MILLENNIUM DEVELOPMENT GOALS, MANGROVE RESOURCE UTILIZATION AND COASTAL NIGER DELTA WOMEN ECONOMIC LIVELIHOOD

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Abstract
This paper is a sociological assessment of mangrove resource utilization and the impact on women livelihood in the coastal communities of the Niger Delta based in the context of the Millennium Development Goals that makes the case for women empowerment through gainful livelihood activity. The analysis reveals a growing incidence of rural coastal women indiscriminate exploitation of mangrove resources in an unsustainable manner. The paper argues that this indiscriminate exploitation and depletion of mangrove resources are potential catalysts for food insecurity and mass poverty among the women of the area since the mangrove provides the basis for occupation and thus the major sources of livelihood for them. Based on the foregoing the paper makes broad proposals for the sustainable use of mangrove resources in order to avoid further decline or depletion in their stock which could greatly worsen the already compromised living conditions of these rural women. In the circumstance, we recommend that more conversation efforts should be adopted to preserve the mangrove resources that are most significant to rural coastal women’s earnings and economic livelihood.
Introduction
The eight millennium development goals (MDGs), were agreed to at the United Nations millennium summit in September 2000. The broad goals are to:
- Eradicate poverty and hunger
- Achieve universal primary education
- Reduce child mortality
- Improve material health
- Combat HIV and AIDS, malaria and other diseases
- Ensure environmental sustainability
- Develop global partnership for development

The MDGs represent a global partnership that is aimed at promoting poverty reduction, availability of universal primary education, material health, gender equality, combating child mortality, AIDS and other diseases. Set for the year 2015, the MDGs are an agreed set of goals that can be achieved if all actors work together and do their part. Based on these, developing countries like Nigeria have pledged to govern better, and invest in their people through health care and education. On the other hand, rich countries have pledged to support them, through aid, debt relief, and fairer trade. Although the millennium development goals are eight but implicit in them are 21 targets. The targets are the need to:
- Halve between 1990 and 2015, the proportion of people whose income is less than one dollar a day.
- Achieve full and productive employment and decent work for all, including women and young people.
- Halve, between 1990 and 2015, the proportion of people who suffer from hunger.
- Ensure that by 2015, children everywhere, boys and girls alike, will be able to complete a full course of primary schooling.
- Eliminate gender disparity in primary and secondary education preferably by 2005, and at all levels by 2015.
- Reduce by two – thirds, between 1990 and 2015, the under five mortality rate.
- Reduce by three quarters, between 1990 and 2015, the maternal mortality ratio.
- Achieve, by 2015, universal access to reproductive health.
- Have halted by 2015 and begun to reverse the spread of HIV/AIDS.
- Achieve, by 2010, universal access to treatment for HIV/AIDS for all those who need it.
- Have halted by 2015 and begun to reverse the incidence of malaria and other major diseases.
- Integrate the principles of sustainable development into country policies and programmes; reverse loss of environmental resources.
- Reduce biodiversity loss, achieving, by 2010, a significant reduction in the rate of loss.
- Halve, by 2015, the proportion of people without sustainable access to safe drinking water and basic sanitation (for more information see the entry on water supply).
- By 2020, to have achieved a significant improvement in the lives of at least 100 million slum –dwellers.
- Develop further an open trading and financial system that is rule based, predictable and non discriminatory. Includes a commitment to good governance, development and poverty reduction nationally and internationally.
- Address the special needs of the least developed countries. This includes tariff and quota free access for their exports; enhanced programme of debt relief for heavily indebted poor countries; and cancellation of official bilateral debt; and more generous official development assistance for countries committed to poverty reduction.
- Address the special needs of landlocked and small island developing states.
- Deal comprehensively with the debt problems of developing countries through national and international measures in order to make debt sustainable in the long term.
- In cooperation with pharmaceutical companies, provide access to affordable essential drugs in developing countries.
- In cooperation with the private sector, make available the benefits of new technologies, especially information and communications.

Our interests in this paper are the first, third and seventh goals and the specific targets that are contained therein. While the first Goal targets the eradication of poverty, the third encourages the need for the empowerment of women and the seventh makes proposals on the need for the empowermental resources in sustainable manner. With these at the background, coupled with the environmental interface to the Niger Delta crisis in Nigeria, this chapter examines women’s mangrove economic livelihood activities in the Niger Delta particularly in terms of its impact on the mangrove economic livelihood activities in the Niger Delta particularly in terms of its impact on the mangrove resources.

The Mangrove in the Niger Delta Political Economy
The growing literature on the importance of natural resources has been shown through their socio-economic benefits to the rural population in the rainforest zone, both in aggregate and regional terms (FAO, 1978; FAO, 1987; and Rodda, 1991 in Bisong and Ajake, 2001). Many of these studies conclude that there are differential benefits that are derived from these forest resources. These benefits include energy requirement for domestic and industrial activities; food consumption; income earnings; medicinal value; and employment opportunities.

For instance, the FAO (1978) reveals that the income of rural people in the Philippines and India is dependent on the gathering of forest products. Studies by UNESCAP (1985), Francisco and Israel (1991), on women’s roles in coastal communities in the Philippines also show that although economic diversification is increasing their employment options, women still depend mostly on natural resources to meet their economic and household needs. In coastal communities in the Niger Delta of Nigeria, the mangrove and its marine products such as fish and shellfish are the basis for subsistence and a significant portion of each income.

The mangrove is thus exceptionally important in the Niger Delta political economy. In most fishing communities, women engage in a number of other part time seasonal income earning activities (often in the informal sector), many of which are also resource dependent. Among the more important subsistence and income generating activities, which involve women, are fish and shellfish processing and marketing. The success of both activities depends on the availability and quality of marine mangrove resources.
In their studies, Ejituwu and Gabriel (2003), and Oshin (1972), observed that the economic value of mangroves to women of coastal communities in the Eastern Niger Delta can better be appreciated from the harvestable products which households consumed and the surplus that are sold in far away places like Onitsha, Aba, Owerri, Nsukka and Kano. Enemugwen (2001) in his study corroborated this position where he recorded that in Andoni (a coastal community) fish and shellfish were sold as far as Tripoli in North Africa. In this instance too, women are more involved in the fish trade. Thus, coastal communities women play an important role in Niger Delta economy, particularly in the area of trade on mangroves and their products, both internally and across long distances. There is however current concern about the integrity, particularly in terms of yield of the Niger Delta mangrove ecology. This has been largely blamed on the lack of conservation consideration of these resources, through indiscriminate use, thus leading to severe economic crisis and poverty in the region. Generally, the issue of indiscriminate exploitation and depletion of the mangrove resources as potential catalyst for the current mass poverty among women in the coastal communities of the Niger Delta enclave requires examination. Looking at households’ activities of the coastal communities and how these relate to the mangrove ecosystem it shows that women make primary contacts with those products of the mangroves that are fundamental to family life. Their domestic roles coupled with the exploitation of mangrove products for food and income, bring them into daily contact with the natural mangrove forest ecosystem. Women are thus the first to feel the impact of large scale mangrove forest degradation of mangrove products or resources for improved economic activities in the coastal communities of the Niger Delta.

The paucity of data about the coastal women’s earnings from the mangrove forest as well as the systematic decline in the resources may undermine efforts at improving the socio-economic conditions of the rural women. This also translates into faulty mangrove forest economic conditions of the rural women. This also translates into faulty mangrove forest economic development policies, which could negatively affect the livelihood of the women in particular, and the coastal population in general.

No doubt, this is leading to the urgent need for the culture of seafood like oysters, periwinkles, cockles, etc. in coastal communities of the Niger Delta region. In one breath, the political economic crisis in the region occasioned by environmental degradation, poverty and long neglect by government over the decades suggests this. In another perspective, the fact is also that these communities over the years have either abandoned the indigenous (traditional) methods of cultivating these seafoods or are massively and indiscriminately over exploiting them without the indigenous practice of conserving these mangrove resources.

The coastal communities in the region have always been major sources and suppliers of seafood, but present realities reveal a drastic dwindling and abandonment of the indigenous sources of livelihood which women are more engaged in. yet the seafood is what the local people depend on for their livelihood and protein, iodine and calcium supply. In the same vein, the current mass poverty amongst the local population, especially women which has compelled them to paddle long distances with canoes in search of these sea foods has equally heightened the fear of famine, thus necessitating the imperativeness in embarking on the return to the traditional or extensive cultivation of these fisheries. The culture of fishery can effectively be managed sustainably by the local populace (Irikana, 2006).

The absence of improved methods of cultivating sea foods, mass poverty, indiscriminate exploitation of available ones and the eventual scarcity of sea foods within the neighborhood now demand journeying long distances on the river via paddling locally made canoes in search
of the sea foods and other mangrove products or resources. Recognizing the mass involvement of women in the livelihood activities from which they are able to sustain and complement efforts of their husbands and families, and train their children in schools from the sale of both fresh and dried sea foods; and who today can no longer fulfill their role as women, this study attempts to highlight the importance of culture and cultivation of sea foods to resuscitate these once vibrant sources of subsistence. The need for this can therefore be realized through extensive culture and cultivation of oysters, cockles, periwinkles, crabs, shrimps, etc (Wilcox and Powell, 1985; Irikana, 2006) that will be strategically located in the mangrove swamps of the coastal communities.

Furthermore, addressing the scarcity of sea foods in the area would, to a large extent, meet the required food nutrient of the local population, especially women and children. It would also revamp the livelihood opportunities opened to women to sustain food production as well as bring about development of the sea food fishing, sector that is gradually becoming extinct.

**Coastal Women Utilization of Mangrove in the Niger Delta**

Mangroves are one of the coastal resource ecosystems (e.g sea grass and coral reefs) found at the crossroads between the land and the sea. As in the case of Niger Delta region, the tidal flat constitutes its theoretical boundary, which sometimes extends to the shallow waters in the coastal areas. They are found throughout the Niger Delta coastline. According to Scott (1966) in Irikana (2006), the mangrove swamp in the Niger Delta covers 5,048km$^2$.

Mangroves are an irreplaceable and unique ecosystem, hosting incredible biodiversity. They are among the most productive ecosystems in the world. They house a wide variety of life migratory birds, marine creatures and associated species of flora. A wide variety of representatives of the plant kingdom live on them. The aerial roots of the aquatic plants form a web, hosting a multitude of animal species such as fin–fish, mollusks (oysters, cockles, periwinkles, etc) and crustaceans (shrimps, crabs). They operate as zones for mating refuge and nursery areas for a large number of species; many of them of importance as human food which has made it possible for populations to settle around them, having their subsistence in resources generated by this ecosystem (Moses 1985; Baandaranayake 2001).

Indeed, mangroves are of immense utility to the people of coastal communities of the Niger Delta region. The environment or socio–physical conditions of the area affect and / or determine the condition and behavior of the people. The occupational choice of communities in the ecosystem is, to a large degree, made within the confines set by the environment. What this implies is that the socio–economic activities of the people are environment–specific or environment–bound. The mangrove ecosystem of the coastal communities thus influences the socio–economic activities of the local population with women being, more involved in the utilization of the resources and the socio political fallouts from that seemingly economic activity,

Consequently, with a local economy that depends mainly on mangroves for food, shelter, income, and employment, people of coastal communities are found in indiscriminate exploitation and utilization of the unique and valuable range of resources and services provided by the ecosystem. Apart from the harvesting of fish, oysters and other sea foods by the local people, they also utilize the mangroves as timbers and fronds in a wide variety of ways, including firewood charcoal, scaffolding, etc. however, beneath these seemingly indiscriminate activities is a highly sophisticated organizational structure and system. This structure ensures stability and sustainability.
Changes brought about by oil and gas exploration and exploitation in addition to nypa palm invasion as well as poverty have given rise to the continuous depletion of the mangrove with potentially dangerous consequences for the people’s struggle for existence as it threatens related marine species dependent on the ecosystem. This portends great danger to the users and consumers of mangrove products (Irikan, 2006).

It has to be added and emphasized too that this fundamental error that brings about mangrove resources depletion and a legacy of environmental degradation in the region is traceable to the people’s lack of knowledge in relating with their environment. In utilizing the resources available in the mangrove ecosystem, the people have failed to connect human development to the natural environment – the basis of all life. As Ashion Jones et al (1998) contend and we agree with them, ecological problems such as these arise when an ecosystem is seen in ignorance by the people while carrying out their activities as something out there, which have no connection to humankind.

What is therefore needed to avert this problem and to maintain biological diversity – the variety of life on earth, and subsequent assurance of food security in the coastal communities is the integration of both the environment and human production activities for sustainable development. This means a long term culture process of maintaining a balance between population and natural resources within a given environment.

Mangroves, which are found throughout the extensive coastline of the Niger Delta, represent a rich and valuable ecosystem. More importantly, both marine and mangrove fishing in the coastal communities depend on them. However, the widespread use and over exploitation of the mangroves by the local people have contributed directly to their depletion. Most of what is remaining today is secondary growth of mangrove forest especially in the eastern part of the region. The fundamental change in the mangrove forest, according to Irikan (2006) is inversely related to changes in number, occurrence, and size of various resources within the environments.

The consequence of the foregoing on the people and environment is a progressive decline of marine and mangrove resources. In most coastal communities, there is a steady reduction in the quantities of periwinkles, oysters, cockles, cramps, crimps, and fin-fishes collected and caught. For example, in his study, Irikan (2006) observed that between 1973 and 2004, there were dramatic reductions in the number of baskets of the resources collected per week. Specifically, between 1973 and 1983, periwinkles yielded estimated five baskets per week but declined to three and a half baskets per week between 1984 and 1994; and between 1995 and 2004, this same resource has dropped in quantity to only two baskets per week. This study supports Ashton – Jones et al (1998) findings in the whole of coastal communities of Niger Delta. They stated that between 1980 and 1986, annual recorded catches of fin-fish ranged between three hundred and seventy thousand and one hundred and thirty seven thousand tones on a declining plain, and that fisher men complained that their catches were going down day by day.

Indeed, the disappearance of the mangroves translates into economic loss. No doubt, the various indiscriminate and unsustainable utilization of the mangroves forest and other human activities have impacted negatively on the forests leading to poor harvest of mangrove resources, loss of biodiversity, poor quality of life and food insecurity. In addition, the economic hardship is translated into lack of funds that has led to poor shelter, feeding, clothing, education, marriage breakdowns and crises, and prevalence of diseases. Similarly, fish and shellfish, which constitute the major source of diet, are now scarce. This has brought about low protein and iodine intake
whose deficiency leads to the prevalence of diseases like beriberi, goiter and kwashirorkor among children (Ukoima, 2002).

In earlier times, women were seen complementing the efforts of their husbands in providing funds for their children’s education. Today they can no longer render such assistance to their husbands and this has affected the training of their children in schools. Marriage, which has been a respected institution before this time, is today debased. Cases of divorce arising from economic hardship are a common phenomenon. Women have taken to prostitution as a vocation thereby debasing womanhood and the sanctity of marriage and the institution of family.

Furthermore, since the local people depend on mangrove trees for cooking and ironing of their clothes, the scarcity of these trees has forced them to depend on unavailable kerosene for most domestic activities. This has aggravated the already existing economic hardship among the people, particularly women with the unpredictable daily increases in the prices of petroleum products including kerosene. Trapped under the present circumstance, the young fishermen and fisherwomen have been compelled to migrate to the urban centres for better opportunities that never existed anyway. Some of the demeaning situations in which women are found in the cities today are consequences of the compelling rural urban migration. Beyond the rural urban migration, the economic problem in the enclave has raised a fundamental political question; and as the political issue has not been sufficiently addressed, social issues have emerged, and these issue has not been sufficiently addressed, social issues have emerged, and these impart are youth restiveness, street gangs or cultism, hostage taking, kidnapping and other forms of anti-social behaviours that have today bedeviled the region.

Summary and Conclusion
This paper has examined the impact of the unsustainable utilization of mangrove resources on coastal women livelihood against the stated objectives of Millenium Development Goals (MDGs). The paper noted instances of indiscriminate exploitation of these resources by coastal women that depend on them as major source of economic livelihood. It shows that the mass poverty among the women in the region is occasioned by the depletion of mangrove resources. Thus, the indiscriminate exploitation and the consequent depletion of mangrove resources are therefore adjudged to be part of the critical catalysts for the worsening living conditions especially among women in the coastal communities of the region.

The implications of the foregoing are that: the local people need to tend the mangrove forest in order to maintain its naturalness and productivity for future use. To that extent, what seems necessary to be done is a change in attitude towards the environment. The need to adopt a more environment friendly approach to the exploitation and utilization of the mangrove forest resources based on traditional practices becomes apparent and urgent. It also calls for a new and sustainable strategy of economic empowerment of the coastal women.

It may well be stated that the understanding of the household activities of coastal women and the mangrove resources they collect for income would enhance the formulation of rural economic policies designed to improve sustainable mangrove forest management in the coastal communities of Niger Delta.

In order to realize the objectives of the Millennium Development Goals (MDGs) of enhancing sustainable development and guaranteeing economic access for women generally and in the Niger Delta in particular, there is need to continue to realize the highest possible rate of economic return from the mangrove forest. Based on the foregoing, the following recommendations are made:
- It would be necessary to make an inventory of the mangrove species and the resources in them so as to be able to sustainably harvest them. Local legislation could be put in place and enforced as to the kind of species, minimum size, and maximum number that could be extracted or exploited per year. This would go a long way in conserving the natural environment.
- A deliberate effort at regenerating mangrove tree species and their resources could be embarked upon. This could be started by focusing on the seedlings/nurseries of desirable species of sea foods /fin fishes.
- Communities should be made to enact local legislation in controlling the rate of exploitation of these resources, and enforce their implementation.
- Local communities can set up environment committees to monitor activities that impose threat to their existence and future.
- The multi national oil companies and the government should be made to adopt environment friendly practices according to international standards in their seismic and oil exploration/exploitation activities.
- Specific sustainable poverty reduction projects based on the environmental communities. These women would be organized in co-operatives.
- Effective public enlightenment in the conservation of mangrove resources should be put in place and carried out.
- Manpower training and research for conservation should be more purposefully focused and substantially funded than what is obtained presently.

References


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