7TH NATIONAL CONFERENCE ON ENVIRONMENT AND HEALTH
(Organized by the LivingScience Foundation, Ile-Ife CAC/IT/91834)

Venue: Redeemer's University, Ede, Osun State, Nigeria + Online via Zoom
Date: Wednesday October 19 - Thursday October 20, 2022

BOOK OF ABSTRACTS

NIGERIAN JOURNAL OF ENVIRONMENT AND HEALTH
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The NJEH is the only journal of its kind in Nigeria that seeks, in a rigorously scholarly fashion, to bridge the gap between Science, Practice, and Policy in the field of Environment-Health. Just like our Conference series, the Journal appeals to a distinguished readership of academics, professionals, policy makers, and other key stakeholders in the environment-health sector. Our ultimate goal is translating research findings in Environment-Health into visible positive benefits for the common man in Nigeria.

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LIVINGSCIENCE FOUNDATION, P.O.BOX 1674, ILE-IFE, OSUN STATE, NIGERIA.

"Science for life more abundant (John 10:10)"

The aim of the *Living*Science Foundation is to enhance public health in Nigeria by facilitating and promoting sound evidence-based, comprehensive and holistically-derived, home-grown environmental-health policies and practices; undergirded by a conviction that an all-wise benevolent Creator designed the world to run sustainably.

The Specific Objectives of the Foundation are to

i. provide an authoritative voice showing that studying and doing Science from a creationist perspective will not only make best sense of our world, it will also yield abundant life for people and the entire ecosystem. This will entail a direct standing up to, and scientific refutation of the currently prevalent evolution theory of origins.
ii. seriously engage in the business of identifying peculiar traditional and modern hazards in the Nigerian environment; scientifically evaluate attendant health risks particularly to identified susceptible, vulnerable and sensitive subpopulations; and widely communicate the findings in society, while advocating for remedial actions as may be necessary.
iii. provide information, education, and advisory services on health and environment to the general public, various tiers of government, and other stakeholders. This may involve undertaking resourced projects and contract works that support the vision of the Foundation.

We welcome your inputs as Partners, Collaborators, and Sponsors. For more details, kindly contact us on
+234 805 710 6482, or visit our website at: www.lsfnigeria.org

PLEASE MARK THIS DATE ON YOUR CALENDAR: 6TH NATIONAL CONFERENCE ON ENVIRONMENT AND HEALTH, APRIL 13-14, 2021

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**On this page we have pictures of Members of Board of Trustees

Odeyemi OriOke Haastrup Achonwa Erhabor Olanipekun Ojo







**On this page we place pictures of Ministers for Health, for Environment

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1. Honourable Minister, Federal Ministry of Health, Abuja
   Dr. Osagie Emmanuel Ehanire

Ministry of Environment, Abuja.
- Honourable Minister for Health, Dr Osagie Ehanire



Commissiner of Health, Osun State

Commissioner of Environment, Osun state

Co-Chairman: Hon. Adeoye Andrew Adelakun (Board Chair, Osun Health Insurance Agency)

Welcome!



I am highly delighted to welcome distinguished delegates to this epochal seventh edition of our annual National Conference on Environment and Health. Like the mustard seed sown, the Conference has grown from humble beginnings and is on its way to becoming a notable force in the Sector, in the country.

My profound gratitude goes to all Stakeholders who embraced the important vision of not waiting for government's mobilization before coming together in this fashion. I pray that the fruits which are already beginning to show will indeed attain maturity, endure, and bring tremendous blessings to our people and land.

It should be clear by now that LivingScience Foundation's idea of a National Conference on Environment and Health is beyond that of a regular meeting of Professionals. Here in the same breath as the Professionals engage themselves across disciplines, public englightenment and advocacy are concurrently vigorously pushed. I heartily salute all our special guests from government and civil society who will be attending only the opening ceremonies, and trust that they will nevertheless get a grasp of the message the Conference is passing across. The subject of locally-supervised risk assessment in the all-too-important environment-health sector is absolutely critical. It is important that everyone, from scholars to the lay people on the street, appreciate the very serious issues involved. It is only then that our country might be able to meaningfully engage the comity of nations on the subject of sustainable development; adequately protecting local interests, whilst at the same time contributing to necessary global welfare.

In closing, I want to sincerely thank our Partners whose supports make it possible for the Conference to be organized at highly subsidized fees without compromising the standards expected of a top-notch Conference.

I bid you God's speed and blessings for fruitful deliberations at the 7th National Conference on Environment and Health.

Welcome!

Pastor Ezekiel A. Odeyemi (FRSA, ACIS)
Pro-Chancellor and Chairman of Governing Council, Reedemer's University, Ede;
Chairman, Board of Trustees, LivingScience Foundation



Dear distinguished colleagues,

The National Conference on Environment and Health is here again, and it is my privilege and pleasure to bid you all, a warm welcome. I particularly welcome our very distinguished Guest Speakers drawn from far and near, as well as other special guests including members of the Boards of LivingScience Foundation and top government functionaries gracing the Opening Ceremony of the Conference.

Seven years ago, I had the priviledge of listening to Prof Wunmi Sadik (right here in this auditorium) speak on sustainable development and responsible use of nanotechnology. The interest sparked by her straightforward and clear presentation, together with her counsel during our subsequent interactions online provided the direct spur for this Conference Series. How apt then that she would be giving one of the keynotes at this landmark 7th edition with a special focus on Sustainable Development!

Over the years, the DG NESREA had consistently sent in goodwill messages to the Conference through top officials of the Agency. This year, we are grateful for his indicated interest to participate in person and his graciously accepting to deliver a keynote.

Attaining Sustainable Development is not a straight-jacket process. There are innumerable routes that can lead to a particular desired outcome. This usually requires a dynamic jostling of parameters in the 3 key dimensions of Environment-Health, Economy and Society. Unfortunately, for too long, our nation has accepted the idea of adopting policies and practices developed in some other clime, without realising that the same (or even better outcomes) can be obtained if we would simply carry out our own risk assessments. Hence, for example, we were willing to go a-borrowing even beyond our total health budget solely to address COVID19 while at the same time ignoring graver health issues such as diarrhea, malaria, and Sickle Cell anaemia that continue to ravage our populations. By contrast, we see Europe backtracking sharply on her policy concerning the use of fossil fuels, as coal was unapologetically brought back into their energy mix in the wake of the situation at Ukraine! Several other examples can be cited, ranging from our continued use of thimerosal-containing vaccines (proscribed decades ago in the developed countries) to the unbelievable devastation of our ecosystem by foreign companies in the name of gold prospecting. And all that without payment of requisite taxes. It is indeed time Nigerians began to interrogate these situations and adjusted our ways!

I want to thank all our Sponsors for their commitment to us over the years. I want to assure them that there is probably no better venture to invest their resources in than this. The benefits of prudent management of the environment flow to all to enjoy across board. Indeed, our major sponsors, OHIS and RUN, can already begin to count their own peculiar blessings. Nipping diseases and sicknesses in the bud, (by preventing them outright with an evidence-based management of the environment) obviously has direct benefits to the Health-Insurance business. And we are proud to see the B.Sc. Environmental Management and Toxicology programme take off at RUN as a direct result of the linkages facilitated during previous editions of this Conference. We look forward to helping nurture that programme to its full potentials, even as it identifies more with the Conference.

Although the Undergraduate Essay Competition is not holding this year, largely due to the situation at the public tertiary Institutions in the country, a worthy recipient of the AF Oluwole prize has been selected. Likewise the High School Innovation programme is right on course.

So, without much further ado, let's get going!



Joshua Ojo (Ph.D)
Professor of Health Physics and Environment, Obafemi Awolowo University, Ile-Ife
and
President, LivingScience Foundation, Ile-Ife

PROGRAMME SCHEDULE

Day 1: Wednesday 19th October, 2022

09.00 – 09:50	Pre-Opening Activities: Set up Exhibition and Poster Stands.
(09:50 – 14:10)	**PLENARY SESSION I: Formal Opening Ceremonies**

Chairman: Pastor (Dr) Samuel Odun Orioke (General Overseer, Christway Int'l Ministries)
Co-Chairman: Hon. Adeoye Andrew Adelakun (Board Chair, Osun Health Insurance Agency)
Rapporteurs: Dr Dele Oketayo and Mrs Tolu Karokatose

09:50 – 10.00	**Opening** Opening Prayer**.** National Anthem. Redeeemer's University Anthem **Pastor Gbenga Akosile, RUN Chaplaincy.**
10:00 – 10:05	**Introductions –** Dr (Mrs) Oyenike **Oguntunde** (Sub Dean, College of Natural Sciences, RUN, Ede)
	Welcome Addresses:
10.05 – 10.10	**Prof Anthony Akinlo**, Vice Chancellor, Redeemer's University, Ede
10.10 – 10.20	**Pastor Ezekiel A. Odeyemi** (FRSA, ACIS), Chairman, Board of Trustees, LivingScience Foundation, Ile-Ife and Pro-Chancellor and Chairman of Council, Redeemer's University, Ede
10.20 – 10.30	**Chairmen Opening Remarks**
10.30 – 10.50	**Goodwill Messages** - Honourable Minister for Environment, Mr Mohammed H. Abdullahi (represented by Dr Abbas Suleiman, Director, Environmental Audit), Federal Ministry of Environment, Abuja. - Honourable Minister for Health, Dr Osagie Ehanire (represented by Dr Rafiu Isamotu Olasunkanmi, Osun State Commissioner for Health)
	Keynote Address 1:
10.50– 10:55	Citation of **Prof Omowunmi Sadik,** (NNOM**).** (xxxxxxxxxxxxx)
10.55 – 11.40	ENVIRONMENTAL-HEALTH RISK ASSESSMENT AND DEVELOPMENT OF SUSTAINABLE GREEN SCIENCE IN NIGERIA **Wunmi Sadik** (NNOM**)**
11:40 – 11:55	Interactions. Questions and Answers
11:55 – 12:00	Short Break
	Keynote Address 2:
12:00– 12:05	Citation of Prof Aliyu Jauro (xxxxxxxxxxxxxxxxx)
12.05 – 12.50	ENVIRONMENTAL-HEALTH RISK ASSESSMENT AND SUSTAINABLE DEVELOPMENT IN NIGERIA **Aliyu Jauro**
12:50 – 13:05	Interactions. Questions and Answers
13.05 – 13.20	**Refreshment/Tea Break**

	International Lead Poisoning Prevention Video Clip: **https://www.who.int/multi-media/details/four-things-you-should-know-about-lead**
	Music by RUN Performing Theatre Arts Department
	Prizes and Awards
	A.F. Oluwole Prize for Environment-Health
13.20 – 13.25	Citation of the Winner**: xxxxxxxxxxxxxxxxxxxx**
	Presentation of Plaque **–** xxxxxxxxxxxxxxxxxx
13.25 – 13.30	Response from Award Recipient **– Dr Patrick A. Ijewere** (B.Sc. Chem, B.Pharm, MD, MBA)
13:30 – 13:35	Innovation Challenge for Secondary Schools Announcement of Winners and Award of Prizes for Phase 1 and Launching of Phase II – **Mr Isijaan Nkanta**
13:35 - 13.50	**Chairmen's Closing Remarks –**
13:50 - 13:55	Votes of Thanks – **Rev. Bode Oluwusi**, (Chairman Board of Advisers, LivingScience Foundation)
13:55 – 14:00	**Closing Prayer. National Anthem - RUN Chaplaincy**
14.00- 14:10	**Group Photographs**
14:10 – 15:30	**Lunch**
15:30 – 16:00	**Poster Session. Exhibition. Press Conference**

(16:00 – 17:15**)** **PLENARY SESSION II:**
Chairman: Mr Adeleke Ajani (Retired Director, NESREA SW Zone)
Rapporteur: Dr (Mrs) Modupe Sanyaolu

16:00 – 16:20	RISK ASSESSMENT: REGULATORY COMPLIANCE, AND COMMUNITY PARTICIPATION IN NIGERIA **Abbas Suleiman**
16.20 – 16:30	Interactions. Questions and Answers
16:30– 16.50	ENVIRONMENTAL-HEALTH RISK ASSESSMENT IN GOLD MINING FOR SUSTAINABLE DEVELOPMENT **Olufunbi Sode**
16.50 – 17:00	Interactions. Questions and Answers
17:00 – 17:15	ASSESSMENT OF DIGITAL HEALTH LITERACY SKILLS AMONG MEDICAL DOCTORS FOR HEALTHCARE DELIVERY IN GENERAL HOSPITALS OF KATSINA STATE-NIGERIA **Nasiru Sani**
17:15 – 17:20	Interactions. Questions and Answers
17:20 – 17:30	Short Break
17:30 – 19:00	Conference Cocktail

Day 2: Thursday 20th October, 2022

(09:00 – 10:00) **PLENARY SESSION III**
Chairman: xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
Rapporteur: xxxxxxxxxxxxxxxxxxxxx

09:00 – 09:20	STEPS TOWARDS DEVELOPMENT AND APPLICATION OF ENVIRONMENT-HEALTH INDICATORS FOR PRIMARY PREVENTION OF CANCERS IN OSUN STATE, NIGERIA **Joshua O. Ojo**
09:20 – 09:30	Interactions. Q&A
09:30 – 09:50	THE "THINK GLOBAL ACT LOCAL" MAXIM IN ENVIRONMENTAL-HEALTH RISK ASSESSMENT **Michael C. Asuzu**
09:50– 10:00	Interactions. Q&A
	International Lead Poisoning Prevention Video Clip: **https://www.who.int/campaigns/international-lead-poisoning-prevention-week/2022/campaign-materials#**

(10:00 – 11.00) **PARALLEL SESSION I** Location 1: [Ground Floor, Auditorium]
Policy and Education
Chairman: xxxxxxxxxxxxxxxxxxxxxxx
Rapporteur: xxxxxxxxxxxxxx

10.00– 10:15	CHRONICLES OF NESREA AS NIGERIA'S FOREMOST ENVIRONMENTAL REGULATORY AGENCY **Maike, Shukwunweizu Muhammad**
10:15 – 10:30	PREVALENCE OF HYPERKINETIC BEHAVIOUR AMONG INCLUSIVE PRIMARY SCHOOL CHILDREN IN OSUN STATE **Ojo, Joanna Olusola**
10:30 – 10:45	STRENGTHENING ENVIRONMENTAL HEALTH SYSTEMS FOR THE IMPLEMENTATION OF SUSTAINABLE DEVELOPMENT GOALS IN NIGERIA**.** **Akinwumi T.I.**
10:45 – 11:00	Interactions. Questions & Answers
11:00 – 11:15	Short Break

(10:00 – 11.00) **PARALLEL SESSION I** Location 2: [Ground Floor, Back Auditorium]
Spatial Technology
Chairman: xxxxxxxxxxxxxxxxxxxxxxx
Rapporteur: xxxxxxxxxxxxxx

10.00– 10:15	SEASONAL VARIATION OF WATER AND SUB-SOIL CONTAMINANTS IN THE COASTAL AQUIFERS OF AROGBO, ONDO STATE, NIGERIA **Arogundade, A.B**.
10:15 – 10:30	TROPOSPHERIC SCINTILLATION PREDICTIONS OF THE NIGERIAN CLIMATE; A CASE STUDY OF MOWE **Sanyaolu, Modupe Eunice**

10:30 – 10:45 COMPARATIVE STUDY OF NATURAL BACKGROUND RADIOACTIVITY OVER EKITI STATE, NIGERIA, USING *IN-SITU* MEASUREMENT, AIRBORNE RADIOMETRIC SURVEY, AND LABORATORY SPECTROMETRIC TECHNIQUE
Yemisi T. Alani

10:45 – 11:00 Interactions. Questions & Answers

11:00 – 11:15 Short Break

(10:00 – 11.00) **PARALLEL SESSION I** Location 3: [Upper Floor, Auditorium]
Socials and Sustainable Development
Chairman: xxxxxxxxxxxxxxxxxxxxxxx
Rapporteur: xxxxxxxxxxxxxx

10.00– 10:10 A REVIEW ON ETHYL MERCAPTAN (IN L.P.G) AS A MAJOR THREAT TO HUMAN HEALTH
Gbenga Adebisi

10:10 – 10:20 CAUSES OF POOR SANITARY CONDITION IN DUTSE, JIGAWA STATE
Nasiru Sani

10:20 – 10:30 BAD READING CULTURE AS THE PRINCIPAL CAUSE OF EXAMINATION MALPRACTICE IN NIGERIA - A REVIEW
Tolulope Karokatose

10:30 – 10:40 ASSESSMENT OF EXPOSURE PARAMETERS ON SCATTERED X-RADIATION DOSE RATE DURING DIAGNOSTIC EXAMINATION IN NIGERIAN UNIVERSITY TEACHING HOSPITAL
Gbenga Martins

10:40– 11:00 Interactions. Questions & Answers

11:00 – 11:15 Short Break

(11:15 – 12:15) **PLENARY SESSION IV**
Chairman: xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
Rapporteur: xxxxxxxxxxxxxxxxxxxxx

11:15– 11:35 RISK ASSESSMENT OF CONTINUED USE OF THIMEROSAL-CONTAINING VACCINES IN NIGERIA
Akinrinola Fasipe

11:35 – 11:45 Interactions. Q&A

11:45 - 12:05 DIMENSIONS OF SUSTAINABLE DEVELOPMENT
Adejoke Lasisi

12:05– 12:15 Interactions. Q&A

(12:15 –13:15) **PARALLEL SESSION II** Location 1: [Ground Floor, Auditorium]
Food and Ecology
Chairman: xxxxxxxxxxxxxxxxxxxxxxx
Rapporteur: xxxxxxxxxxxxxx

12:15– 12.30 ECOLOGICAL ASSESSMENT OF PHYSICO-CHEMICAL PARAMETERS OF SELECTED OPA RESERVOIR TRIBUTARIES
Adewumi E.A

12:30 – 12:45 POLLUTION INDICES AND POTENTIAL ECOLOGICAL RISKS OF HEAVY METALS IN THE SOIL: A CASE STUDY OF MUNICIPAL WASTES SITE IN ONDO STATE, SOUTHWESTERN NIGERIA
Lasun T. Ogundele

12:45 – 13:00 BEYOND FOOD: MEDICINAL TREASURES IN OUR COASTAL WATERS
Oparinde Grace

13:00 – 13:15 Interactions. Questions & Answers

13:15 – 14:15 Lunch Break

(10:40 – 11.40) **PARALLEL SESSION II** Location 2: [Ground Floor, Back Auditorium]
Cancer Risks
Chairman: xxxxxxxxxxxxxxxxxxxxxx
Rapporteur: xxxxxxxxxxxxx

12:15– 12.30 CANCER DISTRIBUTION PATTERNS OVER 5-YEAR PERIOD (2016-2020) IN EKITI STATE CANCER REGISTRY, IDO-EKITI, SOUTHWESTERN, NIGERIA
Yemisi T. Alani

12:30 – 12:45 ASSESSMENT OF CHEMICAL TOXICITY AND EXCESS LIFETIME CANCER RISK DUE TO URANIUM PRESENT IN BOTTLED WATER OBTAINED FROM BENIN CITY, EDO STATE, NIGERIA
Popoola, F. A

12:45 – 13:00 DOSE ASSESSMENT AND EXCESS LIFETIME CANCER RISK EVALUATION OF DUST SAMPLES COLLECTED FROM SOME SELECTED NURSERY AND PRIMARY SCHOOLS IN IFE CENTRAL AND IFE EAST AREAS OF OSUN STATE, NIGERIA
Grace O. Akinlade

13:00 – 13:15 Interactions. Questions & Answers

13:15 – 14:15 Lunch Break

(10:40 – 11.40) **PARALLEL SESSION II** Location 3: [Upper Floor, Auditorium]
Special Workshops
Chairman: xxxxxxxxxxxxxxxxxxxxxx
Rapporteur: Mr Peter Osuolale

12:15– 12.45 Special *International Lead Prevention Week Activity (October 23-29): Say No to Lead Poisoning [#BanLeadPaint, #LeadPoisoning]*
Viewing and Discussion of WHO Multimedia Short Video:
https://www.who.int/campaigns/international-lead-poisoning-prevention-week/2022# [9 minutes]

12:45 – 13:15 Special Workshop: LSF High Schools Innovation Challenge 2022 (Phase 2): BASIC PRINCIPLES AND METHODOLOGIES FOR ENVIRONMENT-HEALTH RISK ASSESSMENT
LivingScience Foundation Team

13:15 – 14:15 Lunch Break

(14:15 – 15:45) **PLENARY SESSION V**
Chairman: xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
Rapporteur: xxxxxxxxxxxxxxxxxxxxx

14:15– 14:35	INCORPORATING ENVIRONMENTAL HEALTH RISK MANAGEMENT INTO MEDICAL TRAINING IN NIGERIA **Bamidele Salau**
14:35 – 14:45	Interactions. Q&A
14:45 - 15:05	RISK ASSESSMENT AND PREMIUM SETTING IN SOCIAL HEALTH INSURANCE **Adeniyi Oginni**
15:05– 15:15	Interactions. Q&A
15:15– 15:35	ASSESSMENT OF DRINKING WATER SAMPLES AROUND SELECTED OIL SPILLAGE AND METAL RECYCLING COMPANY IN LAGOS STATE, NIGERIA **Oyebamiji O. Oketayo**
15:35 – 15:45	Interactions. Q&A

(15:45 – 16.45) **PARALLEL SESSION III** Location 1: [Ground Floor, Auditorium]
Extractive Industry
Chairman: xxxxxxxxxxxxxxxxxxxxxxx
Rapporteur: xxxxxxxxxxxxxx

15:45– 16:00	ENVIRONMENTAL IMPACT OF ILLEGAL ARTISANAL REFINERY IN THE NIGER DELTA REGION OF NIGERIA **Samuel Sisanmi Aghomi**
16:00 – 16:15	ENVIRONMENTAL ACCOUNTING AND SUSTAINABLE DEVELOPMENT **John Ayoola**
16:15 – 16:30	ECOLOGICAL AND HUMAN HEALTH RISK ASSESSMENTS OF METALS IN SOIL AND TAILING FROM IFE-IJESHA GOLD MINING AREA, SOUTHWEST NIGERIA **Adebayo S.A**.
16:30 – 16:45	Interactions. Questions & Answers

(15:45 – 16.45) **PARALLEL SESSION III** Location 2: [Ground Floor, Back Auditorium]
Industrial Wastes
Chairman: xxxxxxxxxxxxxxxxxxxxxxx
Rapporteur: xxxxxxxxxxxxxx

15:45– 16:00	ASSESSMENT OF HEAVY METALS IN ENVIROMENTAL MEDIA AROUND PLASTIC WASTE RECYCLING COMPANY IN LAGOS STATE, NIGERIA. **Oluwagbenga Tosin Bakare**
16:00 – 16:15	THE RADIOLOGICAL ASSESSMENT OF ABATTOIR WASTES IN OWERRI IMO STATE, NIGERIA **Emelue H U**
16:15 – 16:30	CONCENTRATIONS OF AIRBORNE PARTICULATE MATTER AT A SECONDARY STEEL SMELTING INDUSTRY IN OSUN STATE, NIGERIA**.** **Akinlade**, G.O.
16:30 – 16:45	Interactions. Questions & Answers

(15:45 – 16.45) **PARALLEL SESSION III** Location 3: [Upper Floor, Auditorium]
Miscellaneous
Chairman: xxxxxxxxxxxxxxxxxxxxxxx
Rapporteur: xxxxxxxxxxxxxx

15:45– 15:55	ENSURING THE DEPLOYMENT OF BLUE ECONOMY THROUGH THE APPLICATION OF SPATIAL TECHNOLOGY TO ADDRESS ENVIRONMENTAL ISSUES IN COASTAL AREAS **Dipo Theophilus Akomolafe**
15:55 – 16:05	ANALYZING THE FLUTTER PHENOMENON IN AIRCRAFT: A REVIEW OF METHODS AND MODERN SOLUTIONS **Donald C.M.**
16:05 – 16:15	COMPARATIVE STUDY OF BREASTFEEDING AND WEANING PRACTICES AMONG MOTHERS OF UNDER 5 CHILDREN IN RURAL AND URBAN AREAS OF OSUN STATE **Omola, Ayomide M**
16:15 – 16:25	PREDICTORS OF SUCCESSFUL TREATMENT OUTCOME AMONG MULTIDRUG RESISTANT TUBERCULOSIS CLIENTS IN OSUN STATE NIGERIA (2015-2020). **Dauda Monsurat Adekemi**
16:25 – 16:35	KNOWLEDGE, ATTITUDE AND UPTAKE OF COVID-19 VACCINE AMONG UNDERGRADUATES OF OSUN STATE UNIVERSITY **Ibrahim, Kafayat Abisola**
16:35 – 16:45	Interactions. Questions & Answers

(16:45 – 17:00**)** **PLENARY SESSION VI (CLOSING)**
Chairman: **Prof Joshua Ojo,** President LivingScience Foundation, Ile-Ife
Rapporteurs: **Dr. Dimeji Babatunde** and **Mrs Tosin Alani**

16:45 – 17:00	Communique and Closing

PROFILES

SPECIAL GUESTS OF HONOUR



Anthony Enisan Akinlo is a Professor of Economics, with a PhD in Monetary and Development Economics from the Obafemi Awolowo University, Ile-Ife, in 1995. He has over 130 publications in the areas of reforms and growth. He has supervised 23 PhD theses, 5 M.Phl theses and 31 M.Sc theses. He has served and still serving on the Editorial Board of a number of impact journals in his field. Prof Akinlo is rated among the three most productive Nigerian researchers in Economics in the 2021 AD Scientific Index ranking of Economists. He has served the Obafemi Awolowo University in various capacities: Head, Department of Economics, 2002 to 2006; Director, Centre for Industrial Research and Development (now Institute for Entrepreneurship and Development Studies), 2007 to 2011, and Dean, Faculty of Social Sciences, 2013 to 2015. He has equally served in various committees of the University. Professor Anthony Akinlo has participated in many international sponsored Research works and carried out consultancies for such organizations as IDRC, African Economic Research Consortium (AERC), Institute of Developing Economies (IDE), Population Research Fund (NPF) and UNDP. Professor Akinlo served as Visiting Professor to many institutions including; United Nations World Institute of Development and Research (UNWIDER), Helsinki; Institute of Developing Economies, Japan; Ekiti State University, Ado-Ekiti; Federal University, Oye-Ekiti. He is a Pastor-In-Charge of Zone (PICZ), The Redeemed Christian Church of God, Osun Province 7, Ile-Ife. He is married with children.

Emeritus Prof A.F. Oluwole



Doyen of Environment-Health studies in Nigeria**,** Prof A.F. Oluwole was born in September 1939 at Ijare, Ondo State. He joined the services of the then University of Ife (now Obafemi Awolowo University), Ile-Ife in 1969 as a Lecturer I and rose to become a Professor in 1978. Between 1975 and 1976 he served as the acting Head, Department of Physics, after which he became the Coordinator of the University's Nuclear Technology Programme (1976 – 1980). The Programme gave birth to the Centre for Energy Research and Development (CERD), where Prof Oluwole served as the pioneering Director (1980 to 1983). Prof Oluwole not only raised the profile of research on the Nigerian environment by attracting several multi-million dollars international fundings for pioneering original research, he also spearheaded the introduction of the Health Physics and Environment option into the postgraduate programmes at the Obafemi Awolowo University, Ile-Ife.

Outside the Obafemi Awolowo University, Prof A.F. Oluwole held various teaching and research positions at several academic institutions including the University of California, Berkeley, (1964/65, 1969), University of Heidelberg FRG (1971), University of Sussex (1970), University of Washington, Seattle, (1972), Columbia University (1974), McMaster University, (1977).Federal University of Technology, Akure, (1984/85), Nuclear Research Center, Washington State University, Pullman (1985, 1991), University of Surrey, (1989, 1990, 1992, 1993, 1994) and University of Stuttgart, FRG (1989, 1990, 1992, 1993, 1994).

Apart from teaching and research, the meritorious services of Prof A.F. Oluwole include membership of**:** Federal Panel on Ionising Radiation (1970 to 1990); Natural Sciences Research Council Committee on

the National Institute of Nuclear Sciences (1975); FMST's Review Panel on National Policy on Science and Technology (1983). National Panel on Integrated Energy Policy for Nigeria by Ministry of petroleum and Energy 1984, Energy Panel on National Nuclear Centre and Science village, Abuja by FMST, 1987., Energy Commission of Nigeria (2001). Prof Oluwole was also a member of the International Atomic Energy Agency (IAEA) Committee on Nuclear Information Services (1982), and Nuclear Data (1993).

Prof Oluwole was inducted a fellow of the Nigerian Institute of Physics in 1996. He is a member of several professional bodies, including the Tau beta Pi-American National Honour Engineering Society (1964), American Physical Society (1968), American Association of Physics Teachers (1968), Science Association of Nigeria (1970), West African Science Association (1970), Nigeria Institute of Physics (1974), New York Academy of Sciences (1980), and the American Nuclear Society (1982), American Association for the Advancement of Science (1996).

He has authored over eighty scholarly articles in reputable local and international journals in addition to several important books and Monographs

An accomplished scholar, Prof Oluwole was awarded the Nigerian National Order of Merit (NNOM) for Science in 2004. Among over a dozen other prestigious awards received by Prof A.F. Oluwole are the Doctor of Science *(Honoraris Causa)* from the Federal University of Technology, Akure (2006) and the Adekunle Ajasin University, Akungba, Ondo State (2008). In 2019, Prof A.F. Oluwole was appointed Emeritus Professor at the Obafemi Awolowo University, Ile-Ife.

Steering/Organizing Committee Members



Aaron Oladipo Aboderin MD, FMCPath, FRCPath(UK) , FAMedS is Professor of Clinical Microbiology and Parasitology at the Obafemi Awolowo University, Ile-Ife. He is also Consultant Clinical Microbiologist at the Obafemi Awolowo University Teaching Hospitals Complex since 2000 where he coordinates the Residency Training programme for the institution. For many years Prof Aboderin was the Head of the Department of Medical Microbiology and Parasitology. He also served two-terms as Deputy Provost, College of Health Sciences, Obafemi Awolowo University.

He is involved with the training and examination of a large number of students and resident doctors in clinical microbiology all over the country. The Primary focus of his research is on epidemiology of enteric infections and antimicrobial resistance and has over 50 peer-reviewed journal articles. Prof Aboderin chairs the Nigeria's National Technical Working Group on Antimicrobial Resistance (AMR). As an expert in field of of AMR including antimicrobial stewardship, he has been leading Nigeria's One-Health multisectorial response to the threat of AMR through the Nigeria Centre for Disease Control (NCDC) since 2015. He chairs the Steering Committee of the National Conference of Environment and Health.



Adeniyi Samuel Oginni; **MBChB; MPH (Comm. Med); Ph.D (Ecology & Env. Science); Cert. MM4H (Edinburgh)**

Dr. Adeniyi Samuel Oginni is a public health physician, environmentalist, human rights activist, university lecturer and civil servant. He graduated from Obafemi Awolowo University, Ile-Ife

Nigeria as a medical doctor in 1989, bagged a Master of Public Health (Community Medicine) degree at the University of Ibadan through a World Health Organisation (WHO) fellowship programme in 2006 and obtained his Ph.D in Ecology and Environmental Science from the Institute of Ecology and Environmental Studies of Obafemi Awolowo University, Ile-Ife, Nigeria in 2017. He completed a certificate course in Managing Markets for Health (MM4H) of the University of Edinburgh supported by the World Bank Group in 2020.

He is a fellow of the Nigeria Institute of Management (Chartered) and the only Nigerian admitted into the 2016 cohort of Emerging Leaders of the World Heart Federation (WHF). He is the Executive Secretary of Osun Health Insurance Agency and the Chairman of the Forum of Chief Executive Officers of State Social Health Insurance Agencies established to accelerate the movement towards achieving Universal Health Coverage (UHC) in Nigeria. His research interest is workplace safety, health financing, health policy and management. His doctoral thesis assessed the health of metal smelters in a fast growing factory and he was in the collaborative research that assessed compliance of hospitality facilities in Kampala with the 100% smoke-free law of the government of Uganda.

Dr. Oginni is the Scientific Officer for Nigerian Heart Foundation (NHF), a member of the NCD Alliance Nigeria Research Working Group and an active member of the Nigerian Joint Learning Network for UHC. He is the president of Christian Initiative for Nation Building (CINB) an NGO with health promotion and disease prevention, good governance, poverty reduction and human rights advocacy as its thematic areas. He is a past chairman of the Osun state chapter of Nigerian Medical Association. He currently sits on the boards of a number of NGOs including the Network of Non-Governmental Organisations (NETNOS), the Christian Leaders Assembly in Yorubaland (YCLA), and Community Building Development Initiative (CBDI) in Osun state, Nigeria.

Dr. Oginni was appointed as NCD Alliance Nigeria Country Focal Point for the 2020 Global week for Action on NCDs with the theme “Accountability”. In recognition of the activities carried out during the week, NCD Alliance Nigeria won the ‘Act on NCDs Campaign Fuel Awards’ of the Global NCD Alliance. He is a winner of many awards for meritorious service to humanity and in the civil service of Osun State, Nigeria where he currently works. Dr Oginni is Secretary to the Steering Committee and a member of the Organizing Committee.



Beatrice Oluyomi Emma-Okon is a Senior Lecturer and the Acting Head of Department of Medical Biochemistry, College of Health Sciences Obafemi Awolowo University Ile-Ife. Her area of Research are Lipids in Health and disease and Pathophysiology of Type 2 Diabetes Mellitus. She is a member of the Nigerian Society of Biochemistry and Molecular Biology, American Association for Clinical Chemistry and American Society of Biochemistry and Molecular Biology. Mrs Emma-Okon is the Treasurer to the Steering Committee of Conference on Environment and Health.



Oluwatoyin Ikuteyijo is a doctoral student at the Swiss Tropical and Public health, University of Basel Switzerland. Her research interests are in the areas of Violence against Women, Adolescent Sexual Health, Child Health and Environmental Health. She is a Fellow of Ife Institute of Advanced Studies, the French Institute for Research in Africa (IFRA) as well as a 2019 Policy Communication fellow (PRB). Mrs Ikuteyijo is a member of the Mixed Method International Research Association (MMIRA) and she serves on the Board of Advisers of the LivingScience Foundation.



Ismail Adeleke Ajani was born on the 4th of January, 1960 in Osogbo, Osun State to the family of Alhaji and Madam R. A. Ajani. He had his elementary School education at St. Michael Primary Iyin-Ekiti and John Mackay Primary School Osogbo; while he had his Secondary Education at Doherty Memorial Grammar School Ijero- Ekiti and Ado Grammar School. He further went through Higher School Education at Ondo High School in Ondo State, He gained admission to University of Ife (now Obafemi Awolowo University (OAU) Ile-Ife to study Agriculture (Plant Science) in 1981. Mr. Ajani bagged the Bachelor of Agriculture (B.Agric.) in 1985 and did his NYSC Primary Assignment at Nigerian Agricultural and Cooperative Bank Owerri, Imo State. In his quest for academic excellence, Mr. Ajani bagged Master of Science (M.Sc.) Agriculture in 1992 from University of Ibadan, Ibadan.

Mr. Ajani was among the Pioneer Staff of the National Environmental Standards and Regulations Enforcement Agency (NESREA) in 2007. Between 2008 and 2015, he served as the Ekiti State Coordinator, and became the Zonal Director, Southwest Zone of NESREA from July 2015 from which position he retired in 2020. Mr Adeleke Ajani has attended several International Conferences and Trainings both within and outside the country on Environment with interest and vast experience in Compliance Monitoring and Enforcement, Industrial Ecology, Forest Resource Management, Biodiversity Conservation and Management, Environmental Planning and so on. Mr. Ajani is a devout Muslim happily married to Mrs. Bosede Ajani his best half and mother of his lovely children.



Tope Akinwumi *fwapceh* (DPH, B.SC (H\E),MEM, M.Sc, PhD) is a Public and Environmental Health expert, a registered Environmental Health Officer with Environmental Health Officers Registration Council of Nigeria (EHORECON). He currently serves as the President of Environmental Health Officers Association of Nigeria in the South West.

Dr Akinwumi has served in various capacity including Head of Division , Health Education and Community Mobilization, and as Water Supply Officer in Egbedore L. G in Osun State where he made a tremendous achievements in the areas of borehole drilling and supervision ,rehabilitation of HPBH, MBH, Hand washing.

Dr Akinwumi is currently the Head of Department, Water and Environmental sanitation Olorunda L.G , Igbona- Osogbo, Osun State where he is in charge of supervision of water and waste management activities at the centre of Osogbo (Osun State capital) potable water supply and quality control, market sanitation, flood control activities, food hygiene, environmental impact assessment, pollution control, excreta and sewage management, sanitary inspection of premises, pest & vector control and other environmental health activities.

He is the leader/coordinator of a popular weekly radio programme on Osun State Broadcasting Cooperation Ile- Awiye Oke - Bale Osogbo, tagged **"Imototo Ayika Wa"** meaning Environmental Sanitation where the public is educated / enlightened on the components of Environmental Health to improved quality of life, survival, promote hygienic condition and welfare and sustainable environment .

Dr Akinwumi is a part- time lecturer at Environmental Health Officers Registration Council of Nigeria (EHOREON} training centre, Ilesa and chief examiner to the Council certification examination in Nigeria with a good track record.

Dr Akinwumi was inducted as fellow of West African Postgraduate College of Environmental Health in 2015 and Fellow of Nehemiah Fellows, Diocese of Osun Anglican communion. He is a member of several professional and social bodies where he has been decorated with awards and recognitions He has attended several conferences, training and workshops home and abroad on issues relating to water quality assurance, waste management, climate change, health education, pollution control dispute management e.t.c and presented many technical papers in various conferences, meetings and workshops. He is happily married and blessed with children.



Dr (Mrs) Oyenike Oguntunde is a Senior Lecturer in the Department of Computer Science and currently the subdean of the Faculty of Natural Sciences of the Redeemer's University, Ede. She holds a B.Tech (Hons) degree in Computer Engineering from LAUTECH, Ogbomosho. She obtained her MSc and PhD degrees in Computer Science from University of Ibadan, Nigeria. Dr Oguntunde aspires to contribute to national development through handwork, integrity, diligence dedication and honesty; and to be an epitome of success in humility to women folks.



Oluropo F. DAIRO BSc, MSc, Electronic and Electrical Engineering, Ph.D Physics

Since October 2010, Dr Dairo joined the Department of Physical Sciences in Redeemer's University as an Assistant Lecturer. His research visits traversed the International Satellite Beacon symposium at Abdus Salam International Centre for Theoretical Physics (ICTP, Italy), Quantum, Atomic, Molecular and Plasma Physics (QuAMP) at Durham/Newcastle University, UK, courtesy of Institute of Physics (IOP), UK and Gaseous Electronic Conferences at North Carolina State University, USA courtesy of American Physical Society. Prior to the appointment he was with *Société Internationale de Télécommunications Aéronautiques* (SITA) where he started as an intern in 2002 and was welcomed back to top-flight service as a Field Service Engineer after his studies in the UK in 2009.

While in the UK, he obtained PgD Communication Engineering and MSc Electronic Instrumentation Systems in 2006 and 2007, respectively from the University of Manchester. Among the opportunities enjoyed while in the UK are: communication support staff of the Alumni Relation and Development Unit of the University of Manchester (UK and North America campaign, 2006-2007), EDEXCEL Specialist Marker (Systems and Control, 2006-2008), NIST short course on Laser measurement (US Department of Commerce, Boulder, Colorado, 2007) and member of staff Creative Support Ltd (2007-2009). Dr Dairo is an alumnus of the Obafemi Awolowo University with BSc (Hons) in Electronic and Electrical Engineering. He is an active member of Institute of Electrical and Electronic Engineers (IEEE), Optical Society of America (OSA), Society of Satellite Professionals International (SSPI), American Physical Society (APS), Institute of Physics (IOP) and Nigerian Union of Radio Science (NURS). His specific research interests include: Radio communication and environmental monitoring; Molecular effect of green house gases on radio communication; Atmospheric transmission at microwaves frequency; and Nano-Photonics and sensing applications.



Dr. Paulina Olufunke Adeniji

Dr Adeniji Paulina Olufunke has her PhD in Human Nutrition from the Department of Human Nutrition, College of Public Health, University of Ibadan, Ibadan, Nigeria. She is currently a Reader at the Department of Tourism Studies, Redeemer's University, Ede, Nigeria. Her research areas are: Human Nutrition, Public Health, Nutritional Biochemistry,

Home Economics, Hospitality and Tourism. She has published 33 articles in reputable journals. She is member of various Professional bodies: American College of Toxicology(ACT), Society of Toxiclogy (SOT) USA, Institute of Hospitality, UK, African Nutrition Society, Nutrition Society of Nigeria, Home Economics Research Association of Nigeria (HERAN) among others. She is Editorial Board member, African Journal of Hospitality, Tourism and Leisure. Reviewer: International Journal of Contemporary Hospitality and Tourism Management, Scientific African Journal. Member - Board of Governors, Christ Redeemer's School Management (CRSM) - Redeemer's International Academy, Ifewara.



Joshua Ojo is a Professor of Health Physics and Environment at the Department of Physics and Engineering Physics, Obafemi Awolowo University, Ile-Ife, Nigeria. He obtained his PhD in Engineering Physics from the same University in 1995, and served as Head of Department between 2011-2015. Prof Ojo acquired broad research experience from top laboratories in several parts of the world including Britain, the United States, Czech Republic, Poland, and Italy. He has published over 50 articles in local and international peer-reviewed journals. Provoked by results he obtained as Principal Investigator in a series of Research Contracts carried out under the auspices of the International Atomic Energy Agency (IAEA), Vienna between 2001 and 2014, Prof Ojo decided to form a non-governmental organization that would conduct research into environment-health issues of peculiar relevance to Nigeria, communicate the findings widely in the country, and advocate for possible mitigating actions at the appropriate levels. The LivingScience Foundation was consequently registered with the Corporate Affairs Commission in October 2016. Prof Ojo's broad research interest is in assessment of risks associated with exposure to environmental hazards by various population subgroups. His works include both measurements and modeling of exposure to the hazards. He is particularly interested in toxic and essential elements, pesticides, tropospheric ozone, microwave radiation associated with GSM communication, and environmental radioactivity. He is happily married to Olusola and they are blessed with grown-up children.



Isijaan A. Nkanta is a Senior Enforcement Officer at National Environmental Standards & Enforcement Regulatory Agency (NESREA) at Abuja. He is a Federal University of Technology Owerri (FUTO) trained Industrial Chemist with post graduate degrees, certifications and research interests in Science Education, Educational Technology, Science Communications, Environmental Chemistry, Chemical Technology, Green Technology and Geo-Informatics.

He is a member of various professional bodies including International Union of Pure & Applied Chemistry (IUPAC), Chemical Society of Nigeria (CSN), Nigerian Environmental Society (NES) amongst others and has served in various capacities both at workplace and professional associations.

He was Head, Chemicals, Pharmaceuticals & Pesticides Sector, Telecommunications & Broadcast Facilities Sector, School Outreach Program at NESREA Osun Field Office, Osogbo and currently the Vice Chair, Chemical Society of Nigeria (CSN), Osun State Chapter.

Isijaan is also passionate about Educational and Industrial Advancement in Africa. He has raised hundreds of young scientists and has engaged in several religious and community development initiatives. He was pioneer Youth Coordinator at Rivers Community (RIVCOM), Abuja. Isijaan is

ordained into the evangelical cum pastoral ministry for over two decades. He is a true Ijaw son from Obolo (Andoni), Rivers State.



Grace Olubunmi Akinlade is a Lecturer in the Department of Physics and Engineering Physics at the Obafemi Awolowo University, Ile- Ife. There, she also serves as Coordinator of the EnvironLab, a Research/public service Laboratory with full accreditation from the Department of Petroleum Resources. Dr Akinlade had her first and second degrees in Meteorology and Atmospheric Physics respectively. Her Ph.D (Engineering Physics) was obtained in the field of Health Physics and Environment. Her research focus is presently in toxic metals and environmental radioactivity. Dr Akinlade had research stints in Germany and Portugal and has participated in several learned Conferences at home and abroad, including the prestigious Women in Physics Conference held in Seoul, Korea in 2008. Grace is happily married with children.



Dr Fatai Bola Akinwale is a Chief Lecturer in the Department of Physics at the Adeyemi College of Education, Ondo. He obtained his BSc. (Hons) Physics in 1985 from the University of Ibadan, MSc. Physics, OAU Ile - Ife, 1995 and PhD, University of Ibadan with TETFUND scholarship, 2019. His areas of specialization are: .Atmospheric Physics, Solar Radiation, and Climate Change. Dr Akinwale is the recipient of a TETFUND research grant on Modelling land surface fluxes in 2014.



Mrs. Karokatose Tolulope E. holds a B.Sc (Ed) Physics and Masters degree in Engineering Physics (Health Physics and Environment option) both from the Obafemi Awolowo University, Ile-Ife. Her research is on modelling the transfer of lead into the tissues of women with major emphasis on how much gets to infants through breastfeeding. She currently lectures in the department of Physics, State College of Education, Ilesa. She has a keen interest in welfare of infants. She is a member of the Management Committee of the LivingScience Foundation.

Wada Aliyu



Wada Aliyu is a Chief Health Records Officer at the Department of Health Information Management, National Hospital, Abuja - Nigeria. He obtained a Higher National Diploma (HND) in Health Information and Biostatistics from A.B.U, Teaching Hospital, Zaria, and a BSc in Health Information Management (HIM).

He proceeded to the premier University (University of Ibadan) in 2012 where he obtained a Master's Degree in Health Information Management (HIM). He is currently a Research Fellow with Babcock University Ilisha Remo, where he is undergoing a Doctorate Degree (PhD) in Information Resources Management with specialization in Health Information Management.

Wada Aliyu is a member of several professional bodies among which are Association of Health Records and Information Management Practitioners of Nigeria (AHRIMPN), American Health Information Management Association (AHIMA), International Federation of Health Information Management Associations (IFHIMA) and the Institute of Management Consultants – Nigeria (IMC). As a result of the display of high degree of Management skills and professionalism in his chosen career, and satisfying the protocols of the Institutes he belongs, he earned the Fellowship of Health Records and Information Management (FHRI) in 2018 and Fellowship of the Institute of Management Consultants (FIMC) in 2019. In same year 2019, he became Chattered Management Consultant (CMC) after satisfying the requirements of the Institute of Management Consultant.

His work experience covers areas of Data Management and Analytics, Classification of Disease entities and Clinical Coding based on WHO published criteria, Patient Experience Management, Business Development and Management Consultancy.

OTHER MEMBERS OF THE LOCAL ORGANIZING COMMITTEE INCLUDE:
Dr Femi Aluko **Scientific Committee**
Mallam Wada Aliyu **Scientific Committee, Finance**
Dr Dele Oketayo (Convener) **Publicity**
Dr Jacob Opele **Publicity**
Mrs Toyin Amusan **Publicity**
Sanitarian Femi Ola **Publicity**
Mr Yemi Akintude **Publicity**
Dr Dimeji Babatunde (Convener) **High School Innovation**
Dr John Ayoola (Convener) **Finance**

INVITED SPEAKERS



Omowunmi "Wunmi" A. Sadik (NNOM)

Professor, chemist, and inventor Omowunmi “Wunmi” A. Sadik was born in Lagos, here in Nigeria. She graduated from the University of Lagos with her B.Sc. degree in chemistry in 1985 and her M.Sc. degree in chemistry in 1987. She then proceeded to the Wollongong University in Australia where she received her Ph.D. degree in chemistry in 1994.A postdoctoral fellowship from the National Research Council (NRC) took her to the United States where she conducted research at the U.S. Environmental Protection Agency (EPA) from 1994 to 1996.

In 1996, Sadik was appointed as an assistant professor of chemistry at the State University of New York (SUNY) at Binghamton. From there she rose to become a full professor at SUNY in 2005 at which time she was appointed director of SUNY-Binghamton’s Center for Advanced Sensors & Environmental Systems (CASE).

Between 2000 to 2003, Sadik held visiting appointments at the Naval Research Laboratories, Cornell University, and Harvard University all in the US.

Sadik’s research interests are in surface chemistry with a focus on sensors, environmental chemistry and conducting polymers. She has developed microelectrode biosensors sensitive to trace amounts of organic materials, technology which can be used for drug and bomb detection. She is also studying detoxification mechanisms of wastes such as organochlorine compounds in the environment, with the purpose of developing technologies for recycling metal ions from industrial and environmental waste.

Prof Sadik has co-authored over 135 peer-reviewed research papers and patent applications, has given over 120 keynote and invited lectures, as well as contributed nearly 200 conference lectures, posters, symposia and workshops. She was awarded five U.S. patents for her work on biosensors and nanostructured membranes.

In 2011, Sadik chaired the inaugural “Gordon Conference on Environmental Nanotechnology.” She was appointed to the National Institutes of Health Study Panel on Instrumentation and Systems Development, and has made contributions to scientific and government organizations such as the Environmental Protection Agency, American Chemical Society and National Science Foundation. Sadik has received over $5 million in funding and contracts both from the private sector and government agencies. In 2012, she co-founded the Sustainable Nanotechnology Organization (SNO), a non-profit, international professional society dedicated to advancing sustainable nanotechnology around the world through education, research, and promotion of responsible use of nanotechnology.

Sadik has been awarded Harvard University’s Distinguished Radcliffe Fellowship, the NSF Discovery Corps Senior Fellowship, the State University of New York Chancellor’s Award for Research, the Australian Merit Award, the SUNY Chancellor’s Award for Outstanding Inventor, National Research Council (NRC) COBASE fellowship and Jefferson Science fellowship. Sadik was elected as a fellow of the Royal Society of Chemistry in 2010 and of the American Institute for Medical and Biological Engineering (AIMBE) in 2012.She is also a member of the American Chemical Society. She is involved with the Environmental Protection Agency and the National Science Foundation, and was part of the National Institutes of Health Study Panel on Instrumentation and Systems Development. She is involved in international collaborations with the UNESCO International Center of Biodynamics in Bucharest, Romania, Ege University in Turkey, and the University of Fukui in Japan.

On January 21 2021, Sadik was featured on New Jersey's PBS TV to discuss "The Connection Between Environmental Chemistry and COVID" There she showcased the development of biosensors to test COVID-19 and the importance of environmental chemistry during a pandemic.

Despite her international successes and renown, Prof Wunmi Sadik has stayed in touch with Nigeria and she continues to influence and inspire generations of Nigerians, sometimes quietly. She delivered the 7th Graduation Lecture at the Redeemer's University, Ede in 2015 . One of the several fruits of that lecture was the inspiration to commence the National Conference on Environment and Health which is currently in its 7th annual edition. She also kindly accepted to serve as an honorary International Advisor and mentor to the LivingScience Foundation, organizers of the conference series.

Not surprisingly, she was awarded the highest honour given to an academician in Nigeria, the Nigeria National Order of Merit in 2016. She was the fourth woman to be so honoured, and the first female scientist.

Before traveling to Australia for her PhD, Prof Sadik had stints at the Nigerian National Petroleum Corporation (NNPC), and the Nigerian Institute of Oceanography and Marine Research (NIOMR). The story of her proceeding to the US in November 1994 had elements reminiscent of that of Joseph where apparently adverse circumstances were turned round by God for not only her personal good, but for the blessing of mankind. She likes to sum up her journey in this regard with the words of Alan Alda:

> "You have to leave the city of your comfort and go into the wilderness of your intuition. You can't get there by bus, only by hard work and risk and by not quite knowing what you're doing, but what you'll discover will be wonderful. What you'll discover will be yourself."

Her overall philosophy and attitude to life is portrayed in one of her favourite Scriptures:

> "While we look not at the things which are seen, but at the things which are not seen: for the things which are seen *are* temporal; but the things which are not seen *are* eternal. "2Cor. 4:18

We are highly honoured to be associated with Prof Omowunmi Sadik, and to have her present a Keynote at the 7th National Conference on Environment and Health.

ENGR OLUFUNBI O. O.SODE



Engr. Olufunbi O. O. Sode is a graduate of both the Polytechnic (now The University) Queensgate, Huddersfield and the University of Bradford (M.Phil, Powder Technology 1979 - 1982), both in West Yorkshire, England.

A Christian and married, Engr. Sode started his career in the Civil Service with the Lagos State Teaching Service Commission in 1987.

In 1991, he transferred his service to the Federal Environmental Protection Agency, FEPA and was assigned the responsibility of the Head, Public Complaint Unit of the Agency.

As a result of his passion, commitment and dedication to duty, he was posted to the Port Harcourt Office of FEPA in 1993 until the establishment of the Federal Ministry of Environment in the year 2000. During this period, the Port Harcourt Office of FEPA was charged with the responsibility of overseeing both the South-

South and South-East Zones from where he gained considerable knowledge and practical experience on the management, protection and regulation of the environment in general including the Oil and Gas sector.

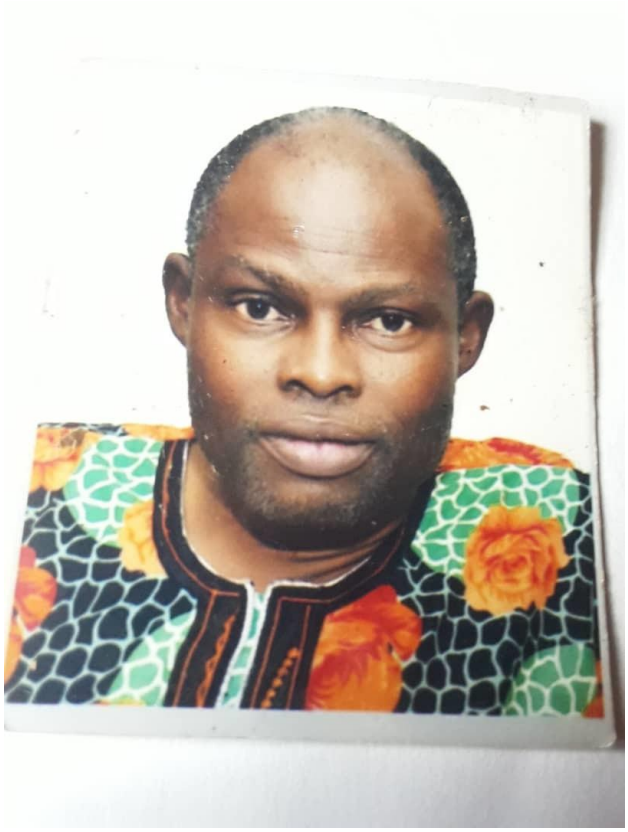
In the year 2000, Engr. Sode was again deployed the Federal Ministry of Environment Headquarters in Abuja to join hands with other staff in setting up the Oil & Gas Division of the Environmental Assessment department from which the National Oil Spill Detection and Response Agency, NOSDRA was established.

In 2007, Engr. Olufunbi Sode was again deployed to the National Environmental Standards and Regulations Enforcement Agency (NESREA) at its creation. At inception, he was Head of the Extractive Industry Compliance Monitoring (EICM) Division of the Inspection & Enforcement Department and was instrumental to the development of several National Environmental Regulations.

He was at various times the Zonal Director of South-South and South-West respectively before his mandatory retirement as an accomplished Director, Regulator and a passionate environmentalist in 2015.

Engr. Sode was part of a Team involved in building capacity of upcoming staff of the Agency.

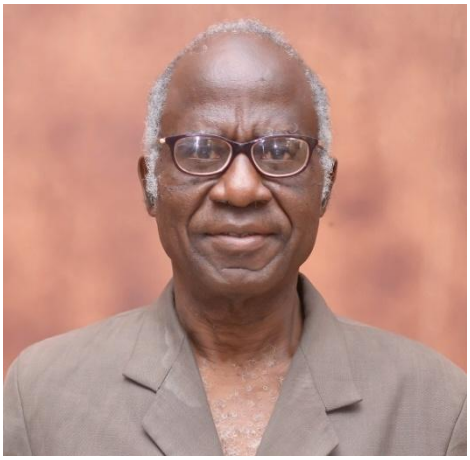
Since retirement, Engr. Sode has been into active environmental consultancy and has at various times been appointed member of EIA Review Panel of several Proposed Projects across the Nation.



PHARMACIST AKINRINOLA FASIPE

Pharm. Akinriola, Fasipe, the a compassionate and systematic Clinical Pharmacist with over three decades of experience in the Hospital Pharmacy sector of which over 20 years is in administrative positions. He also held different positions as a labour leader in Association of Hospital and Admnistrative Pharmacists of Nigeria, and Nigeria Union of Alllied Health Professionals in Osun State. He is honest and punctual at work.

Mr Fasipe possesses skills in various aspects of Pharmaceutical care services delivery such as detection of Adverse Drug Reactions, potential drug interactions, patient care and counseling as well as leadership and collaborative skills. He holds a Bachelor of Pharmacy degree from the University of Nigeria, Nsukka and is also a fellow of West Africa Postgraduate College of Pharmacy. He currently serves as the Director, (Pharmaceutical Services), State Hospitals Management Board, Osogbo.



Dr. MC Asuzu is a professor of disciplinary public health and community medicine of the College of Medicine of the University of Ibadan since 1995. He had also been a consultant population and clinical epidemiologist, community and occupational physician to the University College Hospital at Ibadan since 1987. He had been adjunct professor to the University of Medical Sciences, Ondo, from October 2016, on sabbatical leave from November 2017 and

on extended leave since December 2018. His teaching, service, mentorship and research interests are in population and clinical epidemiology, occupational health, health policy and management, as well as in adolescent and family life education and services, including natural family planning. He joined the University fully as a post-UI retiremeni contract stahh sice December 2020. His particular philosophy of secular life is "to be the disciplinary public health and community physician anywhere I live or work, in spirit and truth and most naturally, without anybody having to need to be merely saying or claiming it". https://scholar.google.com/scholar?start=0&q=MC+Asuzu&hl=en&as_sdt=0,5

ADEJOKE LASISI



Adejoke LASISI is an African fabric designer and environmentalist. She is the founder of Planet 3R and Jokelinks Weaving School.

She holds a bachelor's degree in Economics from Obafemi Awolowo University Ile-Ife. She also holds a certificate in Entrepreneurial Management from EDC Lagos, Nigeria. Adejoke is also saving the planet using her weaving skills by converting textile and plastic wastes into innovative products.

Adejoke enjoys volunteering in entrepreneurship activities both here in Nigeria and abroad.

She is a 2016 Alumnus of the EDC Lagos/ Cherie Blair Foundation Road to Women's Business Growth in Nigeria and a pioneer Cohort member of the YALI Regional Leadership Center West Africa Accra, Ghana 2015.

She is AYEEN 2014 Business Grant Winner, a recipient of the YALI SPIRIT AWARD at the YALI Regional Leadership Center West Africa Accra, Ghana in the Young African Leaders Initiative YALI 2015 and was the runner-up for Franco-Nigeria Chamber of Commerce grant competition in 2016. She was nominated as the best indigenous textile designer at the ACE Awards 2017 and 2018. She also emerges as one of Akin Alabi Business grant winners in 2017.

She is also 7eleven foundation grant winner in 2017. She received a grant for a light manufacturing through SMEDAN in 2018.

She was nominated for the National MSME awards 2018 in Nigeria held at Aso-rock Abuja.

She is a recipient of GEM grant (World Bank partnered with Federal government of Nigeria) and won BlackKnightng grant in 2019.

She also received a grant award from Vice president of Nigeria through NYEES platform held in May 2019 at Abuja. Adejoke emerged as one the Top5 Nigeria Creative Business Cup 2019 Pitching Contest.

Also, she was certified in 2019 by First Technical University as a technical University trainer.

She has showcased her products at various events and exhibitions both home and abroad.

Her work and her journey have been featured on ALJAZEERA, BBC, CHANNELS TV, TRIBUNE NEWSPAPER, PUNCH NEWSPAPER, NTA, TVC, NATIONS NEWSPAPER and some other popular blogs.

Her organization also emerged as one of the Top50 Big Bang Business Competition organized by the Institute for Entrepreneurship and Innovation UC Davis, USA.

Adejoke emerged as the National MSME of the year 2020 for using her weaving skill to save the planet by converting Plastic and Textile wastes into Eco-friendly products.

She was also awarded by the President of Nigeria as one of the five young INNOVATORS at Aso villa Nigeria in 2020. She won the Africa green grant award 2020 organized by Eleven Eleven Twelve Foundation. She was also listed and receive an award as one of the 60 most influential personalities in Ibadan. She was recently recognized by Ooni of Ife as one of the Southwest MSME Ambassadors in 2021.

She has been invited to major events in Nigeria to speak and also got into Social Innovators Program 2021/2022 and Innovation Fellowship for Aspiring Inventors and Researchers 2021/2022.

Her organization was one of the 30 selected in Africa as semifinalists 2021 and 15 finalists for Afri-Plastics challenge 2022. She recently emerged as one of the 6 winners selected globally for the Global Making Matter Design Challenge 2022.

In the space of 2years, her organization, Planet 3R have contributed immensely to achieving a clean environment as her initiative which includes collection of 148,352kg of recyclable waste (pure water sachet and other plastic bags) from the street, training of 162 youths and women, sensitization of over 6300 students across various secondary schools in Nigeria and other part of Africa.

Her aspirations are diverse, but her utmost goal is to uphold and preserve our cultural heritage, but also impact the knowledge of handwoven Fabrics into youths and women through entrepreneurial skill acquisition programs in Nigeria.



Rev. Dr. Bamidele Adewale Salau, professor of Biochemistry a highly motivated person with an excellent track record of achievements; a good team player who discharges his duties with high precision and accuracy; highly resilient and not caving in under pressure with the tenacity to achieve targets and meet deadlines obtained his HND in Public Health from College of Technology, Ilese, Ogun State, B.Sc., and M.Sc. at the University of Ibadan

He obtained a Ph.D. in Biochemistry at Olabisi Onabanjo University and, later, a Bachelor of Theology at LIFE seminary, Ikorodu. He obtained a diploma in Nutrigenomics from Nutrigenomics Institute, Spain. He is a Master's student in Apologetics from the International Seminary for distant Education in Theology and a master's student of Public Health. His working experience spans a private company (Berec Nigeria Limited), the government sector, and the Ministry of Local Government and Chieftaincy Affairs (Health Department). He joined academia 1996 at Olabisi Onabanjo University; from 1996 to 2009. He later moved to Redeemer's University (now at Ede).

He has served in various administrative and academic capacities and is currently the Dean of the Faculty of Basic Medical Sciences. Prof Salau is a technical editor to various reputable journals, both local and international such as:

- Pakistan Journal of Biological Sciences
- Journal of Biological Sciences
- Asian Journal of Biochemistry
- International Journal of Biological Chemistry
- Asian Journal of Biological Sciences
- International Journal of Science and Research

And Reviewer to:

- Journal of Basic and Clinical Physiology and Pharmacology
- Scientific Research and Essay etc.

He has published over sixty articles and books in local and international outlets and presented seminars at local and international levels.



2022 WINNER, A.F. OLUWOLE PRIZE –

Dr Patrick Ijewere: (B.Sc.Chem, B.Pharm. MD, MBA)

:Dr Patrick Ijewere is an unusual man of many parts. He studied Chemistry. He is also a professional Pharmacist as well as a Board certified Medical Doctor with speciality in Internal Medicine. He also has an MBA. He lived and practised in the USA for many years, before felt led by God to return to Nigeria to contribute his own quota to nation building. He is passionate about preventing and reversing chronic degenerative disorders of contemporary society based on the concept "Wellness". This promotes sound management of the environment coupled with good nutrition.

Dr Patrick's thirst for broad uncompartmentalized knowledge began after his secondary education at St Gregory Obalende, Lagos (1978 -1982), when he moved to the United States. Registered first at Case Western Reserve University, Cleveland, Ohio, USA he thereafter proceeded to the George Washington University where he earned a Bachelor's degree in Chemistry in 1986. He followed this up with another Bachelor's degree in Pharmacy (honors) from Howard University, Washington D.C (1989). As a Licensed Pharmacist, he practiced in retail and hospital pharmacy, simultaneously attending Medical College at Howard University (honors), (1989 - 1993).. Upon completion, he proceeded to John Hopkins University, Baltimore, Maryland, USA for Internship and Residency in Internal Medicine.(1993-1996). Subsequently, he accomplished an Executive MBA at the University of South Florida, Tampa in 2003.

Over a period of 15 years, he had professional exposure in Florida in various roles including as an Internist, a Hospitalist, Emergency Room (ER) Physician, and a Ringside Sports Physician for Florida State. He pioneered St Patrick Medical P.A., which had 5 clinics in Central Florida, amongst other clients, served the Florida State Dept of Health, and U.S. Dept of Homeland Security.

Feeling a "deep compelling call" to return home to Nigeria, he decided to exit the USA quietly, without informing his professional colleagues, as he knew they would have strongly discouraged him.. Upon return to Nigeria in 2008, he impacted healthcare in several ways. These include as:

• Leader, Servant, and Mentor –He was the Pioneer Medical Director of Salus Trust, the Catholic church's HMO with over 320 catholic hospitals and clinics nationwide, spread within 52 dioceses. , For two years, he traversed the length and breadth of Nigeria from Osogbo to Uyo, from Port Harcourt to Potiskum, Kainji to Kafanchan inspecting these hospitals and making recommendation on how to move to a better grade.
• Listener and Systems Analyst – Met with providers nationwide to understand challenges with healthcare delivery in Nigeria.
• A Speaker and Motivator – Created awareness on staying healthy (Wellness) and preventing illness by giving health talks on preventive health, proper use of medications, and nutrition. His concept of Wellness celebrates the genius of the Creator and seeks to cooperate with His intention, forging harmony between Man and his environment

Patrick Ijewere is a team player set on transforming healthcare delivery in Africa. Currently, his passion is prevention and reversal of chronic degenerative diseases, such as Diabetes, Hypertension, Asthma, Allergies, Arthritis, Depression, Dementia, Liver disease, Cancer, Autoimmune disorders (Lupus, RA, Autism, MS, Crohn's), using a Nutritional, Natural, Wellness model

With such a rich, diverse academic and professional background, coupled with a patriotic and compassionate heart for people, Dr Patrick Ijewere found himself drawn to the frontlines during the COVID-19 pandemic. At considerable costs in terms of time, finances, and personal convenience and self-prestige, he stuck out his neck educating folks on Radio & social media platforms on the scourge while debunking the barrage of misinformation and disinformation on COVID that littered the media space.

He was among the few medical doctors that helped douse the paralyzing fear that gripped the population regarding COVID by helping put out the correct data and information on COVID and COVID MORTALITY rate. As a Chemist, Pharmacist and Medical Doctor, he also proffered alternative remedies for bolstering immunity and treating COVID in the event of exposure to the COVID virus. He was loud and clear that a COVID infection was not necessarily a death sentence and COVID VACCINES were not the only way to go in mitigating the scourge. He did not also mince words regarding the potential risks involved in massively deploying vaccine candidates that were not thoroughly tested before being rolled out. He held, along with some of his colleagues, Press conferences, newspaper publications, press interviews and radio phone-in programmes to ensure that the public was well informed about the true science of COVID. All at considerable personal costs, this included a month-long zoom meeting featuring top scholars from all over the world

He has been featured on TV and Radio programs NTA, TVC, Channels TV, Wazobia TV, Cool FM, Smooth FM, Classic FM, discussing Wellness, Agriculture, Environment, and GMO issues.

Hobbies include dancing, reading, walking, tennis, traveling, and watching comedy. He LOVES MUSIC !!!! From 1998 to 2008, on weekends, he was "DJ Dr" at Naija parties in Florida, USA, as well as, radio host & DJ of "Sound Safari," a weekly program on WMNF-88.5fm Tampa, Florida, spinning music of Africa and the African Diaspora…(Caribbean, South America and beyond…)

Currently, Dr. Patrick Ijewere hosts a weekly radio program, "Wellness Half-hour" on Inspiration 92.3 FM, Lagos; promoting Environment and Wellness Together with his lovely Caribbean wife, Dr Patrick Ijewere serves at the Carib Health Group

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INVITED

ENVIRONMENTAL-HEALTH RISK ASSESSMENT AND DEVELOPMENT OF SUSTAINABLE GREEN SCIENCE IN NIGERIA

Dr. Omowunmi Sadik, NNOM
Distinguished Professor and Chair
Department of Chemistry & Environmental Science
New Jersey Institutes of Technology University Heights, Newark, NJ 07102

Major areas worldwide face a host of unsustainable risks to human health and the environment, including air, water, and soil contamination. Being currently the largest economy in Africa, Nigeria will also be the third most populous country in the world by 2050, standing behind India and China. Population density is reaching an unprecedented level in major cities in Nigeria, with significant challenges in traffic congestion, noise, and poor housing conditions exacerbated by unsustainable urban development. Sustainable exposure assessment and risk analysis innovations are needed to address the complex environmental risks and health challenges. Using the case studies of extreme lead contamination in modern times (Zamfara and Niger States in Nigeria), this lecture is a wake-up call for the Nigerian academics and health risk assessment communities, and in particular, the Nigerian government, on the critical nature of Science, Technology and Innovation. This keynote lecture provides a much-needed pathway forward in sustainable nanotechnology, articulating an ambitious call to action that includes significant shifts in how we view the population, utilize human and natural resources, as well as a scaleup of investment in areas that are strongly dependent on Green science and technologies needed to benefit environmental and human health.

ENVIRONMENTAL-HEALTH RISK ASSESSMENT IN GOLD MINING FOR SUSTAINABLE DEVELOPMENT

Engr Olufunbi Sode
Funtee Engineering & Environmental Services Ltd.
Ibadan

Organized mining operations have been carried out in Nigeria since the beginning of the 20th Century with very little attention paid to the reclamation and or remediation plans for the mine sites. A large number of these mine sites have either become inactive or abandoned leading to very serious negative socio-economic consequences. While mining activities contribute significantly to the positive socio-economic development of many countries, it can also cause considerable adverse impact on the biophysical environment as well as the social and health conditions of the people. Therefore in compliance with the United Nations Conference on the environment and Development (UNCED, Agenda 21), which stipulates environmentally sustainable industrialization, it is important, that mining activities be undertaken in such a manner that the adverse social health and environmental impacts are minimized if complete avoidance is practically not feasible.
Sustainable development mining is a positive concept that should be built and balanced on the three pillars of economic prosperity, effective environmental management and social responsibility. Its focus should be on the environment, people, and profit, which are inseparable. Environmental and social issues must be considered along with profit when making decision on the execution of any mining project. Achieving sustainable development is a collective responsibility that should all levels of government, non-governmental organizations, business, stakeholders and society at large.

RISK ASSESSMENT OF CONTINUED USE OF THIMEROSAL CONTAINING VACCINE IN NIGERIA

Pharm Akinrinola Fasipe (FPCPharm).
Director, (Pharmaceutical Services),
State Hospitals Management Board,
Osogbo.

Thimerosal (ethyl mercury) is a mercurial compound deliberately introduced into the manufacturing process of vaccines especially for childhood immunization as a preservative.
Mercury, a metallic element occurs naturally both in the free state and as methyl mercury. Over-exposure to mercury has been linked with nephrotoxicity, ototoxicity, muscle weakness, etc. The US Environmental Protection Agency (USEPA) has reduced the allowable intake of methyl mercury from 0.5 ug to 0.1 ug of mercury per kilogram.
The United States Centers for Disease Prevention and Control and the American Association of Pediatrics in July 1999 also directed Pharmaceutical Companies to remove thimerosal from vaccines as quickly as possible.
To this intent this research was carried out to determine if mercurial compounds especially thimerosal is in vaccines administered in Nigeria.
Vaccines administered in Nigeria can be grouped into (a) those to be reconstituted such as Measles, Yellow fever, Pfizer brand of COVID-19 and (b) vaccines contained in multidose vials such as Hepatitis B and Tetanus Diphteria (TD) vaccines. It was found that the TD vaccine still contained thimerosal as a preservative.
Thus, there is need for public health authorities to phase out administration of vaccines in multidose vials for single dose ampoules that do not require preservative as is the case in the advanced countries.

THE "THINK GLOBAL, ACT LOCAL" MAXIM OF IN ENVIRONMENTAL RISK ASSESSMENT

MC Asuzu
Department of Community Medicine, University of Medical Sciences,.Ondo-city. Ondo State. Nigeria.

The global history of the present unbroken practice of organized public health reveals its beginning in the environmental health practices in ships and the sea port of Venice in 1374. This grew into the food and general market hygiene shortly thereafter. Eventually, the present full international and port health services, the industrial hygiene and occupational health practices (of the early decades of the 18th century), and finally, the local government domestic and commercial premises environmental health practices within the wider local government health services developed, following the Public Health Act of the UK in the mid to late 1840s. Of these environmental health practice fields, the domestic and commercial premises services are domiciled in the LGA health services. The occupational and industrial health services, with its occupational hygiene environmental health, are domiciled in the national ministries of labour and their state or regional offices. The international and port environmental health services are domiciled in the national ministries of health, division of international health, at these land, air and sea ports; and are globally well standardized.

The newest developmental environmental health involving human developmental areas as mechanized agriculture with its tree cutting and desertification, sand or soil borrowing for major road construction and other poorly managed industrial activities polluting the environments outside the factories, with greenhouse gasses and their earth warming and non-sustainable development consequences have resulted in the need to create yet another area of environmental health practice within the general as well as the public health arena. This is the dimension of the modern environmental health concerns that has remained

largely very poorly understood as well as organized, BOTH LOCALLY AND INTERNATIONALLY. In responding to this latest environmental health concerns more than in any other of the former 3, the concept of thinking global and acting local will be most realized; while waiting for the international dimension thereof to be developed. This is because, unlike the other environmental health concerns, the greenhouse gasses do not stay locally to be identified by any inspectors but are no sooner produced than they are already global or even planetary. This paper will discuss the details of the concerns to be considered nationally and locally in these regards.

DIMENSIONS OF SUSTAINABLE DEVELOPMENT

Adejoke Lasisi
MD/CEO Planet 3R
Ibadan

Sustainable development is an overseeing principle for meeting human development goals while also sustaining the ability of natural systems to provide the natural resources and ecosystem services on which the economy and society depend. The desired result is a state of society where living conditions and resources are used to continue to meet human needs without undermining the integrity and stability of the natural system.

At Planet 3R, we initiate a waste-to-wealth innovation system by converting waste plastic and nylon into eco-friendly products to align with United Nations 17 Sustainable Development Goals to contribute to ending poverty, protecting the planet, and improving the lives and prospects of everyone, everywhere. Our goal is to ensure the three major dimensions of sustainable development, such as economic, social, and environmental in our community and a country at large.

The economic dimensions of a development deal with the use of limited resources. An economically sustainable system enables continuous output of goods and services, encouraging recycling to have a waste-free eco-system, avoiding indigenous inequalities that threaten locally made products and industrial production, and ensuring sustainability in the effective management of a country's internal and external debt.

The social dimensions focus on the development of human resources as a key to the growth of a nation. A socially sustainable system can ensure an adequate and equal distribution of social services such as education and health care, gender equality, political responsibility, and participation.

The environmental dimensions imply the balance of biological and physical systems. The aim is to enable ecosystems to adapt to changing conditions. An environmentally sustainable system must develop from the exploitation of renewable resource systems or environmental investment functions, keeping the resource base stable. This system also includes the protection of biodiversity, atmospheric balance, and other ecosystem elements that cannot be classified as economic.

To cap it all, we should foster the entrepreneurship system for youth empowerment for them to take charge of the nation's socio-economic growth by contributing their quota to move the country's system forward

INCORPORATING ENVIRONMENTAL HEALTH INTO MEDICAL EDUCATION IN NIGERIA.

Bamidele Adewale Salau
Faculty of Basic Medical Science
Redeemer’s University, Ede

Environment (natural and built) remains the habitat of every creature - living or non-living, its influence on its form and survival cannot be overemphasized. Thus, environmental health remains the only viable option for the health and survival of the creatures therein. Environmental changes have continued to be of interest in recent times due to their adverse effects on health. Thus, the need to understand the dynamics and proper integration of the knowledge in dispensing health services. Medical doctors remain one of the

significant vanguards of health. Hence their understanding of the environmental changes affecting health is expedient and imperative. Unfortunately, the medical curriculum remains copiously deficient in environmental health synopsis, thereby incapacitating such health service providers from giving their best.

In view of the above, it is urgently expedient to review the curriculum to include sufficient environmental health content in Medical education.'

STEPS TOWARDS DEVELOPMENT AND APPLICATION OF ENVIRONMENT-HEALTH INDICATORS FOR PRIMARY PREVENTION OF CANCERS IN OSUN STATE, NIGERIA

Joshua O. Ojo
Department of Physics and Engineering Physics
Obafemi Awolowo University, Ile-Ife

It is well established that as much as 80% of cancers can actually be prevented outright from occurring if appropriate environment and lifestyle-related issues are diligently addressed. According to the 2020 World Cancer Report produced by the World Health Organization (WHO), prevention is the "only consideration that will credibly decrease [cancer] burden" The WHO-endorsed Asturias Declaration specifically declared that "*Primary prevention - prevention of the exposures that cause cancer - is the single most effective means of prevention."* For many Low and Medium Income countries (LMIC) such as Nigeria, primary prevention is about the only hope for the vast majority of the population in the raging battle against cancers, since effective treatment, even when detected "early," are either not available or affordable.

An uncritical pursuit of prevention of exposures to carcinogens could however entail significant disruptions in the economic and social dimensions. Moreover, the level of carcinogenicity of a particular agent might depend on the presence (or absence) of other agents, and the adverse effect might be observed only in certain currently ill-defined vulnerable segments of the population. All these make it extremely difficult to recommend with scientific precision which carcinogens (and to what extent) should be removed from public access. This line of research has therefore remained largely unexplored to date, despite its critical importance.

This presentation proposes working from the known to the unknown (a kind of "working towards the answer") by attempting to identify Environment-Health (EH) Indicators that connect certain categories of cancer patients with their past exposures to various combinations of carcinogens. This will involve a detailed compilation of all known sources of environmental carcinogens (and their strengths) across Osun State; and the use of emerging advanced geospatial statistical methods (viz Artificial Intelligence and Big Data analytics), to seek for associations between exposures to various combinations of these carcinogens and categories of patients that actually present with cancers, based on the demographical and other relevant data extracted from the medical records of cancer patients in the State.

Relationships (involving EH Indicators) so identified will then be codified into an interactive website and a user-friendly mobile phone Application Software which will enable accurate assessment of cancer risks to individuals or some vulnerable subpopulation groups in certain communities. The possible impacts of specific interventions (either by government or the individual) can then be graphically and quantitatively evaluated and demonstrated. The framework developed in this pilot project can thus be continuously fine-tuned, and expanded to cover the entire country, and possibly other non-communicable diseases in due course.

CONTRIBUTED ABSTRACTS

THE RADIOLOGICAL ASSESSMENT OF ABATTOIR WASTES IN OWERRI IMO STATE, NIGERIA

Emelue H U, Eke B C and Okereke B O
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The radiological assessment of abattoir waste in Owerri was done using NaI(T) detector. Blood and bone samples were collected from three (3) abattoirs in Owerri namely Obinze slaughter, Somachi abattoir and Relief market slaughter.

Methodology: The samples were dried, pulverized, and 0.2kg packaged into a container. They were sealed for 28 days so that the short lived uranium and Thorium series could reach secular equilibrium. The samples were counted for 10 hours each using a NaI(T) detector

Results: The mean activity concentration of 40K, 226Ra and 232Th in the blood and bone samples were used to compute the values the absorbed dose rate and the annual effectively dose equivalent. The results show that the mean absorbed dose rates for the blood samples are 12.73 Â±1.47 nGyh-1 (Obinze slaughter), 14.2 Â±1.71 nGyh-1 (Relief market slaughter) and 13.68 Â±0.99 nGyh-1 (somachi abattoir). Then for the bone samples, the mean absorbed dose rates are 16.83 Â± 2.75 nGyh-1 (Obinze slaughter), 16.22 Â±2.97 nGyh-1 (Relief market slaughter) and 19.31 Â±1.10 nGyh-1 (Somachi slaughter). Then the Annual Effective Dose Equivalent (AEDE) for blood samples are 16.73 Â±1.94 ÂµSvy-1 (for Obinze slaughter), 18.70 Â±2.25 ÂµSvy-1 (Relief market slaughter) and 17.98 Â±1.31 ÂµSvy-1 (for Somachi abattoir). While the AEDE results for the bone samples are 22.11 Â±3.36 ÂµSvy-1 (for Obinze slaughter), 21.31 Â±3.89 ÂµSvy-1 (Relief market slaughter) and 25.37 Â±1.45 ÂµSvy-1 (for Somachi abattoir). All these values obtained are lower than the world permissible levels of environmental radiation as stipulated by UNSCEAR

Conclusion: This shows that the activities in the abattoir has not increased the environmental radioactivity in the area.

ASSESSMENT OF DRINKING WATER SAMPLES AROUND SELECTED OIL SPILLAGE AND METAL RECYCLING COMPANY IN LAGOS STATE, NIGERIA

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In recent times, anthropogenic source has been considered to be one of the major sources of environmental pollution. In this study, the levels of six heavy metals (Cadmium -Cd, Copper-Cu, Chromium-Cr, Iron-Fe, Mangenese- Mn and Lead-Pb) were assayed in water samples from well and borehole around Gemade oil spillage and Sun metal industry, Lagos, Nigeria using Flame Atomic Absorption Spectrometry (FAAS). The levels of these heavy metals were in the order Fe > Mn > Cu > Cd

/ Pb / Cr for the two sites and control, and within the range 0.001-10.162 mg/L. The results showed that significant difference exists between these levels and the controls (tv < 0.005). In most cases, the levels of Fe and Mn from the sites were found above the WHO/FEPA limits. Significant differences exist between the levels of Cu and Mn in well and borehole water samples (tv = 0.004 -0.005) but not Fe (tv = 0.31 - 0.91). This indicated that the surrounding drinking water samples were polluted with some of these metals. The results obtained in this work also gave the baseline levels of these metals in the water samples at the selected sites.
Keywords: Heavy metals, Environmental pollution, Flame atomic absorption spectrometry, Oil spillage, Metal industry

ASSESSMENT OF HEAVY METALS IN ENVIROMENTAL MEDIA AROUND PLASTIC WASTE RECYCLING COMPANY IN LAGOS STATE, NIGERIA.

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In this study, the levels of five heavy metals were determined in soil, vegetable and water samples within the neighborhood of a plastic recycling company using Flame Atomic Absorption Spectrometry (FAAS). Identical samples were also collected for same analysis as control. The concentration ranged from 24.5 to 127.4 mg/kg, 2.6 to 63.9 mg/kg and 0.07 to 1.94 mg/L for soil, vegetable and plant samples respectively. Using t-test, the results showed that significant differences exist between the levels of Pb, Cr, Mn and Fe except Zn in the site and control for soil and vegetable samples ($p < 0.05$, tV = 1.71 x 10-10 – 0.0095). Same trend exists in water samples except Pb (tv = 0.110). The soil samples were slightly enriched in Pb and Mn with their enrichment factors ranging from 1.033 – 2.179. The talinum triangulare samples were slightly enriched in Mn and Zn. The mean concentration (mg/kg) of Pb, Cr and Mn in talinum triangulare were higher than the maximum permissible limit set by WHO/FEPA. This same occurred for Pb and Fe in soil samples as well as Cr and Mn in water samples. The findings from this study suggest a potential risk associated with heavy metal pollution from this plastic waste recycling company Keywords: Potential health risk, Heavy metals, Atomic absorption spectrometry, Plastic recycling company
Oral Presentation

ASSESSMENT OF CHEMICAL TOXICITY AND EXCESS LIFETIME CANCER RISK DUE TO URANIUM PRESENT IN BOTTLED WATER OBTAINED FROM BENIN CITY, EDO STATE, NIGERIA

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Water is both a necessary resource and one of the most important natural resources that include radioactive pollutants that are harmful to human health. The intake of water containing radioisotopes raises the probability of developing cancer and poses a serious health issue to humans. Hence, this study investigates the chemical and radiological safety of consuming bottled water in Benin City, Edo State, Nigeria. The activity concentration of uranium was measured using NaI(Tl) gamma spectrometry system. The mass concentration of ^{238}U ranges from 20.55 to 247.43 (ug/L) with a mean of 76.53 (ug/L). This mean value is beyond the tolerable limit of 30 (μg/L) set by World Health Organization (WHO) for ^{238}U in drinking water. The lifetime average daily dose (LADD) ranges from 0.56 to 6.78 ($\mu g.kg^{-1}day^{-1}$) with a mean of 2.10 ($\mu g.kg^{-1}day^{-1}$) and is greater than the reference dose (RFD) of 0.6 $\mu g.kg^{-1}day^{-1}$

for drinking water. Also, the hazard quotient (HQ) obtained has a mean value of 3.49 which is higher than the threshold value of unity set by (USEPA). All the obtained values of excess lifetime cancer mortality and morbidity risks for inhalation of ^{238}U in water are greater the set limit of 10^{-3}. Thus, it causes ELCR more than ingestion of such water and this is hazardous to human health. In The estimated mean values are 4.67 ± 0.30, 2.32 ± 0.14, 1.82 ± 0.11, 1.65 ± 0.11, 2.31 ± 0.16 and 2.48 ± 0.17 ($\times 10^{-3}$ per year) for infants, 1 year, 5 years, 10 years, 15 years and adults respectively. This result indicates that the local population are exposed to uranium-induced diseases and have a high possibility of developing cancer.

Keywords: Radioisotopes, uranium, hazard quotient, cancer mortality, cancer morbidity risk, bottled water, borehole water

COMPARATIVE STUDY OF NATURAL BACKGROUND RADIOACTIVITY OVER EKITI STATE, NIGERIA, USING IN-SITU MEASUREMENT, AIRBORNE RADIOMETRIC SURVEY AND LABORATORY SPECTROMETRIC TECHNIQUE

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Airborne radionuclides measurements have been extensively used in developed countries for mineral exploration, geological mapping and environmental monitoring. In this study, the exposure rate measurements due to background radiation over Ekiti State, Southwestern Nigeria were estimated rom the airborne radiometric survey data with a view to qualitatively compare the results obtained from airborne survey data with ground-based and laboratory spectrometric measurements. The airborne radiometric survey data for the study area was obtained from the Nigeria Geological Survey Agency (NGSA). Eleven (11) towns were randomly selected from Ekiti State from which 22 soil samples were taken for laboratory analysis using Cs-I based gamma spectrometer. From the study area, ground-based exposure rates measurements were done in 220 points (with their coordinates recorded), with hand-held gamma survey meter. Oasis Montaj version 6.4.2 software was used to extract the radionuclides values for the corresponding 220 points with their coordinates on the airborne radiometric map of Ekiti State. The result of the findings showed that a linear and positive correlation exists between the mean ground-based exposure rate measurements (μSv/hr) and mean airborne activity concentrations of radionuclides K, Th U and mean exposure rate measurements with values of R^2= 0.82, 0.29, 0.72 and 0.92 respectively. The result of comparison of the activity concentrations of radionuclides obtained from airborne survey data and those obtained from lab spectrometry of soil samples showed that the values of R^2- statistic were 0.78, 0.49, 0.72 and 0.74 for ^{238}U, ^{232}Th, ^{40}K and Radium equivalent, respectively. The result of comparison of the airborne gamma survey data with lab spectrometry further showed positive and linear relationship as the values of R^2- statistic are 0.65, 0.69, 0.68 and 0.73 for U, Th, K and radium equivalent respectively. The airborne radiometric survey data were found to be relevant in predicting the exposure rate, activity concentrations of radionuclides (in Bq/kg) as well as other radiological parameters at the ground-based level. The study concluded that airborne survey data could help in planning and predicting ground-based assessment of background radioactivity though more needs to be done in other areas.

ECOLOGICAL ASSESSMENT OF PHYSICO-CHEMICAL PARAMETERS OF SELECTED OPA RESERVOIR TRIBUTARIES

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The present study was aimed to access the water quality of Opa reservoir tributaries in Ile Ife, Osun State, Nigeria. Water samples for physico-chemical parameters were collected on monthly bases from six tributaries which were located in the catchment area of OPa reservoir. Water samples for the analysis of some physicochemical water quality were collected over a period of one year. Seventeen (17) physicochemical parameters were investigated across the six tributaries using standard methods. Data collected were subjected to descriptive and inferential statistics using SPSS/PAST. Of all the physico-chemical parameters investigated, water depth, alkalinity and conductivity showed significant spatial variation (p<0.05). These parameters had highest mean concentration in Esinmirin (station 2). While seasonally, pH, phosphate and sulphate were significantly higher in dry season, higher significant variation was observed among Do, nitrate, turbidity, and water depth in rainy season (p<0.05). Moreover, the significant increase in nutrient (nitrate and phosphate) was a result of continual inflow and seasonal changes in water. Meanwhile, cluster analysis in this study showed that, station (4, 1, and 2) are closely related while (5 and 6) are also related, but station 3 forms an outlier, on the other hand, four clusters were extracted based on the similarity of investigated physico-chemical. This study is needful because of the contributing effect tributaries could pose on the mainstream, hence the study.

Keywords: Water Quality, Physico- chemical parameters, Tributaries, Spatial and Seasonal variation.

ENVIRONMENTAL IMPACT OF ILLEGAL ARTISANAL REFINERY IN THE NIGER DELTA REGION OF NIGERIA

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The Niger Delta is the richest part of Nigeria in terms of natural resources. Despite the tremendous natural and human resources, the regionâ€™s potentials for sustainable development remain unfulfilled and its future is threatened by environmental degradation, loss of biodiversity and deteriorating economic conditions occasioned by oil and gas exploration and exploitation activities. The devastating environmental condition in the Niger Delta has been exacerbated in recent time by the sporadic rise in illegal bunkering and illegal artisanal refinery. It is estimated that crude oil theft (commonly called illegal bunkering) account for between 200,000 and 300,000 barrels of crude oil daily lost in Nigeria; with a significant proportion of about 25% of the stolen crude going into artisanal refineries scattered in the creeks of the region. Illegal artisanal refining is a small-scale or a subsistent distillation of crude petroleum over a specific range of boiling point to produce low-grade usable products such as fuel, kerosene and diesel. The damage from illegal crude oil refining activities has acted synergistically with other sources of environmental stress to result in a severely impaired ecosystem characterized by destruction of mangrove forest, loss of biodiversity, air pollution, contaminated groundwater, depletion of fisheries resource, degradation of farmland and a broad of range social-economic and health issues. It is therefore imperative that a multidimensional and environmental management approach is required to address these issues; this should include standardizing the local refining practice by creating a lower-cost license category for artisanal refinery instead of branding them illegal, and enacting legislation for sustainable handling of recovered crude oil and refined products by security operatives.

Keywords: Environmental degradation, Illegal Artisanal Refinery, Biodiversity, Niger Delta, Illegal bunker

DOSE ASSESSMENT AND EXCESS LIFETIME CANCER RISK EVALUATION OF DUST SAMPLES COLLECTED FROM SOME SELECTED NURSERY AND PRIMARY SCHOOLS IN

IFE CENTRAL AND IFE EAST AREAS OF OSUN STATE, NIGERIA

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Primordial radionuclides are sources of radiation exposure to man. In this study, dusts from some 24 kindergarten and nursery schools in Ife Central and Ife East Local Government Areas (LGA) of Osun State were collected and analysed for 238U, 232Th and 40K using CsI(Tl) scintillation detector connected to a Universal Radiation Spectrum Analyser (URSA II) for spectrum analysis. From the specific activity concentrations of 238U, 232Th, and 40K, absorbed dose rates and radiological parameters were calculated. The results showed that the mean activity concentrations of 238U, 232Th, and 40K in Bq/kg; (45Â±11, 46Â±11), (56Â±12,60Â±18) and (669Â±167, 744Â±220) respectively for Ife Central and Ife East LGAs were higher than the world averages of 35, 30 and 500. The mean absorbed dose rate in air (in nGy/h) for Ife Central was 84Â±7 while for Ife East was 91Â±8. Both values were higher than the world average of 55 but were within the safe limit of 1500. Also, the excess lifetime cancer risk was very low having values of 1.66 x 10-3 for Ife Central and 1.8 x 10-3 for Ife East LGAs. Generally, Ife East LGA has higher activity concentrations than Ife Central LGA.

Key words: Background radiation, radionuclides, radiological parameters, Classroom dusts, Ife Central, Ife East.

ASSESSMENT OF CHEMICAL TOXICITY AND EXCESS LIFETIME CANCER RISK DUE TO URANIUM PRESENT IN BOTTLED WATER OBTAINED FROM BENIN CITY, EDO STATE, NIGERIA

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Water is both a necessary resource and one of the most important natural resources that include radioactive pollutants that are harmful to human health. The intake of water containing radioisotopes raises the probability of developing cancer and poses a serious health issue to humans. Hence, this study investigates the chemical and radiological safety of consuming bottled water in Benin City, Edo State, Nigeria. The activity concentration of uranium was measured using NaI(Tl) gamma spectrometry system. The mass concentration of 238U ranges from 20.55 to 247.43 (ug/L) with a mean of 76.53 (ug/L). This mean value is beyond the tolerable limit of 30 (Î¼g/L) set by World Health Organization (WHO) for 238U in drinking water. The lifetime average daily dose (LADD) ranges from 0.56 to 6.78 (Î¼g.kg^(-1) day^(-1)) with a mean of 2.10 (Î¼g.kg^(-1) day^(-1)) and is greater than the reference dose (RFD) of 0.6 Î¼g.kg^(-1) day^(-1) for drinking water. Also, the hazard quotient (HQ) obtained has a mean value of 3.49 which is higher than the threshold value of unity set by (USEPA). All the obtained values of excess lifetime cancer mortality and morbidity risks for inhalation of 238U in water are greater the set limit of ã€–10ã€—^(-3). Thus, it causes ELCR more than ingestion of such water and this is hazardous to human health. In The estimated mean values are 4.67 Â± 0.30, 2.32 Â± 0.14, 1.82 Â± 0.11, 1.65 Â± 0.11, 2.31 Â± 0.16 and 2.48 Â± 0.17 (Ã—ã€–10ã€—^(-3) per year) for infants, 1 year, 5 years, 10 years, 15 years and adults respectively. This result indicates that the local population are exposed to uranium-induced diseases and have a high possibility of developing cancer.

Keywords: Radioisotopes, uranium, hazard quotient, cancer mortality, cancer morbidity risk, bottled water, borehole water

BEYOND FOOD: MEDICINAL TREASURES IN OUR COASTAL WATERS

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One of the most important ways the environment impacts our health is through the food available to us. Some of those foods have the added benefit of various bioactivities. These foods have the ability to enhance health in addition to providing nutrients and are called functional foods. The coastal waters of Nigeria have long been a rich source of food. It is believed that marine organisms produce bioactive agents for survival and defense due to the hostility of the marine environment. Of the myriad of compounds present in them, bioactive peptides have been implicated in activities exhibited by marine mollusc extracts. Since 2017, our research group has embarked on a systematic bioprospecting of edible molluscs from the Niger Delta. We have since reported crude extracts and peptide fractions obtained using chromatographic techniques from two Nigerian periwinkle (Tympanotonus fuscatus and Pachymelania aurita) possess activity against human cancerous cell lines tested (antiproliferative activity), antimicrobial, antioxidant, analgesic and cytotoxic activities. Hydrolysates and ultrafiltered peptide fractions of the molluscs have also been found to exhibit Angiotensin-1-Converting Enzyme (ACE) inhibitory activity. In this paper, we shall discuss more of our recent findings from the project. Our results suggest that we need to pay more attention to these bio-resources and their conservation.

Keywords: Bioactive peptide, marine mollusc, T. fuscatus, P. aurita, functional food

CANCER DISTRIBUTION PATTERNS OVER 5-YEAR PERIOD (2016-2020) IN EKITI STATE CANCER REGISTRY, IDO-EKITI, SOUTHWESTERN, NIGERIA

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Demographic data of 707 cancer patients spanning over a five-year period (2016-2020) were collected from the Ekiti State cancer registry situated in Federal Teaching Hospital, Ido-Ekiti (FETHI) and analysed to check for patterns that might provide insight into the aetiology of development and causes of various cancer types, which could facilitate primary prevention. Data for cancer types were sorted and analysed for various demographic groupings. The result shows that the cancer cases were relatively distributed into groups, such as reproductive (37.2%), breast (33.5%), gastrointestinal track G.I.T. (7.1%), blood and bone marrow (3.1%), colon (3.1%), connective tissue (2.8%), skin (2.7%), metastatic (2.5%), liver and gall bladder (2.3%), brain (1.8%), endocrine (1.8%), kidney (1.6%), lungs (1.0%), lymphoma (0.8%), eye (0.7%) and jaw (0.4%). The number of male and female subjects were 264 (37.3%) and 443 (62.7%), respectively, with 53% of the female subjects presenting with breast cancer. The age at diagnosis ranged from less than-one-year to 100 years with an average of 57.8 years. All the cancer of the jaw cases were in male subjects, while all the breast cancer cases were in female subjects. Similarly, more cases of cancer of reproductive sites were recorded in female (64.8 %) than in male subjects (37.2 %). For Ekiti state, the implicated age ranges from 30 to 80 years with trading being the most affected occupation (38.6 %). The prevalence of cancer (number of cases divided by the population) ranged from 0.64 per 100,000 at Ise/Orun LGA to 15.59 per 100,000 at Ido-Osi LGA.

CONCENTRATIONS OF AIRBORNE PARTICULATE MATTER AT A SECONDARY STEEL SMELTING INDUSTRY IN OSUN STATE, NIGERIA.

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Source apportionment and chemical composition analyses of airborne particulate matter (PM) have shown that the metallurgical industry contributes significantly to atmospheric particles with aerodynamic diameter below 10 μm (PM_{10}) and those with aerodynamic diameter below 2.5 μm ($PM_{2.5}$) which are known to bear heavy metals and other toxic chemicals. PM has been found to be associated with adverse health effects in exposed individuals. Nevertheless, the industry remains largely unregulated in Osun State, Nigeria. This study determined the levels of PM_{10} and $PM_{2.5}$ in the ambient air of a secondary steel smelting industry and a control site in the state using the Met-One air particulates mass monitor (Model GT-331). Measurements were taken at three locations; along the production line, at the administrative area of the industry, and at the control site. At the production area, mean ambient air concentrations for PM_{10} and $PM_{2.5}$ were 3016.3 ± 1281.5 and 1530.0 ± 990.4 μg/m^3, respectively. Corresponding concentrations at the administrative area were 138.4 ± 68.7 and 72.4 ± 62.5 μg/m^3 and at the control site 95.4 ± 6.3 and 44.9 ±1.4 μg/m^3, respectively. The median 24-hr averaging period extrapolated concentrations of 777.97 and 750.80 μg/m^3 for PM_{10} and $PM_{2.5}$ respectively at the production area were between 15 and 30 folds of the guideline values of 50 and 25 μg/m^3 respectively set by World Health Organization. These results suggest a very high risk for the workers and the need for a better air particulate matter control strategy in the industry.

BAD READING CULTURE AS THE PRINCIPAL CAUSE OF EXAMINATION MALPRACTICE IN NIGERIA-A REVIEW

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This study reviews bad reading culture amongst students as the leading cause of examination malpractice in Nigeria. Examination malpractice is simply the improper or illegal conduct by an examination candidate with the intention of passing the examination. Examination malpractice has eaten so deep into the educational system that it is gradually becoming a norm. As an educationist that has taught for over a decade, I have discovered that bad reading culture is the root cause of examination malpractice. Most students are too lazy to read so they cut corners to pass. Statistics have shown that out of 1,572,396 candidates that sat for WAEC, 102,058 results were withheld over examination malpractice. In 2019, out of 1,590,173 candidates, 180,205 results were seized while in 2020, 215,149 results were seized out of 1,538,445. These statistics shows an increase in the percentage of examination malpractice yearly (6.4%, 11.3% and 13.9% in 2018, 2019 and 2020 respectively). This same trend also happens with other examination bodies like NECO and JAMB. Recommendations have been made on various ways to curb this act but the most important is to orientate students on the need to inculcate good reading habit which eventually helps them to pass without cutting corners. With this, we will have more qualified graduates that are willing to go into researches (in the health and environment sector) that will be of immense benefit to the society.

TROPOSPHERIC SCINTILLATION PREDICTIONS OF THE NIGERIAN CLIMATE; A CASE STUDY OF MOWE

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Signal deterioration will result from tropospheric scintillation in microwave communication connections with small fade margins. In tropical areas, very few scintillation research has been carried out. Twelve months (Jan 2014 â€“ Dec 2014) data obtained from Tropospheric Data Acquisition Network (TRODAN) weather station in Mowe, Nigeria, with a frequency of 13 GHz and an elevation angle of 60.7Â° were used to study tropospheric scintillation. The data are processed, and the predictions of a few scintillations prediction models that are already in use are compared. According to the analysis, the ITU-R model predicts the scintillation intensity for a fade at 0.01 % of time to 1 percentage of time, with the lowest error rate. As Mowe is located in the tropical region of Nigeria, it is established in this study that ITU-R and Kasarawa have the best predictions for the climatic condition there.

A REVIEW ON ETHYL MERCAPTAN (IN L.P.G) AS A MAJOR THREAT TO HUMAN HEALTH

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Ethyl mercaptan is a chemical compound added to liquefied petroleum gas for easier detection of gas leakages since L.P.G (which contains butane and propane) is colourless and odourless. Though, ethyl mercaptan is also a colourless liquid, but it has a distinct odour usually referred to as the telltale smell. Though ethyl mercaptan has not been classified to be carcinogenic but it has been found to pose other serious health issues if not appropriately handled. Symptoms caused by the inhalation of this chemical compound include headache, vomiting, diarrohea, muscle weakness and tiredness. Inhaling ethyl mercaptan in excess can cause dizziness, light headedness, liver and kidney damage and even death. Since so many household are switching to L.P.G for daily cooking, the general populace is directly exposed to the toxicity of this chemical compound. Since it is an organosulfur compound, it is highly flammable which is also another harmful property possessed by the compound. Hence, this review is important to create awareness about the harmful effects of this toxic compound if not well handled.

Keywords: Ethyl Mercaptan, Health, Compound

ENSURING THE DEPLOYMENT OF BLUE ECONOMY THROUGH THE APPLICATION OF SPATIAL TECHNOLOGY TO ADDRESS ENVIRONMENTAL ISSUES IN COASTAL AREAS

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One of the major problems being faced in the coastal areas of Nigeria and which has been a serious hurdle in the deployment and adoption of blue economy and other developmental policies is pollution in coastal areas of Nigeria. In these areas, pollution comes in different form and magnitude. It is therefore imperative to address issues relating to pollution in its entirety in order to harness the economic potentials of these areas. Pollution is the introduction of harmful materials called pollutants into the environment. These pollutants can be natural, such as volcanic ash and human activities. In order to achieve stable and progressive economic goals and sustainable policies, it is necessary to identify pollution in its forms, types and shape. One way to identify pollution in its entirety is the use of spatial technology. The Geographic Information System (GIS) and the Global Positioning System (GPS) are the major geospatial

technologies that are being used to identify and locate objects on the Earth and also human activities. Geospatial technology is a term used to describe the range of modern tools and techniques used for the geographic mapping and analysis of the Earth and human. Geospatial technologies is inclusive of Geographic Information System (GIS), Remote Sensing (RS), and Global Positioning System (GPS) that are used to capture, store, retrieve, analyze and display data related to positions on the earth. In this paper, geospatial technologies were used to obtain relevant data relating to pollution of some coastal areas with an emphasis on coastal areas in Ondo State, generate a digital map of coastal areas and identify areas prone to pollution and prefer solutions to the pollutants in order to ensure and facilitate the deployment of the blue economy.

Keywords: Pollution, Pollutants, GIS, Geo-Spatial Technology, Geodetic Data, Coastal areas, Remote Sensing, Global Positioning System

ANALYZING THE FLUTTER PHENOMENON IN AIRCRAFT: A REVIEW OF METHODS AND MODERN SOLUTIONS

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In this work, the phenomenon of flutter wave occurrence in aircraft was carefully reviewed. The first sighting of flutter, how it was handled, and the evolution of aircraft design to accommodate flutter incidents were highlighted. The many methods of analyzing the flutter speed of an aircraft coupled with the software developed to help in simulating flight conditions which help determine when an aircraft will experience flutter were also presented. The methods such as the k method, the p method, and the p-k method used in analyzing the flutter characteristics have been discussed. Also, a number of techniques used to damp the fierce oscillation during the flutter phenomenon in aircraft have been reviewed concisely. These include; the mass balance, aluminum lithium alloy, limiting the flight envelope, and the yaw damper. The results showed that the shear stress of the aluminum lithium alloy increases with every rise in percentage of lithium. The rise in shear stress increases the stiffness of the material. The yaw damper greatly increases the response of a system to flutter. A system with a yaw damper after experiencing spontaneous flutter, has a setting time of 7.84 seconds. The system without a yaw damper has a setting time of 30.8 seconds, this is a large margin. The gap of 22.96 seconds is enough to damage a system unable to respond fast enough. The p-k method determines the degree of flutter at various speeds, calculating for any slight change during flight. The damping ratio of any system increases along with the mass ratio, large mass equals large damping in any oscillating system. The results reviewed show that flutter is significantly reduced using the mentioned solutions.
Keywords: Flutter, Aircraft, dampers

POLLUTION INDICES AND POTENTIAL ECOLOGICAL RISKS OF HEAVY METALS IN THE SOIL: A CASE STUDY OF MUNICIPAL WASTES SITE IN ONDO STATE, SOUTHWESTERN, NIGERIA

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The pollution indices and the potential ecological risks of heavy metals contents of the soil affected by municipal waste were investigated in Ondo, southwestern, Nigeria. The heavy metal concentrations were analyzed using Atomic Absorption Spectrometry (AAS). The average concentrations of Zn, Cr, Pb, Cu, Ni and Cd were 148.7, 45.5, 18.6, 17.8, 17.7 and 1.2 μgg−1, respectively. The average values of the contamination factor of Pb, Cu, Zn, Cr and Cd were less than 1.0, indicating a low contamination status.

The degree of contamination is 2.8, depicting a low degree of contamination. The pollution load indices ranged from 0.7 to 3.0 indicating moderate to slightly pollution. The order of the mean Igeo values is Cr > Cd > Zn > Pb > Cu > Ni. The PCFA revealed galvanized/chrome metal waste, electronic waste and Cd-enriched scrap and explained about 80% of the data. The ecological risk index is as follows Cd > Ni > Pb > Cr > Zn > Cu. The overall ecological risk index is 285.5, classifying the site as high risk. Among the measured heavy metals, Cd poses a significant health risks.

Keywords Soil: Municipal wastes. Heavy metals. Sources. Ecological risk

ECOLOGICAL AND HUMAN HEALTH RISK ASSESSMENTS OF METALS IN SOIL AND TAILING FROM IFE-IJESHA GOLD MINING AREA, SOUTHWEST NIGERIA

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Mining and disposal of mining wastes are notable human activities that have resulted in substantial environmental and human health deterioration. The objectives of this study were to evaluate the level of pollution, potential ecological and human health risks associated with gold mining activities in Ife-Ijesha land, Osun State, Southwestern Nigeria. For this purpose, soil and tailing samples were collected and analyzed for six metals using the atomic absorption spectroscopic technique. The contamination status, potential ecological and human health risks were evaluated using different pollution indices. The mean concentrations (in μg/g) of Fe, Cd, Cu, Cr, Pb, Ni, and Zn in soil and tailing were 196.78, 0.36, 3.78, 65.74, 6.12, 19.56, 10.78 and 241.30, 0.53, 4.30, 76.63, 11.07, 23.50, 24.6, respectively. The geo-accumulation index (Igeo) and contamination factor (Cf) suggested that Cr and Cd may pose an ecological risk. The potential ecological risk index (PERI) indicated a moderate risk level for both soil, and tailings with Cd contributing considerably. The hazard index (HI) indicated no signifcant non carcinogenic risks (HI < 1). Additionally, Pb, Cd, and Cr had lifetime cancer rates that were in accordance with the acceptable limit.
Keywords Metals · Soil · Tailing · Pollution assessment · Mining

STRENGTHENING ENVIRONMENTAL HEALTH SYSTEMS FOR THE IMPLEMENTATION OF SUSTAINABLE DEVELOPMENT GOALS IN NIGERIA.

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Environmental Health profession is as old as humanity, it is an aspect of public health that deals with the science and art of taming the environment so as to reduce environmental impact on man. It also refers to the theory and practice of assessing, correcting, controlling, and preventing these factors that can potentially affect adversely the health of present and future generations. However, the questions commonly asked are what is the relationship between man and its environment? Is man and environment at war? What makes the environment so hostile to man? These and many other questions can be answered if one ponders a while and examine the peace and tranquillity that exist in a natural environment without man presence. This natural environment will exist without any threat to man and his health, but immediately man steps in, everything else changed and will start experiencing "environmental disequilibrium". Still, the need to control the environment in the interest of public health is sine qua non.

Both the past and succeeding governments chose to place high premium and value on the curative health instead to embrace preventive health that will be easily affordable and accessible for her citizens.
The irony of the story is that the neglect or partial patronage of environmental health services/programs by the governments has wrecked and still wrecking unquantifiable havocs on the health of the entire nation. Regrettably, year in year out good chunk of humongous amount of resources that is supposed to be used to prolong and protect the health are usually used to correct this anomaly. Instead of rollback mosquitoes, governments preferred to be rolling precious amount on rollback malaria without commensurate appreciable result or outcomes. The level of pollution in the country has enhanced death and disease rates, aesthetics of our environment has been tainted by poor waste management,
Almost all the Environmental health systems and structures are in state of moribund, and the existing few ones are struggling to subsist, thrives and function to optimum capacity. Out of the numerous challenges militating against smooth practice of Environmental Health are gross inadequate of manpower, weak enforcement of extant laws, misplacement of priority in health sector and lack of political will.
Keywords: Environmental Health, hazards, development, practice.

CHRONICLES OF NESREA AS NIGERIA'S FOREMOST ENVIRONMENTAL REGULATORY AGENCY

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The presentation traces the history of the National Environmental Standards and Regulations Enforcement Agency (NESREA), an outfit established in November 2006 for effective enforcement of environmental Laws, Regulations and Standards in Nigeria.
The objective of the Agency is captured in her Vision and mission which respectively are to ensure a cleaner and healthier environment for Nigerians and to inspire personal and collective responsibility in building an environmentally conscious society for the achievement of sustainable development in Nigeria.

NESREA ensures the fulfillment of her mandate by taking responsibility for the protection and development of the environment, biodiversity conservation and sustainable development of Nigeria's natural resources in general and environmental technology including coordination, and liaison with, relevant stakeholders within and outside Nigeria on matters of enforcement of environmental standards, regulations, rules, laws, policies and guidelines.
Some of the Agency's stand-out initiatives include the NESREA-NYSC CDS group, NESREA School club, NESREA Green Corps, Annual Stakeholders' forum, Extended Producer Responsibility etc. which are done through collaborations with state and non-state actors at Federal, State and LGA levels with the full involvement of MAN, CSOs, FBOs, NGOs, Security forces (NPF, NSCDC, NCS etc.), Institutions of Learning, the judiciary, print/electronic media etc.

Continued success is being achieved in making environmental laws and Regulations, enforcement of environmental Laws and Regulations, maintenance and monitoring Environmental Standards in industrial facilities and localities, creation of environmental awareness, environmental public complaints resolution etc.

The Agency strives to ultimately ensure that self-regulation and voluntary compliance is entrenched within the regulated community and general populace towards achieving environmental friendliness and sustainable development.

SEASONAL VARIATION OF WATER AND SUB-SOIL CONTAMINANTS IN THE COASTAL AQUIFERS OF AROGBO, ONDO STATE, NIGERIA

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Groundwater contamination within the coastal aquifers of Arogbo Community has been a major concern for decades. In this study, the nature, source and seasonal variation of groundwater and subsoil contaminants within the coastal aquifers of Arogbo was investigated. In dry and wet seasons, thirty water samples were analysed for their physico-chemical and bacteriological properties while thirty soil samples were collected at depths of 0.5 and 1.0 m to determine the elemental concentration of heavy metals, their variation with depth and nature of contamination. pH, turbidity, EC, TDS, apparent colour, alkalinity, nitrate and chloride were analysed for in the water samples while heavy metals such as Fe, Mn, Ni, Cd, Co, Cu, Zn and Pb were analysed for in both water and soil samples. The data obtained showed that the aquifer within the study area is shallow with a depth to water table ranging from 0.35 to 1.20 m. The hydro-chemical results obtained revealed that the quality of ground and surface water within the study area had been greatly impaired owing to the presence of contaminants such as Fe (0.002 to 57.490*mg/L*), Mn (0 to 0.683 *mg/L*), Ni (0.001 to 0.148 *mg/L*), Cd (0.001 to 0.012 *mg/L*) and Pb (0.003 to 0.074 *mg/L*). The results of chloride and electrical conductivity from hand-dug wells and boreholes also indicate the likelihood of saline water contamination at greater depths within the aquifer. The bacterial analysis showed that the water samples within the study area are unfit for human consumption while the indices of soil contamination revealed that the soil samples have been contaminated by Cd (0.01 – 0.55 ppm), Cu (0.10 – 48.69 ppm), Zn (0.11 – 350.87 ppm) and Pb (0.45 – 39.21 ppm) from anthropogenic sources. The spatial variation of soil contamination showed that the northern region of the study area is most contaminated by heavy metals. These contaminants could pose serious health hazards to residents of Arogbo community.

Keywords: Groundwater contamination; soil contamination; heavy metals; saline water; coastal aquifer; physico-chemical properties

CAUSES OF POOR SANITARY CONDITION IN DUTSE, JIGAWA STATE

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Halving the proportion of people who are in dire need of improved sanitation has always been the major concern of the UN Millennium Development Goals (MDG). In effect, segment of the nations in the globe have put active plans in place with the sole aim of meeting the sanitation needs of their denizens (Moe and Rheingas, 2021). This is an immediate attempt to help meet the MDG. The global population (3.4 billion people) used a safely managed sanitation service. 31% of the global population (2.4 billion people) used private sanitation facilities connected to sewers from which

wastewater was treated. 14% of the global population (1.0 billion people) used toilets or latrines where excreta were disposed of in situ. 74% of the world's population (5.5 billion people) used at least a basic sanitation service. 2.0 billion people still do not have basic sanitation facilities such as toilets or latrines. Of these, 673 million still defecate in the open, for example in street gutters, behind bushes or into open bodies of water. At least 10% of the world's population is thought to consume food irrigated by wastewater ((World Health Organization. 2022)

In Nigeria shared sanitation facilities are very common in urban areas About 70 per cent of the urban population use shared sanitation facilities. The objectives are as fellows to find out the causes of poor sanitary conditions are to determine the preventions, implications of poor sanitary condition and to determine the poor sanitation and to find out risk association with poor sanitary condition in the study area. The Research was conducted using a case study in finding out the level of implications of poor sanitary conditions in suburb areas of Dutse local government jigawa state. The results shows that 256 of the respondents (78.3%) strongly agreed that environmental health officer play an important role in the prevention of improper environmental sanitation, 71 (21.7%) strongly disagreed that while 177 (54.2%) strongly agreed that government contribute toward waste disposal in our locality, 150 (45.8%) strongly disagreed, while 213 (45.8%) strongly agreed that is there any health implication that arise due to improper environmental sanitation 114 (34.8%) strongly disagreed. A conclusion and recommendations were made accordingly.

COMPARATIVE STUDY OF BREASTFEEDING AND WEANING PRACTICES AMONG MOTHERS OF UNDER 5 CHILDREN IN RURAL AND URBAN AREAS OF OSUN STATE

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Background: Breastfeeding is very essential for the optimal growth and wellness of a child. Decisions regarding initiation and duration of breastfeeding in low-income countries are influenced by a number of factors that could explain its initiation, continuity until weaning. Though a universal culture, geographical variations are not impossible and necessitating the importance of contributory and enabling factors. This is important now that the status of women is changing with the pressure of work and the adoption of higher education and modern lifestyle reducing their time for children upbringing.

Aim: This study compared the breastfeeding and weaning practices among mothers of under-five children in rural and urban areas of Osogbo, Osun state. The specific objectives of the research are to assess the breastfeeding and weaning knowledge, attitude, practices of under-five mothers in the rural and urban communities of Osogbo and as well as determine if there is a difference in the breastfeeding and weaning practices of these mothers.

Material and Methods: This study adopted a descriptive cross-section comparative design involving 384 mothers of under 5 children in the rural and urban local government areas (LGAs) of Osogbo, respectively. Participants were selected through a multistage sampling method using Interviewer administered semi structured pretested questionnaire . Data obtained from the respondents were analyzed using Statistical Package for the Social Sciences version 26. Frequency tables, figures and percentages were used to present uni-variables. Bivariate analysis was used in finding the associations between independent and dependent variables with focus on comparing both settings and logistic regression was conducted to examine multivariate associations between respondents' characteristics and knowledge of breastfeeding among the rural and urban respondents.

Results: The respondents with good level of knowledge of breastfeeding in the rural and urban communities of Osogbo were 29.14% and 29.67%, respectively (P = 0.911). The overall percentage of

respondents with positive attitude in the rural and urban communities was 60.57% and 43.06% respectively. There was a statistically significant difference in the attitudes of respondents in the rural and urban areas, (P = 0.001). Furthermore, more than half (60.57%) of the respondents in the rural communities had practiced or were still practicing exclusive breastfeeding compared to 41.63% of the urban respondents (P = 0.000). The overall percentage of good practice of breastfeeding was 40.57% and 42.11% among the rural and urban respondents respectively, (P = 0.761). Majority of the respondents in the rural communities breastfed their babies between 1-6 months (97.14%) compared to the respondents in the urban areas (95.21%). More than two thirds (77.71%) of the respondents in the rural communities and 75.12% in the urban community initiated weaning foods (supplementary) before 6 months (P = 0.081). The respondents with good weaning practice in the rural and urban areas were 25.14% and 39.71% respectively, (P = 0.734).

Conclusion: Respondents' knowledge about breastfeeding was poor, while their attitude was positive. The practice of breastfeeding among rural respondents was however low compared to their urban counterparts. Government and non-governmental organizations, health care workers as well should focus on programs that will improve the knowledge, attitude and breastfeeding practice of rural and urban women.

PREDICTORS OF SUCCESSFUL TREATMENT OUTCOME AMONG MULTIDRUG RESISTANT TUBERCULOSIS CLIENTS IN OSUN STATE NIGERIA (2015-2020).

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Background information: Multidrug-resistant tuberculosis (MDR-TB) is a major challenge to Nigeria's tuberculosis prevention and control and attainment of SDG3. Identification of predictors of MDR TB successful Treatment outcome is critical for informing health policy implementation as well as curtailing the spread of the disease which forms the rationale for this study.

Objective: This study aims at determining the predictors of successful treatment outcome among multidrug resistant tuberculosis clients in Osun state between 2015-2020

Materials and method: This was a retrospective study in which 181 TB clients from all chest clinics in Osun state across all the 30 Local Government Areas. A Proforma was used as the data collection tool and analysis was done using SPSS version 26. Univariate and Bi-variate analyses were done appropriately, Chi square was used to determine association between categorical variables, Level of significance was set at 0.057

Results: Regarding the sociodemographic status, majority of the respondents were within 30-39 years i.e., 48(26.5%), male 106(58.6%) and married 126(69.6%), The clinical profile showed that their site of disease was pulmonary 181(100.0%), most of them had new type of DRTB 75(41.4%) and majority were under-weight 89(49.2%). Concerning the Laboratory profile, almost all i.e., (92.8%) were anemic. More than four-fifth of respondents i.e., 156(86.2%) of the clients had a favorable treatment outcome (cured, treatment completed) while 25 (13.8%) had an unfavorable (treatment failure, died, loss to follow-up, not evaluated) treatment outcome using TB guideline. There is an association between drug intake (second line drugs) and treatment outcome (p-0.001, X2 – 10.53) as well as heamoglobin status (P= 0.045, X2 – 2,245)

Conclusion and recommendation: Successful treatment was influenced by drug adherence and Heamoglobin status. Therefore, there is need to strengthen adherence counselling and early commencement of treatment among MDR TB clients.

Keywords; Tuberculosis, Multi drug resistance tuberculosis, successful treatment outcome, predictors, clients.

KNOWLEDGE, ATTITUDE AND UPTAKE OF COVID-19 VACCINE AMONG UNDERGRADUATES OF OSUN STATE UNIVERSITY

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Background: The Coronavirus disease (COVID-19) is a highly transmittable and communicable viral infection caused by Severe Acute Respiratory Syndrome(SARS-COV-2) which started in Wuhan, China and evolve round the world. A Covid-19 Vaccine is a Vaccine intended to provide acquired immunity against Severe Acute Respiratory Syndrome Coronavirus 2(SARS-COV-2). The various types of Covid-19 Vaccine are Nucleic Acid vaccine(Pfizer-BioNTech, Moderna), Inactivated Virus Vaccine, Whole Vaccine(Sinopharm, Sinovac), Viral Vector Vaccine(Oxford Astrazeneca,Sputnik V), Protein Subunit Vaccine.

Aim: This Research work was initiated to ascertain the level of knowledge and attitudes of Undergraduates of Osun State University towards the Uptake of COVID-19 vaccine. Methods: The study was carried out in Osun State University, Osogbo using a descriptive cross sectional study design. The study population of 292 undergraduates of Osun State University,Osogbo Campus, Osun State, Nigeria, was selected. A multi-stage sampling technique was used for selecting the participants. Data was collected using an administered questuionnaire, analyzed using IBM SPSS V23.0 and appropriate Univariate and bivariate analyses were done. Chi square was used to determine association between categorical variables, level of significance was at 0.05.

Results: Findings revealed that almost half of Undergraduates of Osun State University had good knowledge(49%) and two-third(68%) has supportive attitude towards the Uptake of Covid-19 Vaccine. Factors associated with good knowledge and supportive attitude towards the Uptake of Covid-19 Vaccines included: age, religion, awareness about Covid-19 Vaccine and type of Covid-19 vaccine received.

This Study showed that Undergraduates that belong to College of Health Sciences had a better Knowledge and supportive attitude towards Covid-19 Vaccine. Data gathered from this study showed that the respondents knowledge on Covid-19 vaccine have an association with their attitude towards the uptake of the vaccine.

Conclusion:This Study has therefore shown the need for education/sensitization of Undergraduates on the Covid-19 vaccine and also to enhance a supportive attitude towards the uptake of the Covid-19 vaccine.

Keywords: Vaccine, Knowledge, Attitude, Uptake, Pandemic, Covid-19 Disease

ASSESSMENT OF EXPOSURE PARAMETERS ON SCATTERED X-RADIATION DOSE RATE DURING DIAGNOSTIC EXAMINATION IN NIGERIAN UNIVERSITY TEACHING HOSPITAL

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Radiation exposures from diagnostic medical examinations are almost always justified by the benefits of accurate diagnosis of possible disease conditions. The aim is to assess the influence of selected exposure parameters on scattered dose rate. The research was carried out using Gamma Scout software installation on Computer system (Laptop) to record the radiation counts, pulse rate and dose rate for 136 patients. 73 patients participated for male category with 53.7% while 63 females participated with 46.3%. The mean and Standard deviation value for each parameter is record and tube potential is within 69.50±11.75 ranges between 52.00 and 100.00, tube current is within 23.20±17.55 ranges between 4.00 and 100.00, focus skin distance is within 73.195±33.99 and ranges between 52.00 and 100.00. Dose Rate (DRate in µSv/hr) is significant at interval of 0.582 and 0.587 for tube potential and Body thickness (cm). Tube potential is significant at interval of 0.582 and 0.842 of DRate (µSv/hr) and body thickness (cm). The study was compared with other studies. The exposure parameters selected during each examination contributed to scattered radiation. Quality assurance program (QAP) is advised for the center.

Keywords: X-radiation, Exposure rate, Dose Rate, Tube Potentials, Scattered Radiation, Diagnostic Examination

PREVALENCE OF HYPERKINETIC BEHAVIOUR AMONG INCLUSIVE PRIMARY SCHOOL CHILDREN IN OSUN STATE

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Hyperkinetic Behavior (HKB) is one of the maladjusted behaviors commonly exhibited by pupils in primary schools. Experiences have shown that a child manifesting HKB is capable enough of significantly disorganizing the setting of a whole school, let alone a classroom. Such a child exhibits and displays behaviors that predispose him to being described as naughty, difficult, and impulsive. Environmental stressors have been identified as either the primary causes of HKB or as secondary triggers of biological and genetic factors.

The need to know the prevalence of this disorder in inclusive classroom settings cannot be overemphasized. Hence, this study determined the prevalence of HKB among primary school pupils in Osun State, Nigeria. Three research questions in one were raised to guide this study. One hundred and eighteen pupils and five teachers participated in the study. Standardized rating scale on HKB was used to elicit information on levels and extent of symptoms of HKB as manifested by the pupils. The data collected were subjected to descriptive statistics using frequency counts and percentages.

Findings revealed that 5.9% manifested severe level of HKB, while 42.4% and 51.7% exhibited moderate and mild levels of HKB respectively. 56% of male participants and 46.3% of female participants had moderate level of HKB respectively. Result further showed that 9.4% and 1.9% of male and female participants manifested severe level of HKB. It was also observed that 49.1%, 44.3% and 6.6% who presented mild, moderate and severe levels of HKB respectively were within the age range of 8 -10 while 75%, 25% and 0.0% were within the age bracket of 11-13.

The study therefore concluded that HKB is manifested among pupils in primary schools in Osun State as well as revealing the gender at risk of severity.

Keywords: Prevalence, Hyperkinetic Behaviour, Inclusive Primary School

ASSESSMENT OF DIGITAL HEALTH LITERACY SKILLS AMONG MEDICAL DOCTORS FOR HEALTHCARE DELIVERY IN GENERAL HOSPITALS OF KATSINA STATE-NIGERIA

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The world is on digital era, where billions of information recourse are internet. Digital health literacy skills refer to the health professionals' ability to find, evaluate, search, and communicate information through the internet. The ability of health professionals to find information on the internet enhance them to find medical information within short period of time for medical decision-making. Thus, digital health literacy skills are vital in healthcare industries. Digital health literacy skills will help to save life and save the time of patients, it will help for easy diagnosis and treatment. Digital health literacy skills is an important to establish efficient and sustainable healthcare delivery systems. The main objective of the study is. To identify the types of digital health literacy possessed by the medical doctors under study; to identify ICT Facilities available for healthcare delivery under study; to investigate how the medical doctors use of ICT Facilities for healthcare The literature reviewed related literature from various literature sources under the following sub-headings: Concept and significance of digital health literacy. Types of digital health literacy possessed by health professionals in Nigeria. Types of ICT Facilities available in specialist hospitals, use of health literacy skills by health professionals. Challenges associated with the use of ICT facilities by health professionals cross- sectional survey design, was employed for this study. The result shows that majority 155 (42%) of the respondents rate their digital health literacy as moderate, 48 (37%) rate their digital health literacy skills as high, 17 (13%) rate their digital health literacy skills as very low, while only 10 (8%) rate their digital health literacy skills as very high. Conclusion and Recommendations were made as there should be more staff trainings in order to enhance the capacity-building of the medical doctors and Adequate and up-to-date ICT facilities should be provided in the hospitals.

THE CASE AGAINST MANDATORY COVID VACCINATION IN NIGERIA



A Position Paper by
the Nigerian COVID Response Alliance
(www.NigerianCovidResponseAlliance.org)

January 2022

EXECUTIVE SUMMARY

1. There is no justification for the ongoing mandating of COVID-19 vaccines in Nigeria. Not only are the supposed benefits vague, the costs in various dimensions are steep and unacceptable. Patriotic Nigerians must rise to help extricate our Government from the manipulative clutches of foreign and private interests who are the barely-hidden forces behind these mandates. We document here some grounds why the mandates should be resisted and rejected.

2. The Vaccines being mandated in Nigeria are all EXPERIMENTAL and have NOT been *approved* for regular use by any scientific/medical authority. All they have is Emergency Use *Authorization*. Furthermore in a demonstration of an incredible level of audacious opacity, details of the actual contents of the vaccines, together with the Contracts with the pharmaceutical companies for their acquisition, are shrouded in utter secrecy. Not only ethics, but local and international laws DEMAND that such products be not mandated.

3. Furthermore, even for approved medical products, it is expected that would-be recipients would be adequately informed by the prescribing physicians, of both benefits and risks associated with the product. The contraindications should be made clear, and alternatives should be presented and made available. Mandatory vaccination, and that of an unapproved product in particular, shamelessly violates these sacrosanct norms of modern science. Indeed, the Fact Sheets for the COVID vaccines specifically require that would-be recipients be informed of some vaccine contents, such as polyethylene glycol (PEG), which could be fatal to people allergic to it. The simple fact is that most Nigerians are not even aware of their allergy status with respect to such chemicals! The presumed "consent" of Nigerians who receive these vaccines is therefore certainly far from being "informed".

4. The Vaccines are demonstrably NOT efficacious. Hence the need for unending "booster" doses, while the "fully vaccinated" must continue to observe same protocols as they were before the jab. New virus variants are known to evolve in response to mass vaccination, and are not by any means attributable to the unvaccinated population as is being suggested in certain quarters. There is no country/territory anywhere that has overcome COVID-19 via vaccines. On the other hand, a country like Gibraltar with 100% vaccination rate continues to witness the highest severity level of COVID 19, while countries/territories that changed course from sole-dependence on mass vaccination to embrace other alternatives (like Croatia, Denmark, Norway, Japan, the Provinces of Uttar Pradesh and Delhi in India, and a number of states in the US) are all witnessing dramatic improvement in their COVID situations – often within weeks of such decisions! The UK, Czech Republic, Netherlands, and Ireland are the latest countries to join the wagon of those dropping the clearly unprofitable vaccine mandate.

5. The Vaccines have been conclusively proven to be NOT safe. Not only are the scientific basis for numerous adverse effects now well established and published in reputable scientific and medical journals, the existence of such adverse effects are already being adequately DEMONSTRATED from public health data available globally. Such effects include acute ones such as myocarditis, blood clotting, and death, as well as longer-term ones including adverse reproductive outcomes and Cancers.

6. The financial costs of the COVID vaccines are unjustified, especially in the face of other more compelling public health challenges Nigeria uniquely faces. Credit facilities offered us to facilitate our response to COVID (largely procurement, storage, and deployment of COVID vaccines) are now well in excess of 3 billion dollars, far exceeding our total annual health budget.

7. The value of Natural Immunity is significant and CANNOT be discountenanced as is being attempted by the vaccine pushers. It is now well-established that naturally-acquired immunity against COVID-19 is far superior to vaccine-acquired immunity – in terms of efficacy, robustness and duration. As has been established in the case of measles and smallpox for example, people who have recovered from COVID-

19 and have consequently acquired natural immunity should not be required to receive a COVID jab again.

8. Other proven solutions exist for COVID-19, despite amazing desperate efforts to demonize and proscribe these alternatives. Articles published in the world's topmost medical journals to push such conspiracy have been later shown to be pure forgery and unceremoniously retracted. Nevertheless policy decisions taken on the strength of these fake scientific data continue to be unabashedly used to push mandatory vaccination and associated measures.

9. Even those who have received the vaccine should join the fight to reject a Mandate. The issues involved go way beyond public health. Wars have been fought and millions of lives sacrificed to defend ideals such as democracy, rule of law, and Faith. It is hard to explain the dogged determination to push this vaccine globally on all human beings, without thinking of some deep hidden agenda. Data available in OFFICIAL public records show that precisely-defined relevant patents had been filed years before the COVID pandemic ever broke out, or the virus involved identified! Resisting a patently unwarranted mass deployment of the vaccines will not only help limit the public health concerns involved, it would prevent various extensive abuses possible in any future attempt to weaponize the vaccine.

Lagos, 27th January, 2022

FOR NIGERIAN COVID RESPONSE ALLIANCE:

Rev Tony Akinyemi (Chairperson)

Prof Joshua Ojo (1st Vice Chairperson)

Rev Linda Tokuta (2nd Vice Chairperson)

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Cover picture taken from https://www.fccpc.gov.ng/uploads/files/patients-bill-of-rights-full-version.pdf

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V. CONCLUSION

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