

ENVIRONMENTAL HEALTH PRACTICE IN NIGERIA: A GENERAL OVERVIEW

Engr. Dr. Ife Adewumi, RSH Dip (London) BSc & MSc Env Health (Ife), MSc & PhD, Civil Engr. (Ife), MNSE, Regd.; MMSN, MARSCP, MLACANET

Department of Civil Engineering, Faculty of Technology, Obafemi Awolowo University, Ile-Ife, Nigeria

Abstract

This paper examined the emergence and practice of Environmental Health Profession in Nigeria over the years. It explored the challenges militating against growth of the profession. These include the politicalization of public health profession and the need for higher education for Environmental Health Officers. The professionalization of Environmental Health and establishment of their Registration Council Act of 2005 was commended. The paper advocates for further efforts at true professionalization of the cadre in Nigeria. It was also recommended that the fallow grounds of Environmental Management in Nigeria should be mitigated by Environmental Health Officers, who should in addition, be more focused in discharging their duties and must live above the vices of corruption and poor attitude to work that characterize Nigerian society.

Key words: Environmental Health, Sanitary Inspectors, Public Health Superintendent, Environmental Health Management.

Introduction

An adequate interrogation of the topic 'Environmental Health Practice in Nigeria' to my mind requires that we remind ourselves of where we are coming from, where we are presently and then look ahead to what the future holds for this group of professionals. A look into the past will afford the young officers in our midst to appreciate the efforts that past leaders have made to get environmental health profession to where it is today. It also reminds the old of the gains and problems in the past to ensure that there will be progress in the future. Any people who have no past definitely have no claim to a future. I also believe this reminiscence will also challenge those that may be called into leadership to know that it is not over until it is over.

The paper is also carefully thought out and packaged as a vehicle towards *Enhancing Environmental Health Practice in Nigeria within the context of the new National Environmental Sanitation Policy*.

Defining Environmental Health

The only reference to the Environment in the 1999 Constitution of the Federal Republic of Nigeria is in Section 20 that says "The state shall protect and improve the environment and safeguard the water, air and land, forest and wild life of Nigeria". Although, we all know that the State refers to the Government, specifically the Federal Government of Nigeria, the 'Who' and 'How' to do this crucial task were not specified or defined further in that Constitution. If we take 'the State' as a person or group or persons who are mandated [invariably by the Government, whether Federal, State or Local] to perform that Constitutional role, it will not be out of place to say that Environmental Health Officers (EHOs) are best suited to perform this role. A justification for this view is the recent establishment and passing into law the Environmental Health Officers Council of Nigeria Act (2005).

I make bold to say that the Environmental Sanitation Policy is anchored on this empowerment of the EHOs by the Act establishing the Council. In 2002 when the Executives of Environmental Health Officers Association met at Ile-Ife to prepare and fine-tune the Draft Bill that was presented to the House of Assembly for processing and ratification, they brainstormed on issues that will make every EHO relevant in the 21st Century.

There can be no reformation without information and when those who have information refuse to be reform by it, they will remain deformed. It should also be noted that there is no reference to human beings in that tacit reference to the environment in the Nigerian Constitution but it is implied that human beings are the focus of such efforts. Traditional Public Health definition Act of 1958 says that ‘a nuisance is anything, place or act that has or may have a deleterious effect on man’. However, in the Federal Environmental Protection Agency Act of 1998, ‘environment’ is defined as “...water, air, and land and all plants and human beings or animals living therein and the interrelations which exists amongst these or any of them”.

Healthiness is defined as ‘a state of complete physical, mental and social well-being and not just the mere absence of illness or diseases’. Pension or pensionable employment is currently a social problem that has impacted on every working or career person from civilian staff to uniformed service staff such as the Army and Police. One wonders why EHOs are not classified as Uniformed Service Staff since the body is responsible for policing and protecting the nation from diseases and pollution. Such oversight has probably not favoured the consideration of these professionals for a Special Pensions Fund just as done for Police and the Army.

Environmental Health Practice then refers to knowledge and practice or efforts directed to the provision of facilities or infrastructure for an ecological or environmental balance between human beings and the totality of his/her environment *in a sustainable manner*. Sustainability refers to a consumption or impact sufficient to meet the needs of present users without mortgaging the healthiness of those in the future. No wonder then that Ken Saro-Wiwa (1914-1995) said “*the environment is man’s first right. Without a safe environment, man cannot exit to claim other rights, be political, social or economical*”.

In the Beginning (Sanitary Inspectors of 1950s – Early 1970s)

Going down Memory Lane, the noble works of Dr. O. Oluwole in Lagos, a Public Health Practitioner who, after returning to Nigeria from Britain where he trained, saw the need to have trained personnel who could perform routine house inspections and enforce some rudimentary sanitation laws in the early 1950s in Lagos. The *Sanitary Inspectors*, as they were then called were solely responsible for most of the routine duties such as Market Sanitation, House Sanitation, Food Hygiene, etc. They were assisted by Sanitary Labourers who ensure that waste brought to public depots or incinerators were promptly managed. Following the success of Dr. Oluwole’s effort in Lagos, the Ministries of Health in the three Regions of Nigeria then established a School of Hygiene in each of the Regions for training of Sanitary Inspectors in Nigeria then. These were the School of Hygiene at Ibadan, Aba and Kano.

Probably because the foresight for the establishment of this very important cadre of health workers came through a Medical Practitioner, the Establishment for the

profession was put under medical doctors. It is also important to note that it was not only Nigerians that were trained at the three Schools. The School Hygiene at Ibadan in particular had students from other West African countries such as Ghana and Sierra Leone. Its worthy of note that one of the Trustees, Alhaji Muhammed Kazaure, was among the distinguished pioneers of this noble profession in Kano and Pa A.A Akinbola was at the Ibadan School of Hygiene.

The Politicization of the Public Health Profession

A major setback on the profession occurred during the first Republic especially in the Western Region, when in an attempt to please some powers that be then, a few Health Inspectors were used by politicians to plant nuisances in the premises of political opponents, and ostensibly prosecute them. This backfired when that political group failed to win the 1963 election. Another problem occurred when a building under construction collapsed at Bodija, in Ibadan. Then Health Officers were responsible for the approval of Building plans and routine inspection and approval during the construction from foundation to the occupation of the completed house. About the same time, the Association of Veterinary Doctors and Technologists (i.e. Veterinary Superintendents) took the Association to Court to claim responsibility for meat inspection due to a case of display of infected beef that had been inadvertently passed for sale and as fit human consumption by Health Officer.

This tumult continued till the end of 1970 when a major change took place in the profession. One thinks that using the three incidences to downgrade the profession showed lack of foresight on the side of the government. It was a decision tantamount to killing a mosquito with a sledge hammer! This has accounted for a downward slide in the healthiness of the Nigerian Community. It is not only public health that was affected, the profession suffered from the reprisal.

These points were raised here as a warning that the ethics of environmental health profession must be maintained and no individual or group of individual members should allow politicians to use them and lose all that the profession has gained in the recent past. History should not repeat itself concerning this profession!

Today, when people say they cannot see the 'helmeted officer in Khaki to bring sanity to polluted cities' it is a confirmation that there is a future for the practice of the profession and a challenge. In this Information Technology (IT) age, every means of communication or advertisement should be used.

The public tend to associate the major roles of Environmental Health Officers to sanitation alone, forgetting that the maintenance of good sources of water supply, food hygiene, immunization against communicable diseases, pest management, etc. is within the premises of the public health practitioners. Some even ignorantly argued then that rather than fight to retain meat inspection as part of their duties, EHOs should focus on municipal wastes management and breaking of pots containing mosquito larvae! It is noteworthy however, that veterinary people do the work at the abattoir, while the control of beefs at the market place where they are displayed for sale remains part of the roles of EHOs.

From Public Health Inspectors to Public Superintendents (1970 – 1980)

The need for improved professionalism not just for a change of nomenclature informed the establishment of new cadre of health officers, the Public Health Inspectors. The training for Health Inspector includes an In-Service Training of three years with an entry qualification of West African School Certificate as required for University Admission. Practicing Sanitary Overseers were drawn from Local Governments to convert to the Health Inspectors cadre after undergoing the same training with the School Certificate holders. The Health Inspectors with Minimum WASC credits also take a Professional Examination organized by the Royal Society for the Promotion of Health for West African Inspectors on completion of the years of training.

Pa Akinbola, then in the Services of the University College Hospital, Ibadan, again played a prominent leadership role as President of the Association of Health Inspectors of Nigeria (and Alhaji Muhammed Kazaure with Sunday Ogundare as General Secretary) mobilized members in an Industrial struggle that resulted not only in improved Conditions of Service for Health Inspectors but eventually to a change of the title from Public Health Inspectors to Public Health Superintendents. It also brought back dignity to the profession. It is pertinent to mention that the Association enjoyed immense support from Dr. Joshua Adeniyi (the first qualified Health Inspector to cross into academics in Nigeria and who is now a Professor of Community Medicine at the University of Ibadan).

The Need for Environmental Health Education at Higher Levels

It is within this time-framework that the University of Ife (now Obafemi Awolowo University), Ile-Ife started a BSc degree programme in Environmental Health and Epidemiology precisely in 1974 becoming by this the first University in Africa to have a programme in Environmental Health. Engr. Prof. Oluwole O. Songonuga was the visionary and first Head of Department of the programme. The programme attracted studentship from as far as Uganda, Liberia and Gambia. It is happy to note that Mr. Bamgboye, the current President of this noble profession's Association had the best Graduating Undergraduate Student Result to date with his First Class in the programme and by 1987, the author became the first Candidate admitted to the MSc (Environmental Health) programme completed in early 1989 before crossing into Civil Engineering profession. One Mrs. Adinlewa of Akure was the first to have a First Class in the programme but her cumulative grade point average was less than that of Sanitarian Bamgboye. The mention of these names is to encourage young EHOs to believe in themselves that they can become whatever they set out to achieve in life.

The Ile-Ife Environmental Health programme gave Direct Entry admission to holders of the RSH Diploma for West African Health Inspectors and later to those with West African Health Examination Board before the programme was rationalized and finally cancelled. Although other Universities have since started Environmental Education (EE) programme, such as University of Calabar and Nsukka, and University of Agriculture, Abeokuta and Lagos State University, these programmes are not Environmental Health programme per se. The importance of a degree in Environmental Health, especially to the advantage of EHOs is *cine qua non* to manpower development.

Paragraphs 99 to 108 of the Draft Plan of implementation for environmental

management and sustainable development worldwide of the World summit on Sustainable Development (WSSD) agreed that:

- i. Education is critical for promoting Sustainable Development (SD), and so it is necessary to mobilize necessary resources to complement the efforts by national governments to pursue the goals and actions.
- ii. Financial assistance and support should be provided to education, research, public awareness programmes and developmental institutions in developing countries ... in order to sustain their educational infrastructures and programmes, including those related to environmental and public health education; and
- iii. Means of avoiding the frequent, serious financial constraints faced by many institutions of higher learning, including Universities around the world, particularly those in developing countries and countries in transition should be considered.

From Public Health Superintendents to Environmental Health Officers (1980s–1990)

Since life is dynamic, any profession that refuses to change with time will become a static and redundant relic. The clamour for a wider environmental monitoring scope following the Koko toxic waste dumping resulted not only in the establishment of the Federal Environmental Protection Agency (FEPA) in 1988 but also the broadening of the scope of the job performance of health officers. Note that the job specifications and mandates of a Public Health Inspector is less than that of an Environmental Health Officer by which the cadre of professionals came to be known in the late 1980s.

With a deep sense of humility and for the records, the author was privileged to be the first to be called an Environmental Health Officer (EHO) in Nigeria in August 1983 at the Federal Polytechnic, Idah now in Kogi State, where the office was created after my National Youth Service Corp (NYSC) for my employment with the Institution.

How then is the EHO different from the Public Health Superintendent? It must be emphasized that the change of name is a reflection of the broadening of the role or expected role of the environmental health practitioner in the realm of the global awareness on the need to preserve the environment. Sridhar (2006) reminds his readers of the WHO (1952) definition of Environmental Health as *'the control of all those factors in man's physical environment which exercise, or may exercise, a deleterious effect on his physical, mental, or social well-being'*. In particular, it refers to the control of:

- i. Methods for the disposal of excreta, sewage and community waste to ensure that they are adequate and safe;
- ii. Water supplies, to ensure that they are pure and wholesome;
- iii. Housing to ensure that it is of a character likely to provide as few opportunities as possible for the direct transmission of disease, especially respiratory infections, and encourage healthful habits in the occupants;
- iv. Milk and other food supplies, to ensure that they are safe;
- v. Personal and public habits or other alternative hosts associated with human disease;

- vi. Atmosphere conditions, to ensure that the external atmosphere is free from deleterious elements and that the internal conditions of workshops, houses, etc are suitable for the occupation undertaken (WHO, 1952).

EHOs must have competence or professional interest in the seven keys to total promotion of health in the list above.

Secondly, it is recognition of the fact that by the time of the change, several graduates of the Environmental Health Programme at OAU and elsewhere had acquired further postgraduate degrees in Nutrition, Health Education, Community Diseases Control, and some with RSH Diploma or WAHEB Diploma had also obtained the Master of Environment Management. Among EHOs in Nigeria are members who are lawyers called to the bar and very articulated. The presence of such high caliber of professionals implies that with such scientists and learned colleagues in the profession, the EHO has no advancement limit especially in the 21st Century.

Environmental Health Management versus Environmental Management

As reiterated by Alo (2006), the challenges of sustainable management of the Nigeria environment to meet the development needs of the 21st Century will depend on having a large cadre of well-trained and well equipped resources managers. The challenges also requires that the environment be fully understood to mean the totality of the social, biological and psychological surroundings of any people and that environmental management now requires multidisciplinary, cross-sectorial professional competence. Alo (2006) further argued that amongst the strategic options available to mitigate environmental problems and in the interest of SD, capacity-building through training and education programmes constitute an important segment of any country's framework. There is unfortunately a sordid paucity of personal/human capacity with experience and access to the latest technologies and methods to deal with the complex issues of environment and ecology management.

Ating (2006)'s contribution in Njemanze and Mefor (2006) is relevant in clearing a lot of ambiguities about the role of EHOs vis-à-vis environmental management. He (Ating 2006:215-225) pointed out that 'the professionalisation management practice in Nigeria based on field study, with emphasis on formal training should be mandatory. The technical personnel that offer services, as consultant should be person who has undergone formal professional training in a discipline that is technology based. They should be fully registered with professional institute or Association and are bounded by the professional ethics and code of conducts of their professions. The professional ethics and code of conduct for the farmer and hunter are not the same: it is also applicable to the Engineer, Architect, Lawyer, Environment Manager, Chemist, Biologist, Town Planners and Geographers, etc. He went on to mention an Environmental Management Association of Nigeria (EMAN) of which he is a fellow, and president among other things. In listing the Environment Management Team, he identified a professional in Environment Management as the Team Leader with Town Planners, Architects, Estate Managers, Land Surveyor, Lawyers, Engineers, Medical Scientist, Natural Scientist, Social Scientist and Quantity Surveyor as members. In order Teams, there is no known profession attached or referred to as the environmental manager, I want to make bold to say with the Environmental Health Officers Council of Nigeria Act (2005). The EHOs is this unclassified professional.

At an International Workshop on Environment Statistics in Dakar, Senegal, Adeyinka *et al* (2005) identified critical environment problems in Nigeria including:

- a. All types of erosion (sheet, Gully and Coastal and Marine erosions);
- b. Flooding (coastal flooding, river flooding and urban flooding);
- c. Drought and Desertification;
- d. Oil pollution from spills, oil well blow-outs, oil ballast discharges and improper disposal of drilling mud);
- e. Urban decay and squatter settlement
- f. Industrial pollution and Waste;
- g. Municipal solid waste;
- h. Concrete jungles/cities
- i. Loss of Fauna and flora; and
- j. Climatic change/Ozone layer depletion.

Despite the multidisciplinary nature of environmental management, many of the problems listed above require the professional input of EHOs. Take urban flooding for instance, construction of premises in unapproved locations such as along riverbeds or drainage areas and / or dumping of refuse in unregulated or unapproved location are major causes of urban flooding. Where are we when such structures are being put up, or when refuse are dumped into river courses? It is usually not right for even the Town Planning Authority to put Red 'X' on a structure nearing completion. Such moves are interpreted as meaning 'we need money from you or else we'll demolish this structure' it is ironical that such illegal structures are eventually 'approved' and occupied.

Professionalization of Environmental Health Practice

Items 'e' through 'g' is also conveniently within the jurisdiction of the Environmental Health Practitioners. Even the issue of ozone depletion is often traceable to burning of fossil fuels and incineration over which Environment Health Practitioner has jurisdiction. So at least 50% of what were identified as the major environmental problems in Nigeria are under the management of the EH practitioners. I am in total agreement with the views of Mr. Maurice Strong who said 'protecting the environment is so important that requirements and standards cannot be too high and continuing improvement must be made regardless of cost (Strong, 1992). Sr. Strong Chaired the Rio De Janeiro Summit in 1992 and he cautioned that 'we can rejoice in the creation of environment ministries and agencies: that is not sufficient to deal with environment issues. Fundamental challenges in economics behaviour are the only way in which we can ultimately deal with the environmental challenge. That means integrating the environmental dimension into every aspect of economic policy and decision making" Alo (2006) concluded that Nigeria has the problem of competence and enforceability which is related to a death of professional manpower. He had proposed the approval of the NICEP (Nigerian Institute for Chartered Environment Practitioners) Bill already put before the National Assembly to enable NICEP regulate environmental management as a profession.

The Enactment of the Environment Health Officers Registration Council Act 2005

While not sure of the content of the NICEP Bill referred to by Alo (2006) or the proposed EMAN Bill (Ating, 2006), the establishment of many professionally-related bodies is

bound to create a situation where there will be cross-border effect resulting in 'noise' and 'blood-letting'. Especially with the signing into law of the Environment Health Officers Registration Council of Nigeria Act (2005) is there room for NICEP and/ or EMAN to seek corporate membership and find relevance in the EHORECON? In situation like this, eternal watchfulness is the keyword for a sustainable existence and relevance of the first to be registered body. It's always tougher to maintain leadership than in getting into leadership position. The Association of EHOs struggled to get the Bill signed but that is not all to it. It is important for all hands to be on deck that the Association has the much needed solution to environmental health problems in Nigeria.

Enhancing Professionalism of the Environmental Health Officers

How well secured are the members in the face of such other bodies that may also lobby to get registered. Given the understanding that, such things are at times money matters or the people you know. It is not enough to say that the sky has enough room for all birds to fly without colliding into one another, because there are those birds of prey that will deliberately hit out at weak birds. Added to this is the fact that Federal Government decision and /or policies are most times unstable; often it is more of a '2 steps forwards, five steps backward' drunken scenario. I am not naturally a pessimist but the need to safeguard the future and welfare of the EHOs is crucial. This informed the need to warn that whatever is taken by the Government may not come back to EHOs again.

The Total Man Concept

The 'Total Man Concept (TMC) has as its philosophy, the development of the individual, who will eventually develop their 'world'. If anyone of you has attended any of the Man O' War Training, you will notice the similarity in this TMC philosophy and the Motto for the Man O' War Movement which is "Build the Man the Community".

Deeper than the Man O' War motto however, the TMC is directed at the education of the total man, that is the Spirit, Soul and Body. There should be self-development for community service philosophy among EHOs. The gist of what I am trying to say is that many people are working to be paid instead of working to be made (Oyedepo, 2004), working for money instead of making money to work for them.

So, any EHO who builds his/her hope on what to gain from harassing poor offending members of public will not be able to see the wonderful opportunities provided by the wonderful training received at the School of Health Technology and/ or later in the University. So, instead of appearing to be busy at work every day, they should develop their skills in areas of interest and or establish a private practice outside official hours. After all, Doctors and nurses, Pharmacists and almost all other professions have their own private practices, why cant EHOs?

Breaking- Up the fallow Ground in Environmental Health Management

The author was in Tanzania in December 2006 to attend two different Workshops. The first one in Arusha, by the United Nations Environment Programme (UNEP) discussed the need for African Nations to embark on Human Development through the Market (HDtM) as tools for Sustainable consumption and production. Let us be informed that Sustainable Development has evolved to Sustainable Consumption and Production in the sense that there cannot be any meaningful development where there is no sustainable production. The sustainable consumption of such product is what will guarantee protection of the environment. So, we were taught to identify things in the

neighborhood that those presently living below the poverty level can be encouraged to either produce or source and thereby make a living above the poverty level and have sufficient to do other healthful things. The world having become a global village, eco-tourism is one area that developing countries can profit immensely from.] As a professional health practitioner, how can you be relevant in tourism in any way? As an entrepreneur, how can you invest ahead of the programme and make your profit during the programme with all your investment bringing in profit? Can you alone or group with mutual fund invest in such things without the efforts eating into your official duties, etc? A man in Lagos identified our vanity for weekly parties and the need for restrooms at such open parties. He started a mobile toilet services and he is into immense wealth now.

Mr Kofi Annan, the former United Nation secretary General, in his address to the world Economics Forum (Feb 2002) said “There are many positive ways for business to make a difference in the lives of the poor – not through philanthropy, though that is also very important, but through initiatives that, over time will help to build new markets” it is important for EHOs to consider positive, legal means of improving their status.

The Second Workshop at Dar es Salaam was jointly organized by UNIDO and the University of DaresSalaam on Low-Cost building design as a relevant science for developing countries and as a solution to slum issues and disease traceable to overcrowding or poor infrastructure in housing estate. The author presented report on personal efforts at developing appropriate materials and technology for Low-Cost but High-Technology Building Construction. EHOs may not go into materials development but it is thier responsibility to ensure that in their area of jurisdiction, they should ensure that appropriate materials are used and prevent a re-occurrence of the Bodija episode. This falls within the mandate to controls buildings.

As a young Health Officer in the Oyo State, three problems challenged and motivated the authors thoughts: the problem of ever presents heaps of refuse in Ibadan street; inadequate water supply and the attendant water related diseases and poor housing. When the opportunity for further studies came, I made these my research interest to date. I think we are at a point when those research efforts should leave the confines of a library or publications for applied implementation of the findings. It will interest you all to know that the three areas are major issues in the eight global millennium development goals (MDGs) to which Nigeria is a signatory. The issues range from reducing to halve extreme poverty through reduction of under 5 Mortality Rate (U5MR), provision of water to halting the spread of HIV/AIDS and providing universal primary education all by the year 2015 (<http://www.un.org/millenniumgoals/>). We have just eight years to do all we have to do!

The author also presented report on effort at developing electro coagulation methods of raw water and waste and wastewater treatment, as a cheap means of water treatment that will reduce cost of chemicals at an international Conference in Ethiopia (Adewumi, 2006a). Though not a new technology, what is probably new is my use of scrap aluminum metal waste and a plate of AC as electrodes and dielectrics respectively. If you recollect that many waterworks don't treat water and Activated carbon (AC) as dielectric to remove total solids and turbidity. That project can benefit a community water treatment plant when completed. An aspect of that study reported

relates with my project on production of Activated Carbon from palm kernel shells for water treatment. Efforts have been successful at producing cylindrical absorbent filter candles for household water treatment. The absorbent/filter unit removed taste and odour that ordinary water filter candles could not remove. One major objective is to reduce the cost of access to potable, wholesome drinking water, lack of which accounts for more than 110% of U5MR.

The U5MR is used as an index of development: the smaller rank the worse the case (UNICEF, 2003) as at 2004, Nigeria's U5MR ranking was 158 and Sierra Leone was number 1. From 1960 when we had independence to 2002 when data was available, the U5MR of Nigeria reduced from 207% to 183% deaths % while infant mortality rate (IMR) also decreased slightly from 123 to 110 deaths %. Libya rank 130 with the U5MR and IMR reducing from 270% and 159% in 1960 to just 19% and 16% respectively in 2002.

If development is to assume a more human face, then there arises a corresponding need for a means of measuring human as well as economic progress. The UNICEF uses the U5MR as the principle indicator of such progress since it measure an end result of the development process. It is also the result of a wide variety of input, the nutritional health and the health knowledge of mothers; the level of immunization and ORT use, the availability of maternal and child health services (including prenatal care); income and food availability in the family; the availability of clean water and safe sanitation; and the overall safety of the child's environment (UNICEF, 2003).

So rather than buying pure water at N5 per sachet or N10\L, or the bottled water at N100\L, the activated carbon filter system can treat several liters of raw water per day for several months at a cost less than N250 for the candles. A major aspect of my PhD work was developing the technology for the production of AC commonly used by most industries, especially pure water industries, beverages and pharmaceutical industries form PKS. Not only were the appropriate condition for the production determined by optimization, the special furnace and equipment for its production was also developed (Adewumi, 2006 see slides). The objectives for the development of the equipment is to facilitate local production of this engineering materials which is presently imported into the country, even from developing countries like Malaysia, and Thailand. Since most agricultural waste are suitable for its production, I have also produced AC from even carbonaceous municipal solid waste, fruits and leaves of almond fruit tree (*Terminalia catappa*). Etc.

Still on pure production and sales, the role of EHOs at routine checking of the quality of the product is immense. Once NAFDAC approves registration, most asked water producers hardly run routine checks on the quality of the product. This has accounted for evidence of bacterial growth in several samples of sachet waters in different parts of Nigeria (Okoh et al, 2005). The Institute of Public Analysts of Nigeria (IPAN) has taken over an aspect of the EHO's job of routine bacteriological and characterization of water sample meant for public consumption. Although NAFDAC requires a report by a public analyst as a neutral monitoring body, no edit has said that the EHO cannot conduct routine checks on such water and premises.

The sachet-bursting advertisement of NAFDAC is one such confirmation of the usurpation of aspect of EHOs mandate for routine quality analysis and check on all

foods intended for human consumption. For this analytical aspect however, the EHO employer must provide necessary facilities. Since a batch of pure water in sachet has a shelf life of two weeks, it means that every registered pure water producer must be visited at least twice a week and the sample collected. If there is evidence of contamination, the EHO and not NAFDAC, can confiscate such product, lock up the establishment until all the treatment facilities are put in order. Quote me! And I think the Association should take this up legally with reference to your mandate as specified in the Act establishing the council.

Mutual Fund Investment

A corporate Thrift and Credit Society where deduction are made directly at source is a sure and better way than the proposed contributory Pension Scheme. At least, you will get your full contributions with interest after giving them the mandatory six months notice. Another option is Investment in Stock, especially of blue chip companies, with shares, you make money to work for you and the dividends bonus share and appreciation of the face value of each share into individuals struggling on their own.

I am privileged to be linked and associated with a newly established Nigeria Company that will soon come to your LGAs and State to embark on major Sustainable Business Ventures that will bring dignity to the environmental health profession. The target is to bring solid waste management solution to every community. Not only that, the business will also allow limited number of space/opportunity for individual participation that will bring a very attractive and robust Sanitation will also be reduced by at least 60% to 70%.

The general minimum ROI per annum to partners may be collected either lump sum at the end of one year or divided into monthly or quarterly dividends until the partner dies or withdraw is investment. I am not allowed for now to say more than this but whoever is interested and prepared to venture and take the risk will receive full details of when the company will come to their State of Local Government Area. The cooperation of this body with the Company is crucial to a mutual up-liftment of individuals and our communities from the slum situation into a healthy situation, as jobs will be created for many restive youths, who will be well taken care of salary – and health – wise! That is a way of implementing the Human Development through the Market (HNtM) programme towards Sustainable Consumption and Production.

Conclusion

The paper has been presented to let EHOs know where they are coming from, where they are at present, and their hope for a better future even in the face of the reality of worsening conditions of services and greater challenges to the practitioner. The need for training and retraining was emphasized and the reality that they need not work for money any longer but make money to work for them as individuals. The cooperate need to protect the mandate conferred on the Association by the Environment Health Officers Registered Council Act (2005) against usurpation of its roles by Contending bodies was emphasized.

References

- Adewumi, I. (2006a). Developing Electro coagulation Treatment Unit for Water Treatment, paper presented at the 4th African Roundtable on Sustainable Consumption and Production, United Nation Conference Centre, Addis Ababa, Ethiopia, May 28 – 1st June 2006.
- Adewumi, I.K. (2006c). Characterization and Specification of Activated Carbon Produced from Palm Kernel Shells for Water Treatment, Unpublished PhD Thesis, Obafemi Awolowo University, Ile-Ife.
- Adewumi, I. (2006c). Developing Materials for Low-Cost High-Technology Building, Conference Hall, Kunduchi Hotels & Resorts, Dar es Salaam, Tanzania, 12 – 14 December 2006.
- Adeyinka, M.A, Bankole, P.O and Solomon, O. (2005). Environmental Statistics: Situation in Federal Republic of Nigeria. Country Report presented at the Workshop on Environment Statistics, Dakar, Senegal, 28th February to 4th March 2005, 8pp.
- Alo, B. (2006). The Challenges of Manpower Development in The Nigeria Environmental Sector. In: Njemanze, V and Mefor, L. (2006) (eds), A Book of Readings on the Environment & Ecology, national Assembly, Abuja, pp. 143 – 169.
- Ating. A.E (2006) Management of Flood Coastal Erosion in Nigeria. In: Njemanze, V. and Mefor, L. (2006) (eds), op. cit, pp. 186-225.
- Covenant University (2004). Staff Handbook & Condition of Services, Covenant University Press, Canaan Land, Songo-Ota
- Njemanze, V and Mefor, L. (2006) (eds). A book of Reading on the Environment & Ecological Problems in Nigeria. Senate Committee on Environment and Ecology, national Assembly Abuja.
- Oyedepo, D. (2004). Bishop Dr. Oyedipo is the Chancellor and Visionary of the Covenant University, Ota. The cited quotation is one of his Anecdotes in: Covenant University (2004) op cit.
- Sridhar, MKC (2006). Eco-sanitation for Sustainable Development. In: Njemanze, V and Mefor. L. (2006) (eds), op. cit, pp.170 – 185.
- Strong, M. F. (1992). UNICED, Agenda 21 and Thoughts on Environemnt and Development. In: Global Environmental Accords. Earthscan Publications, London.
- UNICEF (2003). The State of the World's Children 2004. UNICEF, New York.
- WHO (World Health Organization, 1952). WHO Technical Report, 1952, No 47. pp. 4-5.