

**A KEY NOTE ADDRESS PRESENTED ON THE OCCASION OF THE  
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PROMOTION, RESEARCH ASSOCIATION OF NIGERIA (HEPRAN):**

**THEME: ENVIRONMENTAL HEALTH IN THE 21ST CENTURY:  
ISSUES, CHALLENGES AND PROSPECTS**

**BY**

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**INTRODUCTION:**

Environmental Health is a discipline in Public Health whose focus is on the promotion and maintenance of a Healthy Environment for the survival of humanity. Environmental Health has been defined by The World Health Organisation (WHO) (1992) as being the “control of all those factors in the physical environment that exercise or may exercise a deleterious effect on physical development, health and survival.” This far reaching definition encompasses a very wide range of activities and involves the work of many different disciplines. Environmental Health is the study of how environmental factors can harm health and how to identify, prevent and control such effects.

**THE ISSUES**

Biological threats like Severe Acute Respiratory Syndrome (SARS) and natural disasters like the Tsunami in Indonesia, hurricane Katrina and Rita in the Gulf Coast have devastated entire regions. Environmental exposures cause hundreds of thousands of illnesses each year, including asthma and cancers. Environmental Health addresses public health issues associated with exposures

to human-caused and naturally occurring chemical and microbial contaminants in air, water, soil, and food. Recent trends in flooding, especially in Pakistan, India, Yemen, USA (including wildfire) and Nigeria are environmentally related.

Chemical Science has done much in the previous century to benefit humans - from creating new drugs, creating exciting new materials and discovering the basis of life. But with great power comes great responsibility. And the biggest responsibility is to protect the environment.

As far back as 1962, the writer Rachel Carson published a famous book called "Silent Spring". It showed how chemical pesticides were harming birds. It was the first detailed book about how human actions were hurting the environment.

In 1970, Alvin Toffler stated in his book, "Future Shock", what was happening then to people and groups who are over whelmed by change caused by science and technology. Change affects our products,

communities, organization - even our patterns of friendship and love.

"Future Shock" vividly describes the emerging-super-industrial world-tomorrow's family life, the rise of new business, subcultures, life styles and human relationships-all of them temporary.

In most developing countries including Nigeria, wastes from industries and municipalities have increased enormously. Industrial pollutants, such as wastes from chemical plants, are often dumped directly into waterways. Oils and salts are often washed off city streets. Heavy metals and organo-chlorines are leached from municipal and industrial dump sites. (Economist, 1998).

Furthermore, pollutants such as sulphur-dioxide and oxides of nitrogen, which combine in the atmosphere to form acid rain have had pervasive effects on both freshwater and land ecosystems. Acid rain may kill acid sensitive fish, corrode metal roofs, kill vegetation and in the soil can release heavy metals, such as lead,

mercury, and cadmium that then percolate into waterways (Finrichsen, 1998). Some of the worst industrial pollutants are synthetic chemicals, particularly, the hydrocarbons, dioxins and organo-chlorine such as DDT and PCBS, which are toxic in the environment (World bank, 1993). These chemicals do not breakdown easily under natural processes and thus tend to accumulate up the biological food chain until they pose risks to human health.

Oil spills are usually accidental (if not man made) and flow from breaks in pipelines, ship wreck oil tanker or offshore wells. When this occurs the hardest hit are birds that become covered with oil and starve to death because they are unable to fly. Oil can also coat the respiratory surfaces to seafood (such as fish, oysters, periwinkles and other organisms), killing them. Oil soaked beaches are extremely difficult and expensive to clean and much of the damage cannot be reversed.

Oil related operations are the most obvious industrial activities in Rivers

State. The hazards of such industrial activity include oil spillage, sometimes due to maintenance of oil pipes or in connection with the separation of oil and water, either at the Installations in both offshore and onshore. As stated earlier such spillage usually kills seafood such as oysters and fish, apart from contaminating and killing the mangrove swamps. Gas flaring being the product of oil production is highest in Rivers State. Such gas flaring activity usually contributes to acidification of soil and corrosion of metal roofs as seen in Ogba/Egbema/Ndoni Local Government Area of River State (Nwabie 1999).

#### **THE STOCKHOLM CONFERENCE**

I may not make justice to this address without reference to the Stockholm conference.

On 5th June 1972, world leaders got together to think seriously about our planet's future for the first time. Leaders of 113 countries met in the Stockholm conference and agreed upon a plan to reverse some of the damages. It was the first time that

issues like chlorofluro-carbons (CFCs) and global warming were discussed. The gases implicated in increasing the warmth of the earth (the Green house effect) are mainly carbon dioxide through combustion, nitrogen fertilizers used in agriculture, methane from cattle feeds, chloroflurocarbons (CFCs) from the manufacture of plastic foams and other industrial processes (Awake, 1998). CFCs not only trap heat, but also destroy the earth's ozone layer. These heat-trapping gases are emitted into the atmosphere at increasing rates due in part to population increase, the growth of energy use, industrial activity and agriculture.

Stockholm was without doubt the landmark event in the growth of International Environmentalism", writes John McCormick. It was the first occasion on which the political, social and economic problems of the global environment were discussed at an intergovernmental forum with a view to actually taking corrective action".

World Environmental Day (WED) was established by The United Nations

General Assembly in 1972 to mark the opening of the Stockholm conference on Human Environment. The anniversary of the Stockholm conference is celebrated as WED every year on June 5 to raise global awareness to take positive environmental action to protect nature and the planet earth. It is hosted every year by different cities and commemorated with an international exposition through the week of June. After the conference, the United Nation Environmental Programme (UNEP) was set up.

It coordinates activities of all UN member states on issues. One of its best achievements was the Montreal protocol, which banned CFCs and help stop ozone depletion. The UNEP today fund environmental protection activities in many countries, and is helping countries draw up a treaty to stop global warming.

The goals of the WED are to develop a world population that is aware of and concerned about, total environment and its associate problems, and committed to work individually and

collectively toward solution of current problems.

There are four primary reasons for WED:

1. Giving a human presence to environmental problems.
2. Empowering citizens to engage in project to heal the earth and prevent further damage;
3. Help communities understand that it is their responsibility to make change and that they can do it together, and
4. To implore people to become partners in the course of protecting the environment. Conservation methods include addressing the climate changes on our planet, destruction of habitats, soil erosion caused by over development on land, the ozone layer, and the general protection of ecosystems.

**The UNEP statement on WED 2007 states:**

*The day's agenda is to give a human face to environmental issues; empower people to become active agents of*

*sustainable and equitable development; Promote an understanding that communities are pivotal to changing attitudes towards environmental issues, and advocate partnership, which will ensure all nations and peoples enjoy a safer and more prosperous future. WED is a people's event with colourful activities such as street rallies, bicycle parades, green concerts, essays and poster competitions in schools, tree planting as well as recycling and clean-up campaigns.*

#### **THE THEME OF THE WED FOR 2012-2014 (PAST 3 YEARS)**

The first WED was celebrated in 1973. Since then, it is hosted every year by a different city with a different theme.

The theme for the 2012 WED was Green Economy: Does it include you? (Times News Network, 2012). The theme aimed to invite people to examine their activities and lifestyle and see how the concept of a 'Green

Economy” fits into it.

The 2013 theme for WED was THINK, EAT, SAVE (WED, 2013). The campaign addressed the huge annual wastage and losses in food which, if conserved would release a large quantity of food as well as reduce the overall carbon footprint. The campaign aimed to bring about awareness in countries with lifestyle resulting in food wastage. It also aimed to empower people to make informed choices about the food they eat so as to reduce the overall ecological impact done to the worldwide production of food (Wed, 2013).

The 2014 theme for WED focused on “Small Islands and Climate Change”. The official slogan for the year 2014 is “Raise your Voice not the Sea level”. The UN General Assembly declared 2014 as the International year of Small Island developing states (SIDS). Climate change is a major challenge for SIDS, as global warming is causing ocean levels to rise. Due to their small size and isolation, SIDS are more vulnerable to natural and environmental disasters, climate

change and sea-level rise. The problems that these small islands face -climate change, waste management, unsustainable degradation of the natural resources, extreme natural disasters in the midst of over population and continuing industrialization are the problems that face us all.

### **THE PROSPECTS**

According to a World Bank staff, we are living in a fragile, complex and dangerous world. Imbalances in the world, such as the wealth gap, generalizational gap and poverty have direct impact on environment and health. Poverty (which according to the World Health Organisation is a disease) has a substantial impact on the environment because the poor has less access to information and services, less formal or non relevant education is associated with risk behaviours, especially the youth; and economic need forces poor women and migrants into risky work environment that poses high risk in communicable diseases. Furthermore, poor neighbourhoods/communities tend to have fewer health personnel (doctors, nurses,

pharmacists, etc) inadequate transportation and recreation facilities, and lower availability of healthy food and potable water supply. Without these services it is difficult, if not impossible, to provide access to basic public systems.

It seems equitable distribution of the world resources and closing the imbalances between the more developed and less developed countries might partly be a solution to a good environmental health for all in the 21st century.

### **THE CHALLENGES AND NEW STRATEGIES**

Medical science is advancing and developing new and far more precise tools to investigate the linkages between health and the environment. We are beginning a new age from the standpoint of research opportunities on gene-environment interactions. In environmental health, this will have tremendous implication. We might be able to better understand the complex question, "why does one individual when exposed to a toxicant, develop disease, while another with the same

exposure does not?"

With the adoption of a broader view of environmental health, environmental health scientists' strategies for addressing issues have changed. For several years, environmental concerns in the most technologically advanced countries have been dominated by a mentality of government regulation and remediation. It is now suggested that in the 21st century, industry and academia must instead play an increasingly important role in exercising environmental responsibility.

We must educate engineers, managers, scientists, economists and policy experts to analyze environmental issues and synthesize sound solutions. Sound thinking about and commitment to sustainable development and environmental stewardship must be integral part of the general education and practice engineering management. Proactive environmentalism is good business in the growing commitment to a healthy environment on the part of industry and academia in setting the

stage for new partnerships between the public and private sectors (Vest, 1997).

There is no doubt a growing awareness of significant environmental health issues, both domestically and globally. Scientist and policy makers are now grappling with the complex issues such as climate change, sustainability and obesity - a diverse set challenges that continue to have health implications. To meet these challenges require dialogue/partnership from a number of stakeholders. There is no doubt the problem did not come from one activity, and the solutions are not going to come from one source.

Government alone clearly does not have the financial and other resources to solve all the health-related problems. Further gains in environmental health are going to be met through the collaboration and partnerships.

The environment is one of the major determinants of human health and well-being. It also impacts the economic welfare of the society. To improve our health through a better

environment, the world needs a new frame-work for people from different sectors. The World Bank believes it is important to engage the corporate sectors to be actively involved in reducing imbalances in the world. Issues such as air pollution, heavy metals, global climate changes, and the built environment are greatly influenced by the private sectors decision making.

An environmental consultant, Barry Castleman noted that voluntary corporate polices can provide improved protection of human health and the environment, particularly in less developed countries. The vacuum of regulation and liability in many countries has allowed global corporations to operate without applying safeguard required in Europe and the United States.

The tragedy in Bhopal, India in 1984 brought the issue of corporate "double standards" to the world's attention. Numerous safeguards in effect in the United States, such as plant design, safety systems and maintenance, had been neglected at the company's plant.



A corporate audit Union by Carbide Corporation 2.5 year prior to the Bhopal disaster had identified many of these problems (Ives, 1985).

After the tragedy in Bhopal, multinational corporations began to issue global corporate policy statements based on the premise that there was no justification for operating a chemical process under strict conditions of pollution Control and worker protection in one country, than another.

Environmental Health professionals (EHPs) work to:

- Maintain a safe supply of food and drinking water
- Discover mechanisms of diseases caused by environmental exposures
- Treat and dispose of solid and toxic wastes
- Reduce air, water, food, and noise pollution
- Control workplace hazard

A challenge before the Nigerian Government and Institutions that train and produce Environmental health

professionals is to see that there is no non-challant attitude toward environmental health in the country.

## **CONCLUSION**

With reference to our "Existence", a college teacher once said that the dependency of mankind on our earth planet and our relationships, responsibilities towards protecting, saving our OXYGEN, without which we cannot live. We should turn our attention from comfortable living (fuel, cars and Air-conditioner) to the very foundation on which our entire mankind has been dwelling. We may have different opinions on various issues but our planet, Environment does not.

If we imagine that there is no Planet, Environment, then where is the discussion to fight for comfortable living. Whatever we are, however we are, whatever may be our strength or the development, does not equal with our lovely Planet and its Environment. We are just a single drop of this entire ocean called universe. All our relations are desperately related with and subjected to the effects of this

world, universe.

Almost have we damaged our environment for our selfish need (development) by thinking that we are the owners of this planet. But we are just the Guests on this planet and have so many responsibilities to save, protect the place in which we are being given an opportunity **ONLY TO LIVE**.

If we are forgetting of being Guests and starting doing damage (already made colonial damage) as the owners, then the planet will throw us out through its disastrous effect caused by us which are beyond our control; only way out may be to **EXTINCT** for no gain.

Thank you for your patience

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