



CPED-*Research For Development News* Vol. 8, No. 1 June 2017

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The Impact of Climate Change on Human Health: **The Case of Schistosomiasis and Implication for Research**

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This Publication is supported by the *Think Tank Initiative Programme* initiated and managed by the *International Development Research Centre (IDRC)*





About CPED

The Centre for Population and Environmental Development (CPED) is an independent, non-partisan, non-profit and non-governmental organization dedicated to promoting sustainable development and reducing poverty and inequality through policy oriented research and active engagement on development issues. CPED started as an action research group based in the University of Benin, Benin City, Nigeria in 1985. The action research group was concerned with applied research on sustainable development and poverty reduction challenges facing Nigeria. The research group also believed that communication, outreach and intervention programs, which can demonstrate the relevance and effectiveness of research findings and recommendations for policy and poverty reduction, especially at the grassroots level, must be key components of its action research. In order to translate its activities more widely, the Benin Social Science Research Group was transformed into an independent research and action Centre in 1998. It was formally registered in Nigeria as such by the Corporate Affairs Commission in 1999.

The establishment of CPED is influenced by three major developments. In the first place, the economic crisis of the 1980s that affected African countries including Nigeria led to poor funding of higher education, the emigration of academics to advanced countries which affected negatively, the quality of research on national development issues emanating from the universities which are the main institutions with the

structures and capacity to carry out research and promote discourse on socio-economic development. Secondly, the critical linkage between an independent research or think tank organisation and an outreach program that translates the findings into policy and at the same time test the applicability and effectiveness of the recommendations emanating from research findings has been lacking. Finally, an independent institution that is focusing on a holistic approach to sustainable development and poverty reduction in terms of research, communications and outreach activities is needed in Nigeria. CPED recognises that the core functions of new knowledge creation (research) and the application of knowledge for development (communication and outreach) are key challenges facing sustainable development and poverty reduction in Nigeria where little attention has been paid to the use of knowledge generated in academic institutions. Thus, CPED was created as a way of widening national and regional policy and development debate, provide learning and research opportunities and give visibility to action programmes relating to sustainable development and poverty reduction in different parts of Nigeria and beyond.

The vision is to be a key non-state actor in the promotion of grassroots development in the areas of population and environment in Africa. The overall mission is to promote action-based research programs, carry out communication to policy makers and undertake outreach/intervention programmes on population and environmental development in Africa.

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Editorial Policy of CPED's Research for Development News (CRDN)

CPED's Research for Development News (CRDN) is the official publication of the Centre for Population and Environmental Development (CPED). Through this medium, CPED seeks to reach out to relevant policy makers and other stakeholders on key issues concerning development in Nigeria in particular and other parts of Africa in general.

Vision: CRDN seeks to inform, educate and report development issues and challenges as well as the progress in the research and outreach activities of the Centre for the consumption of policy makers, other stakeholders and the reading public in its quest to promote sustainable, holistic and grassroots development.

Mission Statement: To provide a medium for drawing the attention of policy makers, other key stakeholders and the general public to the issues and challenges of development and the policy response needed to promote equitable development.

Core Values: The two core values of CRDN are derived from those of CPED. The first relates to the fact that the universal ideals of intellectual and academic freedom is promoted and respected by CRDN. In this respect CRDN will remain an independent, professional and development news letter. Secondly, CRDN is a non-partisan newsletter which is not associated with any political party or organization. However, when the need arises, CRDN in its publication of CPED's research, advocacy and outreach activities will address key political issues that have considerable impact on development, especially at the local level.

Editorial Board: The Editorial Board of CRDN shall be made up of CPED's Executive Director, two professional staff of CPED and two other

members from outside CPED comprising mainly of CPED Fellows.

Editorial Policy: While CRDN will report on any development issue and the various activities of CPED, CRDN will, as much as possible, focus on a particular development theme in one edition. The theme to be addressed in a subsequent edition shall be announced for the benefit of contributors in advance.

Adverts: There shall be created in every issue, a space for advertisement. The cost of the advert placements shall be determined by the Editorial Board.

Manuscript submission: Persons interested in contributing to any edition of CRDN are welcomed to do so. Manuscripts should be original with a maximum length of five pages typewritten with double-line spacing and accompanied with biographical sketch of the author which must not be more than fifty words. Each article should be typed on A4 paper with a margin of one inch round. Manuscripts already published elsewhere shall not be accepted.

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Editor's Note



Professor Emeritus Andrew G. Onokerhoraye, Ph.D., OON, JP
Editor

The Centre for Population and Environmental Development (CPED) is pleased to launch its *Research for Development News*, with support from the *Think Tank Initiative* initiated and managed by the *International Development Research Centre (IDRC)*. CPED's *Research for Development News (CRDN)* series is published twice a year in June and December. The Series will report on the research, communication and intervention activities of CPED with the major aim of informing policy makers and other key stakeholders on development issues as well as informing key stakeholders on CPED's activities on research and intervention. In this respect the editorial

policy of CPED's *Research for Development News* is to focus on one major development issue in each number of CRDN.

This June 2017 edition of CRDN is presenting progress and outcomes of CPED research projects and other activities.

**Professor Emeritus Andrew G.
ONOKERHORAYE**
Editor,
June, 2017.

CPED RESEARCH FINDINGS AND POLICY IMPLICATIONS

The Impact of Climate Change on Human Health: the case of Schistosomiasis

It has been known for decades now that climate change has wide ranging impacts on the health of humans. Changes in climate and climate variability, particularly changes in weather extremes, affect the environment that provides us with food, water, shelter, clean air, e.t.c. Given that the impacts of climate change are predicted to increase over the next century, certain existing health threats will intensify and new health threats may emerge. Some of these health impacts are already being experienced in many countries, especially those of the low and middle income countries around the world.

Increasing recognition of the process of climate change has led to a growing interest by many health

researchers in trying to assess the possible mechanisms by which changes in climate could influence health. Connecting our understanding of how climate is changing with an understanding of how those changes may affect human health can inform decisions about mitigating (reducing) the amount of future climate change, suggest priorities for protecting public health, and help identify research needs.

There are several mechanisms by which climate can affect health. Extremes of temperature and rainfall, such as heat waves, floods and drought, have direct immediate effects amongst which are the distribution of disease vectors, e.g. those of malaria and dengue, and the incidence of diarrheal diseases.

Table 1: Examples of vector-borne diseases likely to be sensitive to climate change

Vector	Major diseases
Mosquitoes	Malaria, filariasis, dengue fever, yellow fever and West Nile fever
Sandflies	Leishmaniasis
Triatomines	Chagas disease
Ixodes ticks	Lyme disease and tick borne encephalitis
Tsetse flies	African trypanosomiasis
Blackflies	Onchocerciasis
Snails (intermediate host)	Schistosomiasis

Table 1 above shows example of vector born diseases which are likely to be very sensitive and highly distributed due to climate change. For the purpose of this write up we shall be considering just the case of Schistosomiasis. We shall identify the mode of transmission, its widespread, effect on human health and mitigation mechanism- control and treatment of schistosomiasis. Data used for this write up were gathered from secondary sources and a presentation by CPED guest lecturer, **Dr. Mark**

booth, on the occasion of CPED annual lecture series with the theme "*Environment and Development in a Changing Climate: Implication for Research*" held on June 7, 2017, Benin City, Nigeria.

Schistosomiasis and the Human Health

Schistosomiasis, sometimes called bilharziasis is a waterborne infection caused by schistosome, a trematode worm. Schistosomiasis is one of the most common infectious diseases in the world causing

56% of known cases of calcifications in the bladder known as bladder stone. The disease affects more than 200 million people worldwide (8% of the world population) and as many as 500-600 million people have been exposed to schistosomiasis of all kinds, with the disease more common in Africa, Asia and South America. This condition affects humans most especially school-aged children (4-15) damaging most of their internal organs resulting in blood in urine and faeces and an enlarged liver in acute conditions. In Africa, two major forms of schistosomiasis are recorded: urinary and intestinal caused by *Schistosoma mansoni* and *Schistosoma haematobium*.

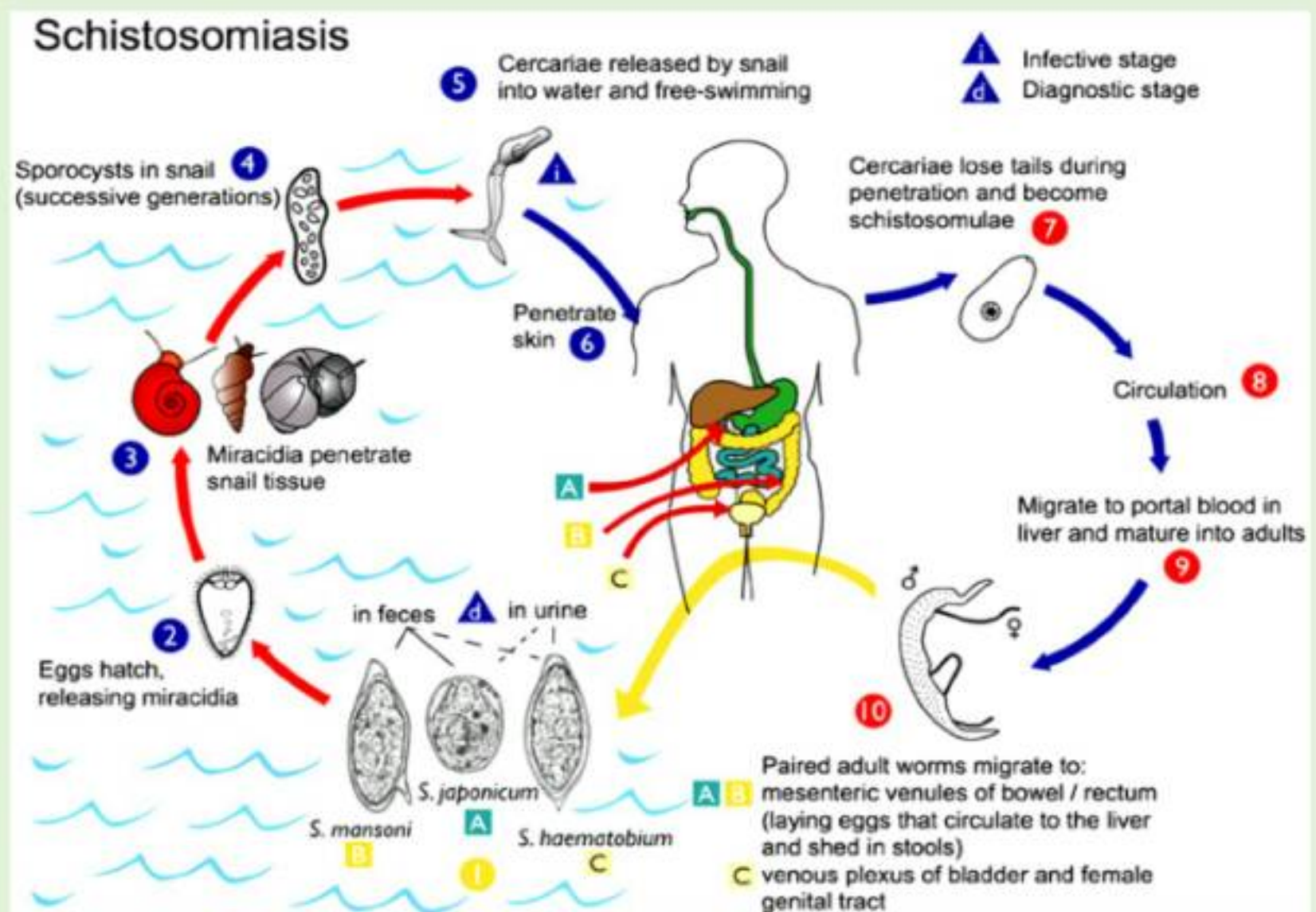
When first infected the patient may be acutely ill with skin rash or fever, abdominal pain, and malaise. Later the chronic phase manifests itself as urinary tract, liver, lung, or intestinal disease and varies according to the species of schistosome. Patients are chronically ill and after several years, the body's

reaction to schistosomiasis may lead to death, usually by urinary tract obstruction, carcinoma of the bladder, portal or pulmonary hypertension, or some complication of these.

Schistosomiasis has been recorded to be the second most prevalent parasitic condition in tropical and subtropical countries after malaria. A high occurrence of the disease is seen in climes without access to safe drinking water and adequate sanitation. On a global scale, the disease is endemic to about 74 countries in Africa, South America, and Asia. Nigeria is believed to have the greatest number of people infected with schistosomiasis worldwide.

Life Cycle of Schistosomiasis and Climate Change

The life cycle of the parasite is complex involving snails, water, and human beings. The cycle is susceptible to environmental change, especially in water-associated stages.



The cercariae (larvae) emerge from infected snails into water. These cercariae penetrate the intact human skin, and migrate through the tissues to find target sites in the human host. There they mature into adult worms, mate, and the female deposits eggs in the venous systems of the bladder or liver. The eggs migrate to the ureters or intestines, are excreted in urine or feces, and hatch in the water as miracidia that swim to find and enter a snail host. In the snail, the parasite undergoes two generations of sporocysts and emerges as the cercariae.

The ecology of each genus of the parasite and snail differs, but some generalities hold. A major determinant of schistosome distribution is the distribution of the snail host. Snail populations are dependent on temperature, water, and water currents. The ecological conditions needed by snails for survival have been carefully studied. Snails of the species transmitting *S. mansoni* in Brazil had an optimum temperature of 25deg. to 28deg.C and lived at 7deg.C for several days; they died after 2

hours at 42deg.C. The shedding of cercariae stopped below 13deg.C and above 41deg.C. Most of these snails died when removed from water, although a few survived if humidity was high enough.

Climate change, therefore, has large impacts on the transmission of schistosomiasis. The transmission of most water-borne diseases is likely to be affected by climate change due to the changes in the distribution and seasonality of the infections and their causative agents. In Uganda for instance, schistosomiasis transmission occurs at altitudes above previously defined limits due to higher temperatures (Kabaterine *et al*, 2004; Rubaihayo *et al*, 2008).

The problems of lack of portable water supply in schools and homes puts children at high risk of exposure to schistosomiasis and the implications of these disease on life, (social, moral and academic reasoning and efficiency of learning in school) in the children as it affects socioeconomic development of the country.



Source of water for many households in Rural Communities in Africa

Recommendations for the Control of Schistosomiasis

The world Health Organisation has recommended a number of strategies for the control of

Schistosomiasis. These approaches could be harmonized and domesticated to meet national, state and local needs. The strategies for the control of transmission of Schistosomiasis include these activities:



1. Health Education and Public Information
2. Diagnosis and Treatment &
3. Promotion of Safe Water Supply and Sanitation

1. Health Education and Public Information

Government at all levels should provide health education to the public at regular intervals. Health education in Schistosomiasis helps the people to understand their own health behavior- specifically water use, urination and defecation and failure to use available screening services, which is a key factors in the transmission of the disease and its effect.

Such health education programme should be tailored to meet the need of the target community, encourage the community to be involved in control measure

2. Diagnosis and Treatment

Adequate diagnosis and treatment of persons who show symptoms of Schistosomiasis is a key strategy for reducing morbidity. However, where prevalence of the disease is high, population based chemotherapy can be used to reduce the prevalence, severity and morbidity of the disease. The target group for chemotherapy will depend on infection and morbidity pattern. In most cases school children will be the most easily accessible target group, and they generally also belong to the most heavily infected age group.

When the entire community is to be treated, there are usually considerable operational difficulties. Health workers or special team have to visit the villages and inform the community, collect and process urine or stool samples and give treatment.

This approach can only be effective if the development primary health diagnostic capacity is given high priority as well as provision of safe water supply.

3. Promotion of Safe Water Supply and Sanitation

The provision of safe and adequate water supplies and sanitation contributes to reducing the prevalence and severity of Schistosomiasis (Esrey et al 1991). A good strategy to reducing the incidence of Schistosomiasis relates to the design and implementation of water supply in a particular geographical zone and metropolis. Such design should be directed at improving the safety of drinking water and minimizing contact with infected water. It is, therefore, recommended that a comprehensive approach, taken into account, water supply, excreta disposal, rain water, domestic drainage, and water from bathing and laundry facilities be considered when executing such design. No doubt safe water demands a great deal of investment in a nation. Hence, active collaboration is needed between national, state and local government agencies to at various level of government to achieve the needed change in the provision of safe water supply to the citizenry.

CPED In-house Research on “Indigenous Opinions for Achieving Justice and Enduring Peace in the Niger Delta, Nigeria”

Nigeria is one of the major countries in Africa that is endowed with abundance of natural resources. She is a major exporter and a player in the petroleum industry. Presently, the bulk of mineral wealth of the nation is gotten from the Niger Delta area which makes it a major hub of economic activities. However, the Niger Delta area of Nigeria for decades of oil exploration still remained one of the least developed regions in the country. The region is made up of about 70 per cent of the national wealth comprising off - shore oil well as well as on - shore facilities that are located within the

region (Ikelegbe, 2010). In spite of this, the Niger Delta the people still remain poor. This deplorable condition of the indigenous people due to the persistence oil exploration and environmental degradation, in turn, had brought the feeling of injustice and agitations such as the AdakaBoro's struggle of 1967; mass demonstration in the 1990s involving mass protest followed by violent attacks on personal and oil installations, hostage taking amongst others (Tonwe, &Aghedo, 2013). Although, several attempts have been made by the Federal Government of the nation to



bring about peace in the region, restiveness and agitations by the people in the area have continued unabated.

A thorough investigation of what has not be done right and what should be done to bring about lasting peace in the oil rich region of the Nigeria is necessary to achieve sustainable development in Nigeria. It is in this contest that the Centre for Population and Environmental Development (CPED), undertook a research in the Niger Delta region of Nigeria to investigate these and many other issues relating to peace and justice in the Niger Delta region.

Dr. Johnson Egbemudia Dudu, a senior research fellow and **Mr. Ernest Omokhoa Imongan**, a research officer, both of CPED, have critically examined the results of these research and documented findings in *International Journal of Advance Research 5(7), 1313-1325 available on (<http://tinyurl.com/ydyvmmac>)* from which this write-up is extracted.

Thus, this study critically examined the indigenous opinions for achieving justice and enduring peace in the Niger Delta, Nigeria. The study was carried out using in-depth interviews and focus group discussions to generate relevant data for the research with 75 persons as participants in the in-depth interview and 40 participants who took part in the focus group discussions in four Local Government Areas of Bayelsa State, Nigeria.

Research Design, Sampling and Recruitment

The study adopted qualitative techniques such as in-depth interview and focus group discussions (FGDs) to generate relevant data for the research. The in-depth interviews involved interviewing key personnel of institutions and some social activists who were opinion leaders. The study took place in 4 (four) Local Government Areas (LGAs) of Bayelsa State that have experienced militants activities over time such as: Brass, Ekeremor, Sagbama and Southern Ijaw LGAs. The study took place from June 2015 to March, 2016.

Interviews and Focus Group Discussions (FGDs)

In all, 75 in-depth interviews were held with different stakeholders on different issues relating to the Niger Delta Question, amnesty and peace with each ward unit contributing at least an opinion leader to the interview. Regarding FGDs, four of them were held including one each in Twon-Brass, Ekeremor, Sagbama

and Oporoma –the headquarters of Brass, Ekeremor, Sagbama and Southern Ijaw LGAs, respectively. In all, 75 persons participated in the in-depth interview include 42 men and 33 women. A total of 40 participants took part in the FGDs including ten persons each in all the four LGAs (five males and five females) selected jointly by the opinion leaders and the researchers. The inclusive criteria were that participants must be opinion leader in their localities, must have spent at least 10 years in the area, and an indigene of the community. All participants were paid stipends for their transportation fare and refreshment at the end of each session in line with the promise to motivate them to be part of the exercise. The interviews as well as the FGDs were conducted in English and the corrupted version -pidgin. The study sort such socio-economic/demographic information such as: sex, age, religion, marital status, highest level of education, occupation, monthly income level, level of activity in the Niger Delta struggle and ways of achieving peace and justice in the Niger Delta.

Data Analysis and Ethical Considerations

The data for the study were analyses qualitatively using N6 NUD*IST software after transcription of data and coding and content analyzed in term of the themes and objectives that the study tried to achieve. In analyzing the transcripts from the FGDs, in-depth and key informant interviews, the thematic analysis technique was used to uncover themes and trends. Comments on aspects of the objectives of the study were compared by place of interview. Such excerpts or extracts are the views expressed by the majority of the discussants. These were also supported with similar views from the FGDs and in-depth interviews.

Ethically, approval for this work was given by Centre for Population and Environmental Development Ethical Committee. Though the study was classified as a low risk one in term of the objects of investigation, at all levels, participants were briefed on the study objectives and their consent was received verbally before administering any of the research protocols. In addition, all the participants were informed of their right to withdraw their participation in the study at any stage. The participants were also assured of their anonymity during and after the study.

Results and Discussions

The content analysis of the expectations of the people of the studied locations of what will bring about justice



and peace; revealed four categorizations of demands among which three are documented in this report. These were (1) Institutional/constitutional Demands (2) Economic/Inclusiveness participation demands. (3) Infrastructural Demands (4) Oil Companies/Federal Government Behavioral Change Demands. Though these are itemized here, there are no clear lines between and among these demands.

Institutional/Constitutional Demands

These demands bother on the constitution of the Federal Republic of Nigeria and the establishment of institutions. According to participants either in the interviews or FGDs, the constitution of the country as it is currently, is so asymmetric and unfair to the people of the Niger Delta. For example, these groups of persons believed that Nigeria is a federated State that is being administered as a unitary entity. According to the persons who hold this view, in other advanced democracy like America which Nigeria patterned her affairs, the units (States) which make up the federation are allowed to develop at their own pace. An excerpt from one of the interview in Sagbama LGA puts this better:

“Make this government of Nigeria just leave the states make them waka according to wetin God give them, make them use wetin God give them as they like instead of this Federal Control”

Translated version (“The government of Nigeria should allow the states to be. The states should be allowed to use the gift from God to them according to their desires instead of Federal control from the center”)

It is apparent that the demand of these groups of persons is that Nigeria is a federated entity and should be so administered through the practice of true federalism; anchored on fiscal federalism and resource control. Put in other words, the persons with this view believed that the people of the Niger Delta States are being robbed perpetually without an end to this exploitation in the name of a “pseudo enclave in Africa called Nigeria”. From the belief of these persons, as evident from the interviews and FGDs, the “so-called country” named as Nigeria only exists as a result of the presence of Niger Delta oil; hence, each successive administrations at the federal level become aggressive to anybody in the Niger Delta region who wants to

work against the benefits. Extract from an FGD in Twon-Brass give a clearer picture to the above position;

“Nigeria is calling for peace with this lopsided federalism. How can we have peace in this atmosphere of injustice? Ino go work na (it is impossible). We say we are operating a federal government. What I was taught in my elementary government class was that the small units operate on their own. They are the owners of every mineral wealth in their land. But what do we have in Nigeria. The owners have no say on how to manage their God-given wealth. We need to control our resources for there to be peace. After all, all of us get small small thing wen God take bless our region (After all, every regions are gifted with at least some resources). Let all of us tap and use what belong to us and give taxes to the federal government. But the situation in Nigeria is different because, the owners of the land have no power on how the wealth from their land is distributed. The trend must be reversed, so that we can begin to own and control our God-given blessing”

Economic/Inclusiveness participation demands

A critical examination of the demands for justice and peace by the indigenous people of Niger Delta based on the pronouncements of the participants of the study indicate a serious yearning for economic improvement through adequate participation in the management, ownerships and running of the affairs of their God-given wealth and resources. From their perspective, while this is supposed to be taken for granted, this had not really been the case; since every government at the federal level have willfully tried to create poverty in the region in the means of abundance resources that are found in their territory by robbing the people of their economic interest and excluding them from managing and running the businesses that are associated with the oil industries. It is therefore the position the participants in the study, that the calls for peace in the region will not see the light of the day until justice prevail by taking cognizant of the economic interest of the indigenous people through inclusive policies that recognize ownership of the resources as they relate to the following arguments.



In the first place, the participants frown seriously at the politics of oil blocks. They find it as a huge aberration when over 80% of the current oil blocks are owned by northern persons who are hundreds of kilometers away from the pollution of these oil blocks. While they the northern persons who owned the oil blocks are enjoying the wealth and fame that these oil blocks produced, the people in the Niger Delta are left to deal with the consequences of the explorations. In their words, it is very sad to see that behind your house is an oil wells full of petroleum in billions of barrels, yet you go to bed without eating. However, when there are spillages, they run right into your source of drinking waters and your immediate ecosystems and disturb the balance and render them useless. Your sources of livelihood are immediately taken away and further impoverishing the owners. The participants described this as big paradox which can only be resolved by serious or vigorous agitations. According to the participants, the owners are now made to beg for what ordinarily had been given to them by nature. To them, this is unacceptable and calling for peace in this environment while the people are suffering is a huge injustice to the indigenous people. To enjoy peace in the region according to them, the Federal Government must do the needful; by inclusive participation of the people of the Niger Delta in the oil industry and ownership of oil blocs. Thus, the participant demanded that the Federal Government should articulate policies and actions in place that will address the lack of participation, as well as the imbalance in the ownership of oil and gas assets if she requires peace in the region. In a simple form, an FGD in Oporoma summarized this demand thus:

"The Federal Government and the Oil Companies must put a plan in place to empower the owners of the oil for full and adequate participation in the oil businesses. This involved allocating worthy citizens of the Niger Delta oil blocks like their northern counterparts. If this happens, then we are close to peace, otherwise, they should forget about peace talk or be ready to kill all of us before tapping our oil"

Another demand relating to the economic interest of the Niger Deltan is in the area of participation in security and oil facility protection. The participants demanded for surveillance and the protection of oil and gas infrastructure as a way to bring about peace

and take care of their economic interest. The argument of the participants was hinged on the facts that the indigenous people of the Niger Delta, apart from their ownership of the oil wells, are closer to the locations of the facilities. This, according to them put them at great advantage position to provide surveillance services to the facilities in view of the knowledge of the immediate environment and this benefit of knowing the area equally empowered them to identify anybody who wants to damage the facilities. An extract from an FGD in Ekeremor captured this succinctly:

"Na we go fit watch the pipeline. Na here dey born us and na we know this areas well. We also know ourselves. Any bad person here, when go do bad thing, we still know them. No other people get this plenty advantages like us. This one go also give us money for wetin belong to us"

Translated Version (We are better place to provide surveillance over the pipelines. We were born here and we have very good knowledge of the terrains. We equally know ourselves very well, to the extent that; we can easily identify anybody with evil intentions. Nobody has these kinds of advantages like us and this will generate income to us at least from our God-given wealth)

Infrastructural Demands

The demand for infrastructure development for Niger Delta States and oil producing communities was pervasive in the study. Participants hold the belief that, as the hen laying the eggs with which other parts of the countries including the Federal Capital Territory derived their beauty, the region ought to get better attentions than the successive governments at the federal level often give to it. They advocated for infrastructures development master plan for the Niger Delta, which should be put in place with alacrity and given a schedule for full implementation by the Federal Government as well as IOCs as an excerpt in an FGD in Sagbama LGA captured this below.

"Na we get the oil, so the governments need to give us better road before any other area. Make government do this one sharp sharp with better better plan when go make us happy"



Translated Version (We owned the oil; hence the government should give us better roads before any other area in Nigeria. This must be done quickly and a plan put in place to achieve this and make us happy)

The interrogations as to the type of desired infrastructure to be put in place came with such answers such as: good network of roads as seen in Abuja and other developed nations. Specifically, the East-West road was mentioned as an example of the road needed. Study participants argued that, what they have now is an improvement from what it used to be, but the Federal Government must strive harder to bring the road to world class standards. Apart from the East-West Road, the participants questioned the rationale of the exclusion of Niger Delta from completion of railways construction in Nigeria. In this regard, the people requested for a railway to run through the heart of the Niger Delta States to Lagos using modern facilities of double gauge rails.

Additionally, the participants believed that the Federal Government should continue in their effort to build a maritime university in Gbaramatu Kingdom. They believed the continuation of the building of this university is crucial to the peace effort since the stoppage of work was politically motivated by certain politicians who believed they want to control the affairs of the Federal Government to serve their narrow motives. Apart from road and railways, the participants were of opinion that the waterways should also be developed to open up the communities in the coastal regions for effective economic activities. Other infrastructural facilities requested include, good water works, state of the arts hospitals and power plants to generate electricity to the communities in the region jointly funded by the Federal Government and the IOCs as seen from the extract in an interview in Oporoma below:

"As an Ijaw man, what happens to one person happens to all. Look at Delta State. The only thing that Goodluck Jonathan remembered to do for his people – the Maritime University is about to be remove, and the government is calling for peace? It will not happen. They should return that University and I know my brothers here in

Bayelsa will attend that school. What they are doing is politics by one man who is bigger than all of us. But we will resist him with everything until the school is return to us"

Conclusion and Recommendations

The opinions of the people of the Niger Delta as ways for achieving justice and enduring peace in the region are the focus of the study. From the analyses of the interviews and FGDs, four demands were put forward by the people of the region as panacea for lasting peace in the region: Firstly, people believed that Nigeria should truly be administered as a federated unit where the practice of true federalism; anchored on true fiscal federalism and resource control is the norm as enshrined in the country's constitution. Secondly, the people requested for economic improvement through adequate participation in the management, ownerships and running of the affairs of their God-given wealth such as ownership of oil blocks and other oil resources. Thirdly, the expectation of the people in the region is to see to a massive provision of infrastructures including roads, rehabilitation of water water-ways, construction of railways, building of power plants among others. Lastly, the region called for a change of attitude by Federal Government as well as the International Oil Companies to take issues relating the Niger Delta more serious by showing a greater level of commitments in addressing developmental challenges and issues such as pollution.

It is the recommendation of this paper that these demands of the people be taken seriously and the Federal Government working with the IOCs should immediately put action plan in place in addressing the demands of the people of Niger Delta. Today, what we have is Niger Delta Avenger, as a writer once put it, "there would be a recurring cycle of militancy in the Niger Delta region long after the fury of Niger Delta Avengers may have been assuaged through the ongoing negotiations by the Presidency". For lasting solution, there is need for rigorous stakeholders meetings and workshops to articulate the demands of the people and bullet point's actions and genuine desire to implement the outlined actions if the perennial agitations in the region are to be something of the past.

OTHER CPED ACTIVITIES

CPED made progress in the implementation of her project on 'improving Maternal, Newborn and Child Healthcare in Underserved Rural Areas of Nigeria through Implementation Research'

By Job Eronmhonsele

This report focused on implementation of a key component of the Maternal, Newborn and Child Health (MNCH) care action research project in Okpe local government area of Delta State.

As it is with Nigeria, many countries are devising innovating health care financing mechanism in order to achieve Universal Health Coverage (UHC). There is no doubt that achieving successful health care financing systems is central to achieving UHC. A health care financing system should be able to provide adequate financial protection such that no household is impoverished because of a need to use health services (*Uzochukwu, et al. (2015), health care financing in Nigeria*). In Nigeria, health financing come from different sources among which is the community based health insurance. This is a mechanism developed to capture people living in rural communities and people in the informal sector who are unable to receive adequate public, private or employer-sponsored health care insurance scheme. Participation in the scheme by community members is not mandatory unlike the National or State health insurance scheme which captured those in the formal sector whereby beneficiaries pay a certain percentage of their salary to the scheme and deducted at such.

However, experiences have shown that low enrolment rates have greatly affected its sustainability which is mostly caused by trust by community members in those selected to manage the scheme. CPED's project team realizing this fact has engaged with participating communities on several occasions through community dialogues, campaign and stakeholders' workshops to arrive at best practices in managing the CHIS at Okpe LGA,

Delta state. Various interest groups in the participating communities, especially women groups were engaged in discussion and dialog to arrive at a rate that is affordable in relation to the services that will be rendered. After such due consultation and agreement by all stakeholders, a committee was then inaugurated as mentioned earlier through a rigorous procedure to ensure the best and willing minds are selected to manage the scheme. Thereafter, a memorandum of understanding (MoU) was signed by all parties which further detailed how the scheme will be operated.

Immediately the MoU was signed, CPED project team swung into action in conjunction with the Ward Development Committee (WDC), CPED trained Village Health Workers (VHW) and the Inaugurated CHIS management committee, to sensitize members of the participating communities about the CHIS and its benefits. Since registration for the exercise has been agreed to be household based, special groups of field officers were trained on household visitation and sensitization skill using language of the people. This special group and the CPED trained VHWs meet with individual household to educate them of the scheme and answer any questions that might arise in the cause of their visit.

The Okpe LG authority, the key organ of government that is expected to pilot the affairs of the scheme, through the primary health care department at the local level has been very cooperative in terms of the logistics for the takeoff of the scheme. These include the design and production of the user's identity cards, patient record files, and other materials required for the enrolment and implementation of the exercise.



Project Team meet with Community Leaders during MNCH Intervention Activities

The Delta state governments through the ministry of Health who are partner in the implementation of the MNCH project have been very supportive in the redesigning and monitoring of the project for its effective and successful implementation. To further consolidate ideas and achieve project objectives, the commissioner of health, Delta state MoH, in one of the project briefing meetings held on February, 2017 in Asaba, in which the permanent secretary MoH, Dr. Mrs. Oseji, Dr. Francis Onojeta of PHCDA, among

others, were present, instituted a technical working committee to work to strengthen the health care financing scheme component of the action research project. Members include Dr. (Mrs.) Oseji, PS, SMOH; Dr. Okunguni, SA to the Commissioner of Health; and Dr. Ben. Nkachika, D. G. Delta state Contributory Health Commission. Other members of the project team included in the committee were Professor Mrs. Felicia Okoro, Dr. Johnson Dudu and Engr. Job Eronmhonsele.



MNCH Project Team meeting with Commissioner and Permanent Secretary MoH, Asaba, Delta State



Other activities of the implementation research project in Okpe LGA include **support of the maintenance of the PHC facility for the uptake of the CHIS**. The project team realized that for a successful implementation of the CHIS, the existing facility needs to be maintained to care for the needs of men, women and children. Outside the maternity

building, the main health centre was renovated and maintained. This includes; replacement and installation of lighting and fittings, renovation of the soak away and septic tanks, painting and provision of other materials for the running of a befitting primary health centre.



Group exercise during training of VHWs on MNCH Project



Cross-Section photo during the training of VHWs on MNCH Project



Installation of Borehole Pump at Okwabude PHC Facility during MNCH Project Implementation

COMMENTARY

Achieving Sustainable Development through the Girl Child Education: Challenges and Way forward

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Introduction

Education is the process of facilitating learning, or the acquisition of knowledge, skills, values, beliefs, and habits. Education method includes storytelling, discussion, teaching, training, and directed research (Wikipedia). Education also means the process of providing information to an inexperienced person to help him or her develop physically, mentally, socially, emotionally, spiritually, politically and economically. The girl child is a biological female offspring from birth to eighteen (Denga, 1993). It is the age before one becomes an adult, this period ranges from early childhood (crèche nursery) of 0-5 years, primary 6-12 years and when they are in their post primary schools and during this time the child will be under the adult who may be his parent or guardians. The girl child simply put is the female child that is not yet an adult. Hence when we discuss the girl child education we are talking of the process of providing information to the girl child to help her develop physically, mentally, socially emotionally, spiritually, politically and economically.

According to United Nations Education, Scientific and Cultural Organization (UNESCO), despite the importance of girl child education to the national development, over 5.5 millions girls

remained out of school. "Girls' education is a human right. It is also a responsibility as educating girls contribute significantly to the development of a stable, prosperous and healthy nation state whose citizens are active, productive and empowered (UNESCO, 2014). Offering girls basic education is one sure way of giving them much greater power of enabling them to make genuine choices over the kinds of lives they wish to lead (*unicef*).

The Importance of Girl Child Education

The importance of education in the life of an individual can never be over emphasized. In both spiritual and temporal aspects of human existence, education is paramount. It is the light that shows the way by removing the darkness of ignorance; the salt that gives the taste of life; the medicine that cures; and the key which open doors (Khadijat Kuburat Lawal). Education is an important tool for the empowerment of women bringing wide range of benefits to both individual and the societies at large. Girls' education is necessary for making the homes a happy place. A man's life blossoms if he is blessed with well-educated woman as a wife and mother. Educated girls can brighten the future of their country by the good upbringing of their children. Education gives a woman freedom of thought. It broadens her outlook

and makes her aware of her duties and responsibilities (Dinesh Saraf, 2013). The girl child needs to be educated to acquire knowledge and skills needed to advance her status for social interactions, self-improvement, to face the reality in society and to learn how to be a good wife and mother. When she is educated, she realizes the full potentials endowed in her; she discovers to be whoever and whatever she wants to be. With education, she would break the shell of ignorance and open up for self-discovery. We have vibrant and outstanding women in Nigeria like Oby Ezekwesili. In more recent times, Oby has been at the forefront of Bring Back our Girls Movement - a campaign front that calls for the rescue (release) of school girls abducted from Chiboks by the Islamist Militant Group Boko Haram. Chimamanda Ngozi Adichie – the author of *Purple Hibiscus* (a Novel) had been recognized the world over by critics and book lovers, and had won awards from international literary bodies. Abike Dabiri-Erewa in her capacity as Special Assistant to President Muhammadu Buhari on Foreign Affairs and Diaspora had been fantastic in her job and made so much impact in her position. Professor Grace Alele Williams, the former Vice Chancellor of the University of Benin made her mark in the great institution of higher learning. All the aforementioned cases indicate that: “What a man can do, a woman can do better.” Thus, from the preceding analogies, it is evident that educating the girl child translates to better health for the future generations, reduction in child morbidity and mortality thus triggering a snowball effect of achieving all other

Sustainable Development Goals in a viable manner.

Challenges

The girl child faces a lot of developmental challenges in the society especially in Africa. Girl children have been subjected to all forms of oppressions, exploitations and discriminations. Women in Africa have been having challenges having equal right like their male counterparts for a long time despite the recognition of education as a basic human right since the declaration of the Universal human rights in 1948 (Swann & Graddol). Girls are less likely to attend primary and secondary schools as a result of different societal factors militating against them which include: location of educational institutions (King E.M and Winthrop R.2015, UNESCO 2014); tradition/culture, disdain for females who advance into higher educational levels, especially in the rural areas, poverty among most parents discourages higher career pursuits for women, poor school environment, which may be hostile to the girl child, the weak position of women in society which relegate women to the background (DFID, 2005). To majority of the parents, girl-child education is less important because no matter what level of education the girl attains, their ambition is to see the girl-child get married. To some parents, western type of education is classified to be a way of negative transformation and initiation of an individual into materialism, promiscuity and inculcation of western cultural ideologies. Child marriage and teenage pregnancy also prevent girls from getting opportunity to education.

The Way Forward

Improving Girls' access to education is to change the negative perception towards girl-child education through awareness campaigns among traditional and religious leaders, as well as disadvantaged communities regarding the importance of girl-child education. This could change their attitude that the role of women in the society is limited to being home-makers who are expected to cater for and serve the men at home, and that the rightful place for a woman is the home or kitchen. The Child's Rights Act should be strengthened and implemented in all states. This would go a long way in checkmating indiscriminate child abuse. Also, parents and community involvement, families and communities at large must be relevant partners with schools in developing curriculum and managing children's education. Low-cost, basic education should be free or cost very little. Where possible, the Government can also create a fund to support needy families who cannot afford the cost of sending their girls to school. The cost of educating girls should be affordable to all. Teachers and students should be counseled to be gender-sensitive. Finally, education on sexual health information, increased access to contraceptives, in order to discourage early marriages and teenage pregnancies.

For security concerns and violence in school, government should provide adequate security for schools while school heads should monitor students' discipline. Lastly, education on sexual health information, increased access to contraceptives, in order to discourages teenage pregnancies.

Conclusion:

In spite of the benefits of education as tool for economic liberation and social integration, girls in Nigeria lagged behind in major indices of being educated. The important thing about education is that it empowers women to bring about wide range of benefits to both individual and the society at large. When girls are educated, they too will be able to bring up and train their children and help them break the shell of ignorance and open opportunity for self-discovery.

Contribution of Author(s)

Mrs Ireroturi Iyamba is the author of this manuscript. She conceived and prepares the manuscript alone.

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CENTRE FOR POPULATION AND ENVIRONMENTAL DEVELOPMENT (CPED)

Under the current five-year programme of work, CPED activities focus on four broad areas reflecting the objectives set for the five-year strategic plan period as follows:

- (i) Research;
- (ii) Communications and outreach;
- (iii) Intervention programmes; and
- (iv) Capacity Building of CPED and partners.

RESEARCH

Six research thematic areas will be targeted by CPED during the five-year period as follows:

1. *Climate change with particular reference to the wetland and coastal regions;*
2. *Gender and development;*
3. *Health Systems and health care delivery;*
4. *Action Research on Education and Development;*
5. *Growth, development and equity; and*
6. *Niger Delta region, peace building and development.*

COMMUNICATIONS AND OUTREACH

Partnership development with public and private sector/civil society organisations

INTERVENTION PROGRAMMES ON SOCIO-ECONOMIC DEVELOPMENT

Beyond action and policy oriented research and its communications activities, our mandate entails implementing intervention activities in our identified areas of policy research during the five-year strategic plan period. In this context intervention programmes that benefit largely deprived grassroots communities and other disadvantaged people are being carried out.

CAPACITY BUILDING OF CPED AND PARTNERS

CPED believes that strengthening partner organisations including community based organisations must be a key mechanism for the achievement of its mandate. This also includes the strengthening of CPED to be able to fulfil its mandate during the strategic plan period.

