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# RED ALERT ON HEALTHCARE WASTE

## AT THE 8TH FEDERAL AND STATES REGULATORY DIALOGUE



- 12th National Council on Environment Ends in Akure
- President okays Amended NESREA Act
- Senate Commends Agency

## From the Editorial Desk

It is with joy that we inform you in this edition, that the amended Act of the National Environmental Standards and Regulations Enforcement Agency (NESREA) has been assented to by the President and Commander in Chief of the Armed Forces of the Federal Republic of Nigeria, General Muhammadu Buhari, GCFR.

The National Council on Environment was held in Akure, the Ondo State Capital. Key decisions on the Environment were taken at the meeting which was chaired by the Minister of State for Environment, Alhaji Ibrahim Usman Jibril.

Health Care Waste is a specialized form of waste that requires very careful handling. Getting a regulation that would effectively guide the management of waste from medical facilities was therefore the focus at the 8th NESREA Annual Federal and States Regulatory Dialogue.

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Turn the pages to get the details of the key aspects of the regulation and the need for it.

This edition also has report on the visit of the Senate Committee on Environment to NESREA led by its Chairman, Distinguished Senator Oluremi Tinubu, and lots more on News beat

The Agency organised a special Retreat for its Governing Council to get them acquainted with the NESREA process. This year, the Management and Staff who have served in the Agency from its inception in 2007 received 10-year meritorious service award for their dedication in building NESREA into a strong institution for environmental protection in the country. Over eighty staff of the Agency at the headquarters and the field offices received the award. We celebrate them in a special way in this edition.

Plus all our regular columns to keep you informed. Enjoy.

*Amaka Ejiofor*

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# THE NEED TO BE AWARE OF THE LAWS

**T**he strength of any regulation lies in the enforcement and when there is any gaps in the laws, the situation is as bad as when there is no regulation at all. There were some loop holes in the NESREA (Establishment) Act 2007 which made effective enforcement of some of the provisions of the Act difficult.

Indeed, the perpetrators of environmental crimes had little or no fear of what the sanctions for their evil act would be. They went about committing crimes knowing that the penalties were not stringent enough to serve as serious deterrent to them.

Also, the hands of the Agency were tied when there was the need to move in to stop an act of violation without a recourse to relevant court orders, even when such activities posed immediate dangers to human health and the environment.

These are just some of the shortfalls in the Act that necessitated a move towards amendment. After the public hearings, the Act sailed through the Senate and the House of

Representatives with both Chambers endorsing the Act. In November 2018, Mr. President gave an assent to the Act, thereby bringing it to force. We are very grateful to Mr. President and we thank him for his political will and leadership.

This would definitely mean difficult times are in the offing for environmental violators. NESREA has received the biggest set of teeth and will not hesitate to bite! Of course the Agency champions voluntary compliance where individuals and facilities on their own adopt the best practices by abiding to the tenets of environmental regulations, but where there is non compliance, the Agency will definitely wield the big stick.

Really, it is a new dawn for the Nigerian environment and would be times of happiness of all men of goodwill who are ready to do the right thing at all times. Nothing beats a good environment devoid of all forms of pollution and degradation, poor sanitary conditions, littering, wildlife and biodiversity loss, flooding, deforestation, and a host of other environmental problems.

We can together tackle the various environmental problems facing our country if we all obey the rule of law. No individual or corporate body is above the law of the land. The responsibility of NESREA is to ensure that the environmental laws are obeyed. Any violators must face the wrath of the law.

If we get it right with our environment, we will definitely witness improved health for citizens. NESREA has 33 gazetted Environmental Regulations which spell out the rules to guide all that we do that would in any way affect the environment. If we follow these regulations, we would definitely achieve a clean and healthy environment for all Nigerians. This is why it is absolutely necessary that we should be aware of the environmental laws.

**Dr. Lawrence Chidi Anukam**  
Director General  
NESREA

**Keep Your  
Environment Clean,  
Avoid Littering**



Dignitaries at the 8th Annual Federal and State Regulatory Dialogue. 6th right: Amb. Blarabe Rano, member Governing Council, representing the Chairman of the Council. On his right is the DG NESREA.

## RED ALERT ON HEALTHCARE WASTE AT THE 8TH ANNUAL REGULATORY DIALOGUE

8TH ANNUAL REGULATORY DIALOGUE

**P**roper handling of wastes is a critical area of environmental management. When wastes are from health research facilities, hospitals, laboratories, pharmacies, dental clinics, dispensaries and patent medical shops they require even more careful handling. Healthcare waste is very different from waste from other waste streams and include tissues, organs and body parts of humans and animals; chemical wastes with high content of heavy metals; wastes from drugs, vaccines, mercury containing devices; radioactive wastes and those objects such as needles and cutting devices.

### **A need to Regulate**

These wastes must be handled with utmost care

and separately from municipal waste to avoid spread of diseases, contamination of agricultural lands, contamination of surface and underground water and air pollution among others.

Modalities for regulating health care waste is the thrust of the draft National Environmental Healthcare Waste Control Regulations which were presented to stakeholders at the 2018 edition of NESREA's Annual Federal and States Regulatory Dialogue. The Dialogue drew participants



L-R: Director Partnership and Education, Mrs Florence Oti; DG NESREA, Dr. Lawrence Anukam, and Director Environmental Quality Technology, Mr. S. B. Joshua at the 8th Annual Dialogue

from Ministries, Departments and Agencies of Government at the Federal and State levels; the Academia, health institutions and the private sector.

### **The draft National Environmental Healthcare Waste Control Regulations**

As an Agency of government charged with the responsibility of enforcing best practices in the environment sector, developing relevant regulations to address emerging environmental problems is at the heart of the mandate of NESREA. Shedding some light on the Health Care Waste Control Regulations, the Director General of NESREA, Dr. Lawrence Anukam said, "the thrust of this is essentially to prevent and minimise waste emanating from activities of healthcare facilities with a view to safeguarding human health and the Nigerian environment, and it lays emphasis on generating the waste, handling the waste and treating the waste".

The Regulations make it mandatory for every healthcare facility to prepare and implement a functional Health Care Waste Management Plan with strategies for handling healthcare waste. It also prohibits open burning of such wastes and recommends stiff penalties for violators.

### **Roles for Federal, States and Local Governments**

As with all its regulations, NESREA works with relevant stakeholders at all levels to achieve its mandate. This Dr Anukam says is because, "as an enforcement arm of the Federal Ministry of Environment, our responsibility goes beyond developing the regulation. Part of our responsibility is to work closely with key stakeholders at the Federal and State levels". He went on to add that "Collaboration is key between the Federal and the State. The responsibility of NESREA is not to stifle development but as much as possible make sure that all aspects of development

would not impede environmental quality and human health.. Every development must be in harmony with nature".

Also stressing the need for collaboration between the different tiers of government in management and regulation of healthcare waste, the Chairman of the Governing Council of NESREA, His Excellency, Chief Iyiola Oladokun, expressed worry that "there is no coordinated effort to comprehensively manage this category of waste". The effect of this he noted was that "much of our healthcare waste is haphazardly mixed with municipal wastes, exposing the environment to various biological, chemical and radioactive pollution". The Chairman, who was represented by a member of the Board, Ambassador Balarabe Rano, called on all stakeholders to work with NESREA to entrench a sound and sustainable healthcare waste management regime.



Participants at a group session during the Dialogue



In his good will message, the Permanent Secretary, Anambra State Ministry of Environment, Dr. C.N Okafor described healthcare waste as very dangerous form of waste which ought to be separated from other solid waste. He commended NESREA for putting together a regulation to control Healthcare Waste.

Former Commissioner of Police for the Federal Capital Territory, Barr. Lawrence Alobi (Rtd.) urged NESREA to be proactive with respect to waste management and thanked the Agency for her contributions to improving the quality of life.

While commending NESREA for hosting the Dialogue, the Managing Director/ CEO of Enville Ltd, Mrs. Celina Maduemezie, encouraged participants to give their best to

ensure the success of the Dialogue.

Also speaking, the Minister of the Federal Capital Territory, Alhaji Mohammed Bello who was represented by the Director, Abuja Environmental Protection Board (AEPB), commended NESREA for hosting the annual dialogue for stakeholders to brainstorm on emerging environmental issues.

At a technical session chaired by the CEO of ECOLEXIS Ltd, Barr. John Ugolo, NESREA Director in charge of Inspection and Enforcement, Mrs Miranda Amachree, made a presentation titled "An Overview of the draft National Environmental Healthcare Waste Control Regulation".

Arising from syndicate group discussions, participants

recommended among other things that sensitization of the regulators, regulated community and waste handlers should be carried out by NESREA in order to enhance enforcement and compliance of the regulation. It was agreed that NESREA should partner with healthcare facilities and the private sector to establish a health care waste treatment facilities.

Over 200 participants drawn from different organizations participated at the Dialogue and these included major stakeholders and sector players, representatives of all relevant Federal and State Ministries and Agencies, public and private corporations, State and Local Governments, professional associations, the academia, the media, the civil society, and the general public.

## NESREA 10 Years Service Award

NESREA staff who have been with the Agency from inception recently received 10 - Year Meritorious Service Award.

The Award was presented by the Director General / CEO, Dr. Lawrence Anukam. In a letter of appreciation to the awardees, Dr.

Anukam thanked them for their contributions to the growth.

He said, "I write to thank you immensely for your decade of commitment and hard work towards the implementation of NESREA programmes and activities."

The DG added, "it is my firm belief

that you will continue to show this commitment in the discharge of your duties in the years ahead."

Among the awardees at the Headquarters were four Directors of the Agency.

We say congratulations to the awardees.



L-R: Director, Admin & Finance, Alh. Abdullahi Hassan; Director EQT, Mr S. B. Joshua; Director I & E, Mrs. Miranda Amachree; DG NBESREA, Dr. Lawrence Anukam; Dir. PPA, Mr. Victor Ojogbo; Dir. P&E Mrs. Florence Oti; Legal Adviser, Barr. Bola Braimoh-Tokura and Dir. Special Duties, Mr. D. B. Salka.

# THE ESSENCE OF THE NESREA AMENDED ACT



**T**he President and Commander-in-Chief of the Armed Forces, General Mohammadu Buhari has signed the amended NESREA Act into law. This would be the first time the NESREA Act was being amended since the establishment of the Agency in 2007.

NESREA has worked assiduously on the review of the NESREA (Establishment) Act, 2007 to address certain legislative inadequacies and noticeable drafting errors in the old Act which have continued to stall the operations of the Agency and weaken enforcement measures.

One of the major changes in the NESREA amended Act is the inclusion of the Federal Ministry of Health in the composition of the Governing Council of the Agency. This was a necessary amendment considering the important linkage between human

health and environmental protection.

The new Act also empowers the Agency to establish and enforce administrative penalties, a move that would strengthen enforcement measures.

The amendment, enables NESREA authorized officer(s) to seal and close down premises or facilities whose activities pose imminent threat to life and property, while a warrant or court order is being sought from

appropriate sanctions to erring facilities or persons according to the gravity of the offence and those committing the offence.

Failure to adhere to regulations is responsible for the high level of environmental challenges in Nigeria and for the country to achieve its developmental agenda, there must be a deliberate effort towards actualization of environmental sustainability.

The mandate of NESREA



court. It also allows for tougher penalties against perpetrators of environmental crimes. In the old Act, provisions on penalties were not deterrent enough as the hands of the Judges were tied by the operational words, "not exceeding". In the amended Act, it was replaced with "not less than", thereby giving the presiding Judge a wider latitude to issue out

empowers the Agency to enforce all environmental laws, guidelines, policies, standards and regulations in Nigeria and to prohibit processes and the use of equipment or technology that undermine environmental quality, and to enforce compliance with provisions of international agreements, protocols, conventions and treaties to which Nigeria is a signatory.

# SENATE APPLAUDS NESREA



Members of the Senate Committee on Environment with NESREA Management during an oversight visit to the Agency. 5th Left is the Committee Chairman, Distinguished Senator Mrs. Oluremi Tinubu

**F**or its efforts at bringing sanity to the Nigerian environment, the National Environmental Standards and Regulations Enforcement Agency, NESREA has received a pat on the back from the Senate Committee on Environment. The Committee which was on an oversight visit to the Agency was led by the Chairman, Distinguished Senator Mrs. Oluremi Tinubu. On her entourage were Distinguished Senators Magnus Abe, Foster Ogola, Bukar Abba Ibrahim, Andrew Uchendu, Abubakar Kyari, Suleiman Hunkuyi and Victor Umeh.

Senator Tinubu said, "We are really pleased by what we have seen and we will try to assist where necessary." She expressed confidence that the Agency was on the right track, adding that the coming on board of the Amended Act would give more bite to the regulations and also plug the loop holes exploited by environmental violators. She explained that oversight functions are necessary to ensure judicious and prudent use of resources and also to create an enabling

environment for Government objectives to be actualized.

Welcoming the Senators, the Director General/ CEO, Dr. Lawrence Chidi Anukam said he was delighted to work closely with the senators as partners in progress. He expressed his appreciation for the cordial relation that exists between the Committee and the Agency, as well as the tremendous support the Agency has received from the Committee. He pointed out that after only a few years of existence, the Agency has grown to have six zonal offices and 26 state field offices in the country. He added that 3 state field offices would soon be added in Abia, Ogun and Adamawa states.

The Director General disclosed that 33 regulations have been produced since the inception of the Agency with one on Health Care Waste currently in the works. He said these efforts were the results of painstaking collaboration and partnership with various State Governments and relevant stakeholders. "Our laws allow us to work closely with other relevant stakeholders to get results," he stated.



# 1ST NESREA GOVERNING COUNCIL RETREAT TO CHART A NEW COURSE FOR THE AGENCY



Chairman of NESREA Governing Council, His Excellency, Barr. Chief Iyiola Oladokun making his remarks at the Retreat

The Governing Council of the National Environmental Standards and Regulations Enforcement Agency, NESREA and the Management Staff of the Agency held a 2- day Retreat recently in Abuja, the Federal Capital Territory. The Retreat was intended to apprise the Council members on the duties and activities of NESREA as well as foster a closer working relationship between the Governing Council and management of the Agency.

The meeting had in attendance all the members of the Governing Council and

Top Management Staff of the Agency at the Headquarters. Speaking on the import of the meeting, the Chairman of the NESREA Governing Board, His Excellency, Barr Chief Iyiola Oladokun bemoaned the myriad of environmental problems in Nigeria and blamed it on the neglect of the sector prior to the establishment of institutional mechanism for environmental management and control. He expressed confidence that with the Retreat, they would be empowered to come up with decisions that will deepen the impact of NESREA in Nigeria, as well as to become good ambassadors for the Agency.

In his remarks, the Director General/CEO of NESREA, Dr

Lawrence Anukam, stressed the need for members of the Governing Council to understand the mandate, functions, activities and programmes of the Agency. Dr. Anukam expressed gratitude to the Chairman and members of the Council for the good working relationship with NESREA's Management and for the support to NESREA since their inauguration. The 2-day Retreat featured technical sessions facilitated by a lead resource person, Prof. Epiphany Azinge and departmental presentations from the Directors of the Agency. Each presentation was followed by robust discussions and deliberations on the way forward, with concrete recommendations.

Chairman of the group, Dr. Benoy Berry, thanked NESREA for the collaboration with Contec Global in addressing stationary sources of air pollution. The visit was followed by a facility tour of Contec Global Ltd by the NESREA Top Management.

## TECHNOLOGY KEY TO NESREA OPERATIONS- DG

The Director General of the National Environmental Standards and Regulations Enforcement Agency, NESREA, Dr. Lawrence Anukam says eco-friendly technology can play a key role in resolving the various problems bedeviling the environment.

While receiving the team from Contec Global Nig. Ltd. at the headquarters of the Agency, in Abuja, Dr. Anukam said NESREA was deploying the necessary technology to tackle environmental problems and improve the lives of the citizenry. He commended Contec Global Nig. Ltd for their commitment in providing technology-driven solution to environmental issues.



DG and Management team listen to a staff of Contec Global Nigeria Ltd. during a facility tour of the Company

# PHOTO SPEAK



DG NESREA, Dr. Lawrence Anukam welcomes Chairman, Senate Committee on Environment, Distinguished Senator Mrs. Oluremi Tinubu to the Agency's Headquarters.



L-R: MD, Nigeria Export Processing Zones Authority, Rt. Hon. Emmanuel Jime; DG NESREA, Dr. Lawrence Anukam; NESREA Dirs. Mr. Victor Ojogbo and Mrs Miranda Amachree during a Visit to NEPZA.



Members of the NESREA Governing Council and other participants at the 1st NESREA Governing Council Retreat.



Cross section of NESREA Directors at the 8th Annual Regulatory Dialogue



DG NESREA Dr. Anukam bags Fellow of Nigerian Environmental Society at the National Conference of the Society held in Minna, Niger State. The DG is being congratulated by the President of the Society Prof. L. Ezimonye





Chairman, Senate committee on Env. Senator Mrs. Oluremi Tinubu, Senator Magnus Aba with DG NESREA, Dr Lawrence Anukam, during the senate committee visit to the Agency.



NESREA DG, Dr. Lawrence Anukam making remarks at the 8th Annual Regulatory Dialogue



L-R: NESREA DG, Dr. Lawrence Anukam, Fmr. Dir. Admin & Finance, Mr. Timothy Okeowo and DG Forestry Research Institute of Nigeria Dr. Shola Adepoju at the 12th National Council on Environment.



Wife of the Ondo State Governor, Mrs. Betty Anyanwu Akeredolu with DG NESREA during a courtesy call on the First Lady in the State Capital, Akure.



Cross section of participants at the 8th Annual Regulatory Dialogue of NESREA

## EPR SIGNIFIES NIGERIA'S MARCH TOWARDS CIRCULAR ECONOMY



At the National Economic Summit - from 2nd Left: MD Unilever Nigeria, Mr Yaw Nsarkoh; DG NESREA, Dr. Lawrence Anukam; DG Nigerian Maritime Administration and Safety Agency (NIMASA), Dr Dakuku Peterside; MD Sterling Bank, Mr. Abubakar Suleiman; and two Directors of NIMASA at the extremes.

The Director General of the National Environmental Standards and Regulations Enforcement Agency, NESREA Dr. Lawrence Anukam says the Extended Producer Responsibility (EPR) programme is part of the plan towards establishing a circular economy model in the country. Dr. Anukam spoke during a breakout session on Business and Growth at the 24th Nigerian

Economic Summit held at the Transcorp Hilton Hotel in Abuja. Under the EPR, producers, manufacturers, importers, among others are responsible for the life cycle management of their products and obliged to take back their end-of-life/post-consumer products. Through this program, waste is to be recycled and processed as raw materials for industries, which is a shift from the

current linear economy model of manufacture, use and dispose. Sharing his thoughts as a discussant on "Unlocking Incentives for Nigeria's Sustainability Champions," the DG told the audience that EPR Operational Guidelines have been published for the scheme and that some sectors have incorporated third party companies known as the Producer Responsibility Organizations (PROs) to assist them in driving the process.

He said certain waste streams such as e-wastes, plastics, batteries and tyres have been identified for the take off of the EPR programme. The approach he stated, is to start with e-wastes and plastics and then gradually move to other waste categories.

The DG further stated that the EPR is private sector driven and that it will generate a lot of green jobs in the waste recovery chain, adding that government's role through NESREA was to supervise the process to keep free riders at bay.

## NESREA PARTICIPATES AT THE COP 14

NEWS BEAT

NESREA participated at the meeting of the Conference of Parties to the Convention on Biological Diversity (COP14) in Egypt.

The Agency was represented by the Director, Environmental Quality Technology, Mr. S.B Joshua and Director Special Duties, Mr. D.B Salka.

The Convention on Biodiversity (CBD) was adopted on 22nd May 1992 and entered into force on December 1993. There are currently 193 parties to the convention which aims to promote the conservation of biodiversity, the sustainable use of its components and the fair and equitable sharing of



Dir. Environmental Quality Technology, Mr. S.B Joshua (left) & Dir. Special Duties, Mr D. B. Salka at the COP 14 in Egypt.



benefits arising from the use of genetic resources. The Conference of Parties (COP) is the governing body of the convention and meets every two years.

The 2018 conference which has as its theme “Investing in Biodiversity for People and Planet” was held in Sharm El-Sheikh, Egypt and was declared open by the President of Egypt, Abdul Fattah El Sisi and other high level officials.

The Conference addressed series of strategic, administrative, financial and ecosystem-related issues of relevance to the implementation of the Convention and its Protocols.

Marine conservation issues were high on the agenda as well as items related to new technologies, such as risk assessment and management of synthetic biology and benefit-sharing arising from the use of digital sequence information (DSI) derived from genetic resources.

The Conference also considered terms of reference for technical expert groups on both Risk Assessment and DSI. The African Ministerial summit which held under the theme “Land and Ecosystem Degradation and Restoration: Priorities for increased Resilience in Africa” addressed Africa's biodiversity –related priorities, including a pan-African action agenda on ecosystem restoration for increased resilience.

## DELEGATES DISCUSS MERCURY CONTROL AT MINAMATA CONVENTION CONFERENCE OF PARTIES

Establishing proper guidelines on mercury was top of the Agenda at the second meeting of the Conference of Parties (COP2) to the Minamata Convention which held in Geneva, Switzerland.

Nigeria was represented at the meeting by the Federal Ministries of Environment, Mines and Steel and NESREA. On the NESREA team were the Director PPA, Mr. Victor Ojogbo; Director, Inspection and Enforcement, Mrs. Miranda Amachree, and a senior Engineer, Mr. Martins E. Ayoson.

The objective of the Conference was for delegates to consider the intersessional work established by COP1, deal with unresolved issues and make decisions that will contribute to the ongoing implementation of the Convention and provide further guidance to the secretariat.

The major issues discussed during the Conference

include Mercury waste, consideration of relevant thresholds, guidance in relation to Mercury releases, environmentally sound interim storage of mercury other than waste mercury, effectiveness evaluation, and program of work and budget, amongst others. Nigeria participated actively in the contact groups and technical sessions.



L-R: Dir. Planning and Policy Analysis, Mr. Victor Ojogbo; Dir. Inspection and Enforcement, Mrs. Miranda Amachree, Snr. Engineer, Mr. Martins Ayoson at the Minamata Convention in Geneva, Switzerland.

# ENVIRONMENTAL REFORMS UNDERWAY AS 12TH NATIONAL COUNCIL ENDS IN AKURE



L-R- Perm Sec., Fed. Min. of Env. Mr. Leon Aliboh; Min of State for Env., Alhaji Usman Jibril; Wife of Ondo State Governor, Mrs. Betty Anyanwu-Akeredolu and Ondo State Deputy Governor, Mr. Agboola Ajayi at the National Council on Environment

**R**ising from the last day of the three-day National Council on Environment meeting held in Akure, Ondo State – the 12th in the series – Hon. Ibrahim Usman Jibril, the Minister of State, Federal Ministry of Environment who chaired the event reeled out crucial decisions taken in the course of the meeting attended by the full complements of Environment Czars nationwide.

The decisions which will go a long way to add fillip to the environment sector include amongst others the need to watch out for man-made activities considered more responsible for environmental degradation than natural causes, the need to encourage States and Local Government to promote good land use practices, the need to promote broad based participation of all stakeholders to develop sub-National Action Plans and Vulnerability Analyses as well as dissemination of information on the Green Bond process as a source of financing for the implementation of the Nationally Determined

Contribution (NDC).

While appreciating the challenges of health care waste management, the Council advised the need for the immediate inauguration of the National Steering Committee (NSC) and re-affirmed the need for effective and efficient information management and information exchange among stakeholders for timely provision of data to aid national planning and development; the need to holistically address the challenges of coastal erosion, marine litters and ecosystem devastation along the Nigeria Coastline, as well as key into the World Bank assisted West African Coastal Area Management programme.

The event which held at the International Culture and Events Centre, (The Dome) from the 29th to 31st of October 2018 witnessed impressive attendance from Ministries, Departments, Agencies, Development Partners, Non-Governmental Organisations (NGO's), Para-Military Agencies, Staff and Officers of various environment related institutions across the country.

A total of 105 prayers consisting of 70 action and 35 information memoranda were considered. 33 were stepped down.

NESREA delegation of senior management staff were led by the Director-General, Dr. Lawrence Chidi Anukam.

NESREA had submitted memos on implementation of the Extended Producer Responsibility (EPR) Programme and the National Programmes on Air Emission Control from Mobile and Stationary sources. The two memos were approved. NESREA's delegation of Senior management staff were led by the Director General, Dr Lawrence Chidi Anukam.

In closing, the Honourable Minister thanked the Government and good people of Ondo State - the Sunshine State - for the warm hospitality extended to delegates and excellent arrangement put in place.

**Mr. Sule Oyofo**  
Deputy Director  
(Information)



# ENVIRONMENT: EMBRACE CHANGE NOW



**Sule Oyofa**  
DD Press & Protocol

**N**igerians better know this: there is no more time to waste to regulate our environment because change is imminent; and whether we like it or not we will be swept along with the inevitable change. I am sure along the line many of us – thanks to globalization – must have been hearing of the words “Protocols, Treaties, Convention”, such as the type that took place in Bali, Montreal or Kyoto and many other conferences – you may call them Conference of Parties (COP) or Environmental Conferences– Never mind. Even if some of us and those in the streets labour to make meanings out of them because of the unnecessary domestic distraction that forcibly jerk us out of focus, they do exist – and the decisions they take rightly impact on us.

We really have to get serious – and get it right too. We can't continue to behave as though we are immune or isolated from the consequences of our growing population – almost 200 million up from 120 million just years back.

The result is evident. Polluted cities, clustered drainage, littering, noisy surroundings, waste dumps, rise in epidemics, and of course dire consequences of flooding!

Attitude! That's what has got to change. This is non-negotiable. We either change or sink; that's it. And I will give you few examples.

Driving from Oluku junction to Idoani in Ondo State along the remote single lane dilapidated highway surrounded on both side by thick eerie forests, I saw on display several gazelles killed by hunters. The driver of my vehicle told me they kill them daily. On the same subject along Avele – Agbede road in Edo State, you find hundreds

of grass-cutters, antelopes publicly on display. You may say it is tradition to hunt them down, but that's wildlife ebbing away. From Kotankarfi in Kogi State to Abaji in FCT, you find scores of vehicles carrying charcoal for sale and others spread by the roadsides.. They club down trees to get to this. Then of course the plumes of smoke that envelope you as you drive through the badly depleted Lokoja-Okene-Okpella highway – that's if you want to still call them roads. Ghoosh! How do we retain our humanity—not even the preservation of the environment—with this type of unrestrained self-inflicted bashing? If anything, this portends danger to our present generation. Fast forward to the cities, where you cannot afford to look at our gutters. They are filled with putrefying stench from used polythene packs! The dusty abandoned road propels your imagination to run riot! Add the rustic behavior of impulsive littering by motorists, and then you become trapped in siege mentality! Some Nigerians haul dirt's right in front of you along the highways; no respect to the rule of law. I am tempted to say, this is crude – if not violent. You ask yourself this: what is happening?

We need to be clinical to react – and fast too. The threat from this decadent and unnecessary behavior is real. Now climate change looms and real life solutions are needed to avert the imminent disaster. Mark you, this has nothing to do with your religion or where you come from. Nigerians must now shift drastically from their locally fabricated opportunistic maxims that government must run on the basis of “It is our turn”; climate change does not know what “zoning system” or “quota system” is ; this is the fallacy—an aberration—that has been our embarrassing and tactless social situation.

And like the Gordian knot often used as a metaphor for an intractable problem solvable only by bold action, we need to now push from where we are – linear – to a circular economy. For those of us who still don't know, I will explain. Sometimes we are too tired to even grasp ordinary and widely accepted norms!

Since the world population is growing, to ensure that there is enough food, water and prosperity by 2050, we need to switch from our present linear to a circular economy. The aim is to ensure healthy and safe living and working condition and cause less havoc to the environment. This means preventing waste by making products and materials more efficiently and recycling them, e.g. waste glass is used to make new glass and waste paper used to make new paper. If raw materials are needed, they must be obtained systematically so that the natural environment is not damaged. The intrinsic mechanics of the linear economy is wasteful, detrimental and cannot sustain the growing population of the planet – not to mention our own society that needs a shake-up!

Let's start learning more about “cradle to cradle”, “greening the environment”, “Renewable energy”, and “sustainability”. These are concepts that the man on the streets ought to know about.

Beware: these technical advancements know nothing about political affiliation or religious infirmity; we need to know this. In life, only change is permanent!

# Coal as an Alternative to Charcoal



Picture shows an Igala woman cooking with charcoal packed inside coal briquette

**C**harcoal is an artificial fuel source produced from burning or heating of hardwoods under a process of limited supply of air. Wood charcoal, sugar charcoal and animal charcoal are the various forms of charcoal. The commonest form of charcoal is the wood charcoal and it is the end product of partial burning of deciduous woods such as mahogany (*Khaya senegalensis*), obeche (*Sclerochiton*), kirya (*Propopis africana*), etc.

The preparation/sales of charcoal is one of the main income sources of so many rural dwellers in Nigeria; no State is left out in this environmentally destructive business. The use of charcoal as a heat source is gaining momentum on a daily basis. This is because beside the goldsmiths and blacksmiths who have been known from ages as charcoal users, the maize/yam/fish/plantain roasters use charcoal a lot. Furthermore, many housewives and restaurateurs have joined the fans of charcoal. This growing number of people using charcoal is an encouraging signal to those who produce it.

Investigations reveal that coal briquette have long been converted to charcoal briquettes. Women said they prefer cooking with charcoal owing to the fact that it burns fast, emits no smoke and does not blacken the entire outer part of the pot unlike woods (firewood).

Surprisingly, the Igalas who have been known long ago to be lovers of wood (firewood) have dramatically changed to charcoal.

Charcoal as a fuel source has serious negative impact on the environment. Relying on charcoal usage encourages unsustainable harvest of forest products, which in turn would lead to deforestation and other environmental degradation processes. It is on this note that stakeholders in environmental maintenance seek an end to the use of charcoal and promote the use of coal with which the country is richly endowed with, as an alternative energy source.

Coal is a combustible black or brownish-black sedimentary rock usually occurring in strata, layers or veins called coal beds or seam. It is a natural resource of the carboniferous era (geologic time or period). Coal forms when dead plant matter is converted in stages into peat, lignite (or brown coal), sub-bituminous coal, bituminous coal and finally anthracite (or hard coal) which is about 95% pure carbon and can be regarded as a metamorphic rock due to its exposure to higher temperature and pressure. These stages of coal formation involve biological and geological processes that take place over a long period of time.

In Nigeria, commercial viable or large

coal deposits are found in Enugu, Kogi and Imo States. Other States endowed with coal deposits include Delta, Plateau, Anambra, Abia, Edo, Bauchi, Adamawa, Gombe, Cross River and Ebonyi States. The Nigerian coal deposit like her petroleum and iron ore deposits is of high quality and environmentally friendly in terms of sulphur content. In fact, it contains little or no sulphur.

The negative impact of coal extraction on the environment is less when compared with the preparation of charcoal. In terms of usage, coal burns faster, better and more hygienic on contact. The dispensation of coal as a fuel source for powering automobiles and generating electricity is phased out due to the discovery of fossil fuel and hydro-energy generations.

Coal could be of great importance to man as an alternative source of energy for domestic cooking. There is no sense destroying the vegetation just for charcoal production while we have coal as a very good substitute of energy source.

Man and other lower organisms need vegetation to survive. Thus, the imperative of trees or vegetation cover to lives cannot be over-emphasized. Planting of trees as a way of supporting and conserving the vegetation is very important. However, to reduce to a minimal level the rate at which we harvest forest products (woods), coal needs to replace charcoal as a source of fuel for domestic cooking. Cutting down trees to make charcoal is deforestation and as such an end should be put to it for the sake of the present and future generations.

## REFERENCE

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2. Wikipedia, the free encyclopedia: EIA, Coal, Coal and Electricity.

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# FIELD ACTIVITIES



*NESREA Officers enlightening the poultry product traders on the importance of clearing the drainages regularly, during sensitization at Yankaji Market, Yammawa, Katsina.*



*NESREA team and staff of WACOT Rice Mill at the opening conference in the facility premises in Argungu, Kebbi State.*



*NESREA Team inspecting the solid waste area at 7up Bottling Company Ibadan Plant, Oyo State.*



*NESREA Officers with site contacts analysing the report of waste water at the Effluent Treatment Plant at Pardee Foods Limited (P2) Ogun State.*



*NESREA Staff addressing the contact person (Arch. Abdurasheed Shote Abdurasheed) during a compliance monitoring visit to Daribe Ultra Modern School Bulunkutu, Maiduguri*

# OZONE LAYER DEPLETION: A MAJOR ENVIRONMENTAL CONCERN

**O**zone (O<sub>3</sub>) is a triatomic form of oxygen. It is found largely in the stratosphere that extends from about 6 km at the poles and 17 km at the equator to about 50 km above the earth's surface. It has been the most responsive form of molecular oxygen and the fourth most powerful oxidizing agent. It has a pleasant concentration at about 2ppm or less, but its higher concentration is irritating. In nature, O<sub>3</sub> is formed in the stratosphere when an oxygen molecule (O<sub>2</sub>) in the stratosphere, after absorbing ultraviolet light energy from the sun, is broken down into 2 oxygen atoms (O + O). The oxygen atom (O) is now free to react with an oxygen molecule O<sub>2</sub> to create an ozone molecule O<sub>3</sub>.

Being a natural constituent of the stratosphere, O<sub>3</sub> is regularly formed and destroyed in a cyclic manner with solar radiation as the driving force. In the absence of any other disturbance, O<sub>3</sub> settles into a dynamic steady state in which the rate of its formation is equal to the rate of its destruction.

Ozone Layer of the atmosphere plays a very important role in the protection of life on Earth by acting as a blanket and preventing harmful ultraviolet radiation from the Sun from reaching the earth. Thus, O<sub>3</sub> is intimately connected with the life-sustaining process. In spite of being a trace gas, O<sub>3</sub> plays a major role in the maintenance of the climate and the biology of the earth. O<sub>3</sub> filters out all radiations below 3000 Å (UV-B radiations) that are biologically harmful, and controls the heat budget of the earth. Any depletion of O<sub>3</sub> would therefore, have catastrophic environmental and health effects on the life system of the earth.

**Chlorofluorocarbons (CFCs) - Threat to Ozone Protection**

Most of the atmospheric gases are of natural origin, but, man in his quest for a better livelihood, has introduced other dangerous gases, and this has led to the growing possibility of damage to the ozone layer. Scientists' discovery revealed that several man-made chemicals destroy the ozone layer, thereby creating a hole in it. These chemicals are called Ozone Depleting Substances (ODS).

Chief among them is the class of chemicals known as chlorofluorocarbons (CFCs), used as

refrigerants (notably in air conditioners), as agents in several manufacturing processes, and as propellants in spray cans.

CFCs are broken down by ultraviolet radiation. The chlorine atom contained in CFCs is released and it directly attacks the ozone. In the process of destroying ozone, the chlorine atoms are regenerated and begin to attack other ozone molecules, and this process continues for thousands of cycles before the chlorine atoms are removed from the stratosphere by other processes. Each free Chlorine atom can destroy up to 100,000 ozone molecules before it is removed.

CFCs came into the market since the early seventies, and a large quantity has been injected into the atmosphere. As a result, experts anticipate increase in skin cancer and cataracts, damage to certain crops and to plankton and the marine food web, and an increase in atmospheric carbon dioxide incriminated in Global Warming due to the decrease in plants and plankton.

**Saving the Ozone Layer**

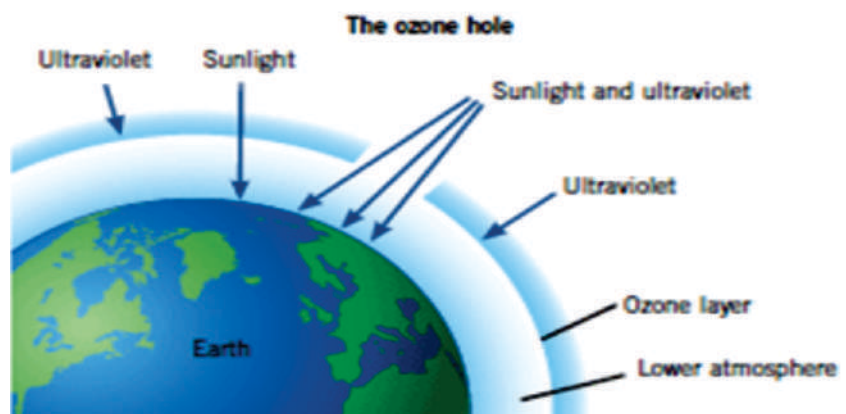
In order to protect the Ozone Layer, the global community agreed to phase out ODS under the Vienna Convention on the Protection of the Ozone Layer (1985); Montreal Protocol on Substances that deplete the Ozone Layer (1987). With 197 countries working together, both developed and developing countries, the Montreal Protocol is the most widely ratified treaties in United Nations history. This is because it is a global environmental treaty of universal ratification. The global community has

phased out CFCs and HCFCs which are also greenhouse gases (incriminated in global warming) and adopted the ozone-friendly chemicals as alternatives, such as Hydrofluorocarbons (HFCs).

Despite the adoption of the Protocols at Montreal and London, which were further refined at Copenhagen to make them acceptable to all countries, it is still stated that the ozone layer is not likely to make a significant recovery until the middle of the next century.

Nigeria is a signatory to both Vienna Convention and its legally binding Montreal Protocol on the Substances that deplete the Ozone Layer. The Federal Government, in its own part, has put in place some measures to ensure that the phased out ODS are not imported, manufactured or sold in the country. One of such measures was the promulgation of the National Environmental (Ozone Layer Protection) Regulations in 2009, aimed at prohibiting the importation, manufacture, sale or purchase of ODS. NESREA is effectively implementing the provisions contained therein.

The Agency, in its enforcement activities, has worked closely with the relevant stakeholders to ensure that ODS importation, handling, sale and disposal are carried out in accordance with these Regulations.





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### Our Vision

To ensure a cleaner and healthier environment for Nigerians

### Our Mission

To inspire personal and collective responsibility in building an environmentally conscious society for the achievement of sustainable development in Nigeria

### Our Mandate

To enforce all environmental laws, guidelines, policies, standards and regulations in Nigeria, and to prohibit processes and the use of equipment or technology that undermine environmental quality, and to enforce compliance with provisions of international agreements, protocols, conventions and treaties to which Nigeria is signatory.

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