labour is required at all stages of potatoes production like clearing the land of grasses, (slash and burn) McElroy and Townsend, (1989:176-179), digging/tilling of heaps or mounds, weeding, harvesting, transportation, etc. Potatoes are propagated vegetatively (Pers. Com.28/12/2012) through nursery, thereafter the leafy strands are cut and planted on tilled soil surfaces like mounds and ridges. These mounds are not dug/tilled by Agadama indigenes but by hired labourers or migrant farmers, mostly youths and men from other parts of Nigeria like the Tiv from Vandekia area of Benue State (alias, food basket of the nation), Young men from Taraba state, particularly the Jukun, people from Ogoja area in Cross-River state, and others came from the Nupe in Niger State and a few Igbo migrant workers who are attracted to the community mostly to tap latex/rubber. This seasonal repopulation makes the community a melting pot of cultures and encourage ethnic integration as the various linguistic groups interact in the evenings after returning from farm work; while indigenes use the opportunity to negotiate for the next days' labour-supply. A 'portion of land' (traditionally measured 10 feet (width) by 20 feet length) is tilled for one thousand eight hundred naira (₦1,800) or more, although the price for labour/tillage is not fixed, but depended on the degree of interaction between demand and supply of labour. This is because these labourers are not permanently resident in Agadama community as they are seasonal migrant farm workers/labourers who come from their various states of origin to the community as suppliers of labour for potatoes and other agricultural crop production. In one of the interview sessions (pers. Com. 28/12/12), some of the migrant farm labourers, the Tiv in particular, revealed that:

'they are attracted to the community because they want to earn money to pay school fees and meet other needs; as most of them are secondary school students in Benue state, only a few of them are married men who are either poor, orphans, motherless/fatherless and as such helpless'.

An indigenous respondent observed that 'there is this belief that what attracts the Tiv boys to Agadama is that there is little money in circulation in Benue state compared to the oil-

rich Niger-Delta areas, Benue state only has surplus cheap food but no cash'(Pers. Com. 28/12/12). These farm labourers migrate to the community from November/December and return in February (as schools resume from Christmas vacation) to their states of origin. A few indigenes who cannot afford the prices charged by the labourers use their sons/husbands who are often reluctant to do so, while the women/wives plant nursery, weed grasses, and tend the crops to maturity. Migrant labourers were formerly used for weeding but indigenes complain that it is often roughly done and as such weeding is now left for the women. The above reason accentuates the assertion by Onwuejeogwu, (1992:24) that "in small-scale societies, women are the controllers of agriculture. The husband does the hard farm work of preparing the the land for cultivation and the wife does the planting and weeding. The farm produce is controlled by her, and the husband responsible for the sales, especially externally. The woman has to obtain all she wants and sell everything through her husband. Women are farmers because of the religious beliefs about fertility: since women are fertile they should do the farm work. Women are therefore looked upon with high esteem in Africa". In recent times however, potatoes farmers in Agadama community are gradually adopting the use of chemicals for grass/weed eradication, thereby relieving women of this task. During harvest, household members carry bags of potatoes on their heads to riverbanks where canoe paddlers (both male/female) are paid to transport across to track-roads leading to the residential parts of the community. From these points, the harvests are taken with vehicles to 'ode market' for sale to buyers who come from Port-harcourt, Warri, Asaba, Owerri, Ughelli and urban centres in nearby Bayelsa state.

Camping Agriculture/Farming in Agadama

The researcher observed that Agadama community potatoes production revolves around a rare cultural practice that can best be described as 'camp agriculture/farming'. The indigenous potatoes farmers live in their farms from January to May as they take with them beddings, cooking utensils and clothes to make their periods of stay comfortable. In most of these farms, they construct makeshift houses/shelters with bamboo, raffia palms, wood, mud and sometimes iron roofing sheets; the shelters are about one metre above the ground; this is because the environment is always water-logged in the coastal-flooded terrain almost all year round (water-level is high during the rains but low during the dry seasons). Some other farmers shelter in the open under trees. Many factors inform the farmers' choice of living in their farms, like the issue

of time and cash management. Agadama people believe that ‘camp living/farming’ helps to save time, transport cost/fares to and from their farms. This notwithstanding, camp living is not without disadvantages such as exposure to lots of health hazards like cold/pneumonia, malaria, insect and snakes bites, attacks by dangerous animals/humans (Fulani cattle herders continuously attack these farmers, (Idowu, 2012). The prevalence of malaria due to mosquitoes is high because the swampy environment of the oil-rich Niger-Delta encourages water stagnation, water-logging, flooding and almost all year round wet lands. The farmers do not go to camps with mosquitoes nets. This accounts for the rate of morbidity and mortality in Agadama community. Thus, Nora and Richard, (2006:1) assert that, today, environmental problems threaten not only natural ecological qualities but also humanity’s very existence. In spite of the above threats, the economic benefits from commercial sweet potatoes production, encourage the Agadama people/community to remain unrelenting and focused with their local economy-farming occupation.

Economic Viability and Development Due to Potatoes Production in Agadama

The benefits accruing from the cultivation of commercial potatoes in Agadama community are quite enormous, as there is a host of direct and indirect beneficiaries. Direct beneficiaries are the farmers, buyers and traders; while indirect beneficiaries include, the transporters, tillers, weed removers, harvesters, canoe paddlers, etc. Potato production, thus, contributes to the economic, social, cultural development and improvement of the general standard of living in the community. But, it is pertinent to state that, “not everybody profit equally in the economic growth of communities” (Pinilla *et al.* 2008). There are variations in the economic rewards accruing to an individual and this is dependent on whether one is a direct or indirect participant in the local economy.

The production of potatoes in commercial quantity is not only done in Agadama but has also been observed to be the major pre-occupation of most farming communities located within Uwheru clan in Ughelli-north LGA of the oil-rich Delta state. Other crops planted in commercial quantities are groundnuts, cassava, okra, pepper, rubber/latex plantations. Early clearing and planting of potatoes begin November to March, late clearing/planting starts from April/May. Both periods exhibit extreme weather conditions, but have positive and negative results: early planting of nursery potatoes strands/leafy stems is often affected by excessive heat from sunlight/rays; while late planting of potatoes is affected by excessive rainfall being a water-logged terrain/environment. Most respondents (90%) revealed that the best period of planting

potatoes is February-March as the climate is moderate at this period. The amount/price, and quantity and quality of harvested potatoes are dependent on climate, time of planting and fertility of the soil. The potatoes are uprooted/harvested at varying periods depending on when it was planted (early or late), and they come in different sizes (bigger sizes are often harvested from distant fertile farm lands, while smaller sizes are harvested from less fertile, over-used farmlands which are often closer to the residential areas); the smaller ones are locally described as ‘santa’, and the size of the potatoes determines the price. Early planters and harvesters are often very small in number because only a few can take the risk of tilling a hard soil under a scorching sun before the rains, thus early harvesters could sell a bag of potatoes as much as two thousand five hundred to three thousand naira (₦2500 - ₦3000). The more the potatoes supplied to the ‘ode potatoes market’, the lesser the price, thus, at surplus-peak period, the price of a bag of potatoes could drop as low as seven hundred to five hundred (₦700-₦500) naira per bag. An average potatoes cultivator in Agadama cultivates ten to twenty (10-20) ‘portions’ of land and harvests about 250 bags, while full-time cultivators could harvest more in a farming season/year; thus, making up to seven hundred and fifty thousand to a million (₦750,000-100,000,000)naira after harvest. This could run into millions of naira for an individual, where more than 20 portions of lands were are cultivated.



Figure 1: Some bags of potatoes ready for sale at Agadama market.

Nature of potatoes yields per portion of land	Number of harvested bags per portion of land
Poor yield	5 bags of potatoes
Moderate yields	15-20 bags of potatoes
Favorably high yields	30-40 bags of potatoes
Exceptionally high yields	50 bags and above

Table 1: Shows the number of potatoes bags harvested per the traditional ‘portion of land’ (10 feet in width by 20 feet in length).

Developmentally, commercial potatoes production has immensely improved the standard of living of the Agadama people individually and collectively as a community. Cultivators’ per capita income increases seasonally during harvest and is reflected in their increased purchase of new vehicles, motor bikes, clothes, good diets, marriage ceremonies and other cultural celebrations done at this period. Although about 60% of Agadama population still lives in mud houses with thatch roofs, pockets of new block/cement houses with modern corrugated roofing sheets could be sighted within the nooks and crannies of the community. A few are able to send their wards to secondary schools and universities to acquire formal education. It was observed that most graduates from this community, even when they are employed, make it a point of duty to return home (some return permanently and go to work in urban centres from the village while others chose to remain in urban areas but return seasonally) to embark on sweet potatoes production in commercial quantities. The harvests are sold and cash rewards are used to embark on capital projects like building houses and marrying new wives, since the people are not averse to polygamy. This is what most respondents described as ‘marriage-competition’ at this period of harvest. However, optimum output is often not realized due to a host of limiting factors that are environmental, socio-cultural, and economic and policy related.

Factors Inhibiting the Commercialization of Potatoes Production in Agadama Community

According to Oke, (2006:139), factors like environment; culture and technology determine the efficiency of the type of subsistence pattern or economic systems employed by any society. This study observed that these factors also serve as limitations to local economies. There are inhibiting factors to the commercialization of potatoes production in Agadama. Environmentally, the community is located within a coastal, swampy water-logged terrain of the Niger-delta and, as such, the environment is always flooded; farmers need canoes to reach their farms as there are no roads to the farms, only a few tracks/paths created by constant usage. When

the rains are at its peak, the water levels become so high and these scare farmers from going to harvest their crops on time/early. When crops are not harvested on time they get rotten due to the 'acidic nature of the soil of West African soil' (Ogundele, 2001:14), thereby leading to economic loss to the farmer. Thus, environmental determinism plays out in regulating and shaping the activities, occupation, type of technology utilized, and the general culture of the people in Agadama community, including threat of the entire Niger-delta.

Socio-culturally, one limiting factor to the general agricultural practice in this area is the poor literacy level of the community population as about 60% of the people are non-literate; they lack effective planning skills in terms of managing money as they squander money made during harvest on frivolities/ceremonies after harvest and sales; only to start searching for lenders during farming seasons. The farmers often get capital for cultivation by borrowing from cooperatives and other lending outfits or wealthy individuals whose percentage interest is overwhelmingly high. Thus, there is need for the Federal Government through the Ministry of Agriculture to popularize/familiarize rural farmers with its programmes on the 'e-wallet initiative' in conjunction with states and local governments to provide funds and farm inputs such as fertilizers, fish fingerlings, seedlings, and chemicals for farmers (Radio Nigeria Jingles, March, 2013).

Technologically, crude implements such as machetes/cutlasses, hoes, sticks, human-power take the centre stage during cultivation, as there are no agricultural machineries such as tractors, ploughs, harvesters, and chemicals like fertilizers which could increase the results/outputs of their farming activities and encourage stress-free farming in the area. The absence of these machineries affects the farmers health-wise, the people look older due to stress as they lack rest, (a respondent even observed that some Agadama farmers wish/pray there are no nights so that they can continue working all day long, Pers. Com. 28/12/12), and as such they are susceptible to a host of latent and manifest health risks like high blood pressure, stroke, hernia, and premature death. Specifically, males in Agadama constantly undergo surgical operation due to hernia.

The farmers also lack adequate skills on bush fallowing, shifting cultivation, mixed farming and storage skills. In fact, lack of storage is also a huge problem to the Agadama farmers, as they cannot harvest and keep the potatoes for long as buyers prefer 'fresh from the

farm potatoes’. Those harvested days earlier before the seasonal ‘ode market day’ which takes place every 4 days lose patronage or are sold at lower/’give-away’ prices. Agadama community is therefore in dire need of storage facility as well as the need to construct/build local industries for processing farm products.

The year 2012 would remain indelible in Nigeria as the year the heavens let loose the rains which led to uncontrollable flooding of communities; of Agadama was completely inundated, with exception of the tarred road. Olalekan, (2012), reported that the magnitude of the flood attracted the Federal government, where President Jonathan observed that ‘25% of Nigerians were displaced and made immediate provision of a total of N17.6 billion in direct financial assistance to the affected States’ categorized into four based on degree of severity as follows:

Category A: Oyo, Kogi, Benue, Plateau, Adamawa, Delta, Bayelsa and Anambra.
Category B: Jigawa, Kano, Bauchi, Kaduna, Niger, Nasarawa, Taraba, Cross-River, Edo, Lagos and Imo.
Category C: Kwara, Katsina, Gombe, Ogun, Ondo, Ebonyi, Abia and Rivers
Category D: Sokoto, Kebbi, Zamfara, Yobe, Enugu, Ekiti, Osun, Akwa-Ibom, Borno and FCT
and some federal government agencies responsible for disaster management (Nigeria-Rising, 2012).

All Category A States received N500m each, Category B States N400m each, Category C States N300m each, and Category D States N250m each. Lives were lost, properties destroyed, farm lands were washed away, residential areas were inundated, houses and homes were filled with water to the roof thereby chasing its occupants out, forcing them to relocate to friends and relatives living at higher planes. Others preferred the temporary refugee camps provided by the governments of various States, mostly in schools. Pupils and students could not go to schools while the devastating flood lasted, although temporary teachers were sent to some of these camps but most never showed up in their designated areas. Most of the flood victims complained of food shortages in the camps and where food was available, the sharing system and was a problem as there were accusations and counter-accusations of smuggling the items out to people who were not flood victims. Some community leaders who were in-charge of sharing these items were accused of partiality and

corruption.

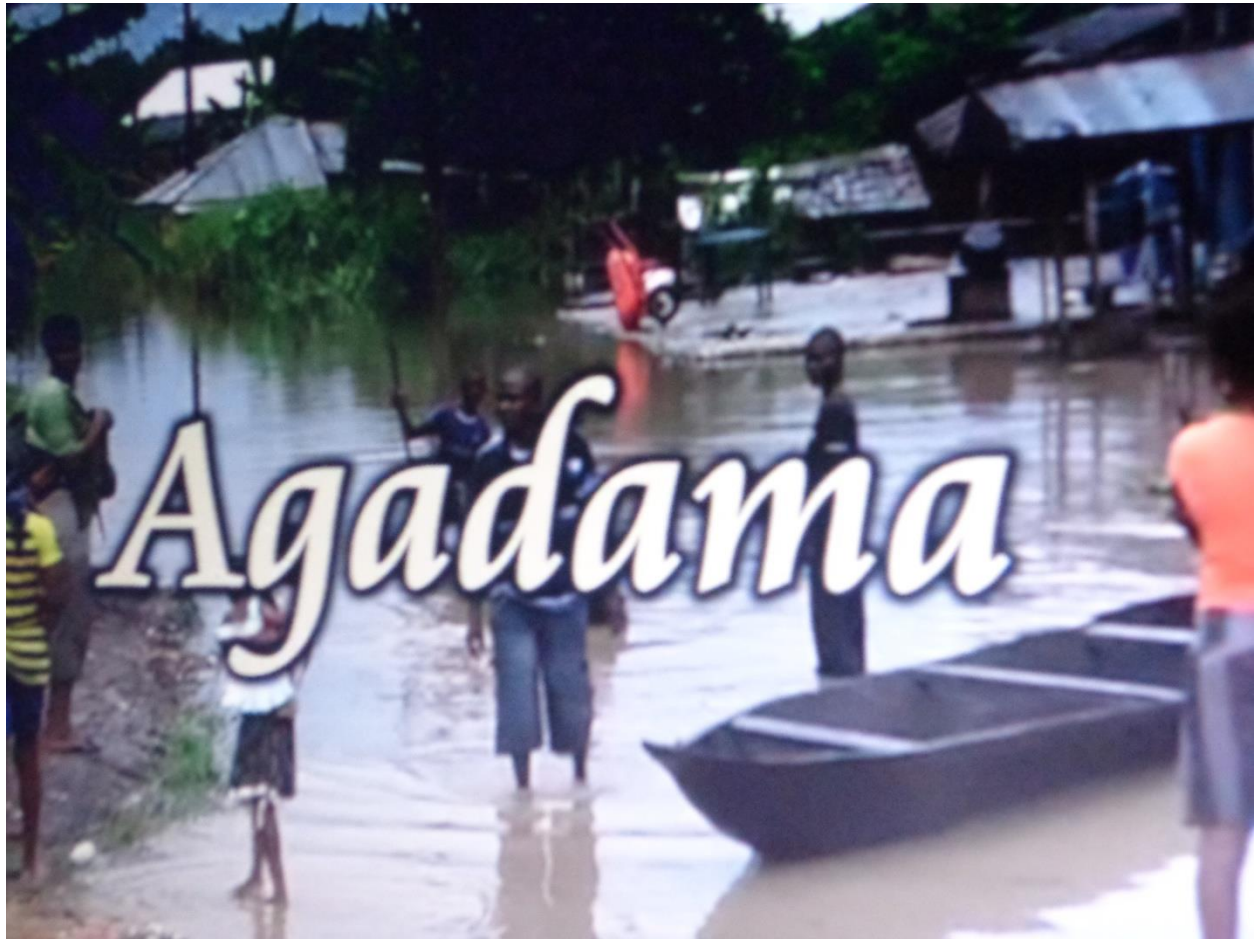


Figure 2: Entrance to Agadama community inundated with water during the 2012 flood disaster in Nigeria.

However, it is pertinent to point out that flooding is a normal phenomenon in Agadama community and the community has devised culturally acceptable/adaptable ways of managing it. But the flood in 2012 was different and abnormal; it started in September and ended in November, it was at its peak in October. The impact of the flood in Agadama was grave and it is inconceivable to state that as at the time of writing this report, the community had not got its direct share of the 500 million naira allocated to Delta state. The farmers whose crops were washed away were faced with the challenge of raising funds to buy new seedlings, stems, fertilizers among

others.



Figure 3: A young man trying to save his mother during the flood in Agadama community.

Periodic attacks by nomadic Fulani pastoralists are the most serious problems on the general agricultural production and health of people in Agadama community; the problem requires urgent government intervention as well as responsive action from the Urhobo nation at home and in diaspora. The gruesome killing of Agadama natives by the Fulani herdsmen can be traced to 2005 (Pers. Com. December, 2012), ‘when the cattle herdsmen paid the community for three years to pasture their animals within the environment in the area. The negotiations turned sour when the farmers discovered that the cattle were destroying their crops and requested that the pastoralist leave the area on the expiration of the rent payment. The Fulani herdsmen never left but became very antagonistic and resorted to violence, using dangerous weapons such as daggers, knives, opening fire with guns on any farmer in the bush. Some herdsmen raped

women, turned chemicals in drinking wells thereby poisoning the people, and stealing properties/crops left in the farms/camp huts'. Timura (2011:103) observed that, "Anthropologists have developed and refined models linking natural resource scarcity to violence, leading to a more critical actor- and perception-centered account that takes the social and cultural context of resource relations as their starting point". But we do not think the issue here is a case of 'resource scarcity related violence/conflicts', but that of ethnic rivalry and ethnocentrism, since groups in a plural society can still co-exist with compromise and mutual understanding. The excerpt below is one of the many news reports by journalists on the conflicts between Agadama-Uhweru and herdsmen:

Indigenes of Uwheru clan in Ughelli North Local Government Area of Delta State, recently stormed the State House of Assembly in Asaba to protest incessant killings, maiming and raping of their people by Hausa/Fulani herdsmen. The protesters besieged the House of Assembly complex with leaves and placards to register their grievances before the assembly leadership. The arrival of the protesting villagers, who conducted themselves in a peaceful and orderly manner, was greeted with public sympathy, as they displayed the photographs of some indigenes of the community who were killed, maimed and others missing as a result of the invasion by the Hausa/ Fulani cattle herdsmen in Uwheru land. Some leaders in the community, Mr Daniel Isama, Chief Emmanuel Ufoma and Mrs Christiana Etagbadore, alleged that the Hausa/Fulani herdsmen had for the past years been unleashing mayhem on their people. They said the activities of the herdsmen had led to wanton destruction of their property, including crops and farmlands. The leaders alleged that some indigenes of the community had been killed, while innocent women and girls were raped by the cattle herdsmen who also indulged in armed robberies and stealing in the community. The protesters further alleged that the cattle herdsmen were most times supported by the military detachments that followed them while grazing their cattle. They recalled that in 2004, the criminal excesses of the herdsmen led to violent clashes between the herdsmen and the people which eventually led to the razing down of part of Uwheru clan by the Joint Task Force (JTF).The protesters, therefore, appealed to the state government and the state House of Assembly to intervene so as to forestall further and imminent breakdown of law and order, recalling that the planting season would soon be over and wouldn't want another attack by the herdsmen..... (Written by Sylvester Idowu, Warri Friday, 09 March 2012.)

The conflicts between the pastoralists and the farmers have worsened since January, 2013, but took an alarming dimension in February as killings were recorded weekly at Agadama and Ohoro throughout February 2013 (Ahon, 2013, *Urhobo Times*, 2013). The absence of security formations like a police station or post further complicates the security problems in Agadama.

Understanding the Socio-Cultural Problems in Agadama Community

There is a significant dearth of essential social, economic and health infrastructures/facilities in Agadama community and this goes a long way in inhibiting the productive capacity of this agrarian community. In terms of accessing basic health-care, the community has little or no evidence of government presence as there are no primary health centers (PHC)/hospitals; Agadama has about seven (7) patent medicine/chemists stores owned by private individuals, who are either retired health personnel, graduates from school of health, and persons who acquired drug dispensing skills through apprenticeship. About 60% of the respondents asserts that government presence was only felt during National Immunization exercises (Pers. Com. December, 2012). The nearest health/maternity centres are located at neighbouring communities like Owarovwo, Uwheru, Unenurhe, and Evwreni. The people make use of Ughelli General Hospital which is about 45 minutes to one hour drive; when a health condition is critical, and in most cases, victims often die before getting to the health facility. The researcher witnessed at least two of such deaths while employing participant observation at Agadama between August 2008 and September, 2009.

In terms of educational facilities, the Agadama community has one secondary school and a primary school, as well as a private nursery and primary school namely:

- (i) Izeze Primary School, Agadama, founded in 1945.
- (ii) Agadama Secondary School, founded in 1980.
- (iii) Kojia International Nursery and Primary Schools, Agadama, 1990.

In terms of road network and transportation, Agadama has only one major tarred road that runs across the community, dividing it into two parts. The road is advantageous to the community as it makes the community accessible to traders who come to buy potatoes, groundnuts, cassava, garri (processed cassava), fresh fish, okra and pepper. But the road has grave disadvantages, being a newly constructed by the state government; the villagers are often run-down/killed by vehicles plying the road (this researcher witnessed at least two accidents during the period of this study). This prompted the researcher to write the community heads asking them to construct bumps on the portions of the road within the community so that motorists can slow down when approaching the community. In terms of power supply/electricity, as at the last research

conducted December 2012, the respondents complained of no power supply to the community for about one year due to break down of their community's transformer.

Community/Government Efforts to Ensure Sustained Potatoes Production in Agadama Community

The members of the community have, collectively and individually, displayed their potential ingenious capability of commercializing potatoes production in the Niger-Delta region of Nigeria through self-help in spite of the daunting problems associated with un-mechanized agriculture. They provide most farm inputs such as nursery, seedlings, stems, fertilizers, and implements by themselves without government subsidizing the cost. There are no known records of any effort by government to support Agadama community in their local economy. Although a few respondents recalled the constituency project embarked upon by one Hon. Oshevire who provided solar-propelled pipe-borne water which functioned between two weeks to a month and stopped. The Agadama community generally relies on the use of wells, streams and rain; these sources of water supply are contaminated with the sooth/wastes produced by oil companies drilling activities and as such are not healthy for consumption. The only reliable source of 'healthy' drinking water is sachet-water ('pure-water') supplied to the community from nearby urban centres and not many of the villagers can afford it.

DISCUSSION

From the above discussion, some anthropological extrapolations could be made. As is with most anthropological studies, we have holistically examined the emic (insider's) and etic (outsider's) perspectives as they relate to Agadama local economy and health. Location of welfare facilities has implication for socio-economic growth and development. In fact, the proximity of productive facilities has the capacity to holistically transform a society. This tends to agree with the neo-evolutionist theories championed by Leslie White that "cultures advance as the amount of energy harnessed per capita per year increases, or as the efficiency or the economy of the means of controlling energy is increased, or both" (Onwuejeogwu, 1992: 15). The technological component of culture is fundamental for any transformation to take place in a society. This is because it would be a movement towards an increasing utilization of the earth's resources as more energy is accessed. And as more energy is utilized in a system, surpluses are

inevitable. Agadama community can be described as a society practising 'surplus horticulture' which is generally viewed as farming carried out with relatively simple tools and methods and yet producing more than they can consume (Oke, 2006:143). A provision of modern agricultural technology and health facilities/personnel to rural areas would geometrically increase this to surplus agricultural enterprise. But, this seems to be a difficult task for the Nigerian government as most of its policies in whatever sector have never worked satisfactorily due to poor implementation. Thus, this study concurs with Massoud, (2008:17) that 'primary health care delivery has failed in Nigeria over two decades after the introduction of National Health Policy launched in 1988 with its main objective of 'Health for All by the year 2000'. This failure has been attributed to several factors like the 'monster- corruption', inadequate funds, unskilled personnel, lack of purpose-driven leadership and accountability and all factors targeted at or revolving the issue of inadequate 'location' of resources in order to increase productivity, growth and development, thereby encouraging rural repopulation.

Conclusion and Recommendation

In summary, we have demonstrated that the vibrancy of any local economy is dependent on the amount of energy harnessed and effectively utilized, and this has implication for rural repopulation. This analysis was done by untangling the web linking local economy, health, ethnic integration, and productive capacity in rural areas. We have stressed that an increased productive capacity of rural communities is dependent on the provision and location of essential facilities (like health facilities, agricultural machineries, and local industries in rural areas) in close proximity to those who need them.

We, therefore, recommend that the government and private sectors should rise up to their responsibilities to rural areas, while the Urhobo nation and communities should be more proactive and patriotic to attract public and private development investors to their rural settlements in Nigeria. There is need for the government to specifically provide storage facilities for preservation of surplus agricultural products in Delta state. Local processing industries should be constructed in this area, especially to process cassava, potatoes into flour in commercial quantity. Rural communities should make provisions for large expanse of lands to government in their areas to construct local industries for a vibrant local economy. This will attract the youths into agriculture and create employment opportunities for the nation's teeming

unemployed youths. There is also the need for government to register its presence in this community by locating/building health centres and hospitals in close proximity of rural farmers, with qualified health personnel and facilities. Government should also make provision for agricultural loans without stringent bureaucratic protocols and also provide tractors for hire as well as fertilizers at subsidized rates. The government, through the Ministry of Agriculture, should re-activate its policy on rural extension workers to educate rural farming communities on best agricultural techniques/practices. There is also need to construct access roads, canoes and boats for coastal agrarian rural communities to access distant fertile lands and to transport their harvests to markets.

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