MANAGING NIGERIA'S MULTIFARIOUS ENVIRONMENTAL LANDSCAPE IN THE 21ST CENTURY FOR SUSTAINABLE DEVELOPMENT, THROUGH A MULTI-DISCIPLINARY APPROACH

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ABSTRACT: The recent widely-publicized renewed commitment of the Federal Government of Nigeria, to increased funding of university education in Nigeria, is a milestone in the history of educational management in Nigeria. The development coinciding as it were, with the 100 years of the country's amalgamation, provides a unique opportunity for all patriotic and committed academicians and other intellectuals in Nigeria, to renew their own commitment to partnering with the governments and people of Nigeria, to combat the challenges of the nation and take the nation to a higher level in the nation's quest for sustainable development. This is to be done through an appropriate deployment of specialized knowledge – a vital tool crucial to attaining sustainable development in the 21st century – a knowledge-based century. The paper is advocating that appropriate knowledge be deployed through a multi-disciplinary approach, to first of all, tackle the multifarious challenges of the country. Following the attainment of this crucial goal, knowledge can then be further deployed as appropriate, to take the country to the next level, in our quest for sustainable development. In going about the assignments, on which a clarion call is being made to Nigerian academicians, the environmental option, is being advocated. This is because its multifarious nature, will be most ideal not only to capture appropriately, all the diverse challenges of the country, but also all sectors of development, whose sustainability is dear to all well-meaning Nigerians and all lovers of Nigeria alike. The benefits of adopting the environmental approach to sustainable development, as well as the possible strategies that could be adopted, are spelt out, so also are the roles for the supervising agency of government for the universities.

KEYWORDS: Sustainable Development, Natural Environment, Socio-economic Environment, Built Environment, Political/Governmental Environment, Spiritual Environment.

INTRODUCTION

The 21st century, a century generally acclaimed as a knowledge century, is already a little over thirteen years, into it. It has lived up to expectation as a century predicted by world reknowned thinkers several years towards the end of the 20th century, as a century that will bring along with it certain global challenges, as well as certain positive drivers of development (Adelegan, 2009). Examples of the challenges which have since manifested themselves within the first decade of the century, are the following:

Economic meltdown, across the countries of the world; Global climate change, with its attendant dire consequences;

Wars and upheavals;

Strange diseases, such as Human Immune deficiency Virus (HIV), Acquire Immune Deficiency Syndrome (AIDS), Severe Acute Respiratory Syndrome (SARS), bird flue, among others Environmental disasters of alarming proportions, such as tsunamis, hurricanes, tornadoes, among others. The positive drivers of development include information and communication technology (ICT) and the natural resources of diverse nations, awaiting to be explored for development, for which knowledge of the right type, has been recommended.

No nation worth being called by that appellation of a nation, can afford to toil with development. However, for such a development to be a worthwhile type, it must be an all-round development. It must touch all aspects of the national life, with such aspects encompassing education, health, environment, economy, security, among several others. It must also be such that is sustainable, in the sense that it must be capable of lasting forever, as long as that nation is in existence.

By the year 2010, Nigeria as a country was 50 years old as an independent nation. By the year 2014, it also attained 100 years as a nation, having had its two main components known then as northern and southern protectorates, amalgamated by the colonial masters, under the leadership of Lord Luggard in the year 1914. If Nigerians did not use the occasion of the 50 years of independence of the country in 2010, to do some stock-taking on how far the nation has fared, the opportunity of year 2014 marking a 100 years of the country's amalgamation, can be rightly claimed to be an appropriate one, for all patriotic citizens as well as the leadership at all levels, for taking stock of how far the country has fared over the last 100 years. They should in fact, be determined more than ever before, to chart a new course for sustainable development of the country. In charting this new course, it must be admitted that Nigeria has not fared well over the last 100 years, judging from the myriad of challenges facing the country. Our elders believe that if a young person falls, he or she looks forwards, whereas an elderly person who stumbles and falls, will look backwards. This elderly person does this, to know what has caused his stumbling and fall, possibly to guide against such in future. Therefore in charting a course for sustainable development of the country for this century, many hinge their hope on this century as a century the country would advance in development and join the league of developed nations. It is therefore an appropriate time for Nigerians to take a close look at our past and assess our present in Nigeria. May be through this, Nigeria will be able to chart a meaningful course for the future in the 21st century.

In managing the 21st century Nigeria for sustainable development, it is being suggested in this paper, that the country should approach such management from the environmental perspective. The question may be raised on why the environmental perspective to sustainable development? The answer to this question is found in the next section of this paper.

The special importance of Environment in sustainable development

Before delving into the issue of the special importance of environment in sustainable development, it may be appropriate to first examine the concept of sustainable development, which is what all nations of the world are aspiring towards. Ever since Barbara Ward made use of the term sustainable development in the mid – 1970s (Ajisegiri, 2011), the concept has been given many definitions. Lawal (2011) cited Interface (2007), who reviewed the concept of sustainability, as noting that the concept and sustainable development, have well over 350 definitions. The most popular of these definitions of sustainability is "**Development that meets**

the needs of the present, without compromising the ability of future generations to meet their own needs" (Lawal, 2011, quoting from the Report of the Brundtland Commission, titled "Our Common Future," of 1987). Ajisegiri (2011), deposed that the concept of sustainable development, can be used in a broad sense to cover biological/resource system, economic system and social system. This concept when used in this form, has a limitation of excluding other key factors of sustainable development. However, when the concept of sustainability is viewed from the perspective of environment, it is then that the concept can be appreciated as an all-embracing concept. This is because environment as a concept, encompasses not only the three broad systems recognized above for sustainable development by Ajisegiri (2007), it also encompasses other pertinent issues, such as that of political/governmental system and the spiritual factor. The spiritual factor is an indispensable factor in the life of human beings, who are the greatest beneficiaries of not only the environment, but also its sustainability and who unlike other living things, are special creatures of a three-fold being of the physical, the social and the spiritual (Adeboye, 2012). The environment, when defined as "the surrounding of an organism in the place where it lives" (Fatubarin, 2009), makes the term to accommodate 5 different environments. These environments are listed by Fatubarin (2013), to include.

The natural environment

The socio-economic environment

The built environment

The political/governmental environment

The spiritual environment

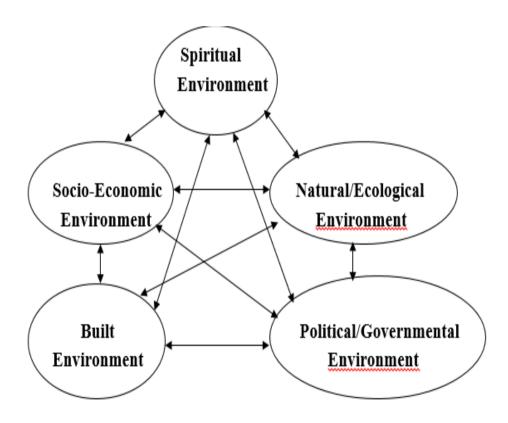


Fig 1 shows the diverse environments and their interactions

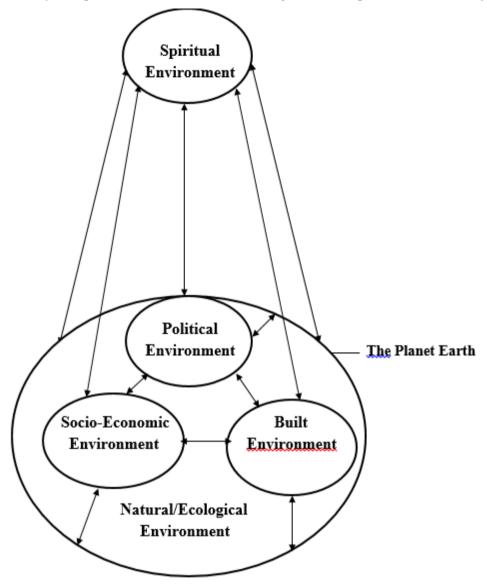


Fig. 2 shows the spatial relationship of the environments and their possible interactions in the planet earth

Figure 2 above shows that all the diverse environments are on the planet earth. Only the spiritual environment is located within the spiritual realm, above the earth. Fatubarin (2013), noted that these environments are not in isolation. They are in constant interactions with themselves, with the result that these interactions as well as what happens in each of them, have implications on the overall sustainability of all the environments. For example, if the natural environment is poorly managed, or adversely affected by a natural disaster, so much so that much of the natural resources are adversely affected, this will adversely affect the economy as well as the socio-economic condition of the nation. It will adversely affect numerous businesses that thrive on the products of the natural environment. The governments at all level, will be starved of funds and the political parties implicated in such mismanagement of the country's natural resources, will have their image severely battered. Similarly, where the socio-economic

environment is under a severe threat, as with the global economic melt down and the climate change phenomenon, together with its attendance serious consequences, this environment will be severely affected. In the same vein, a number of other environments, such as the natural environment, the built environment and the political/governmental environment, will all be adversely affected, so much so that development in the affected nation, will become arrested for quite some time. Where the people of a nation are operating in an unholy spiritual environment, in which corruption and violence are thriving at an alarming scale, virtually all the other environments, whether natural as in the case of the natural environment, or man-made as in the case of the socio-economic, the built as well as the political/governmental environments will be adversely affected. In essence therefore, all the diverse environments listed above, are of special importance in sustainable development. They all therefore have to be specially managed, with as much equal attention as possible devoted to each of them, to make them contribute meaningfully to sustainable and even development of the country, in all facets of the country's national life, that are of importance in development. Incidentally, all the diverse environments are those in which human activities occur. They are also environments that are of interest to diverse groups of academicians. They are the environments on which the bulk of their academic programmes are based and the environments on which their research activities are concentrated.

The role of Nigerian academicians and intellectuals in evolving appropriate strategies for managing Nigeria's environmental landscape of the 21st century, for sustainable development

No Nigerian who is a true patriot, would wish that Nigeria remains as it is now, in the next 10 years. Every true patriot would definitely wish that the country rises above her present challenges and occupy her rightful position in the comity of nations, both in Africa and the entire world. Lucky enough for the country, the nation has the right types of human and material resources, to back up such aspiration. It is in the area of human resources that Nigerian academicians and technocrats come in. A typical Nigerian academic is full of ideas. He or she is resourceful. Above all, most Nigerian academics believe in Nigeria that will continue existing for life, as an indivisible entity. A typical Nigerian academic is not unmindful of the challenges facing the country. He or she knows where the "shoe is pinching" the nation. He or she is prepared to offer a helping hand, if called upon to do so and if the right environment for such contribution is created for his or her participation. After all, he or she has no other country he or she can lay claim to, as his or her own, as long as he or she is still within Nigeria. He or she is probably conscious of the fact that posterity will ask for his or her personal or a collective one, he or she played in future, to salvage the country!

The opportunity for contributing one's quota towards sustainable development of the country, is presently beckoning to all patriotic Nigerian academicians. This is particularly so, in the light of the recent renewed commitment to funding university education, by the Federal Government of Nigeria. This is indeed a wonderful achievement for education in Nigeria. It will be a major milestone in our educational development. And so, for patriotic Nigerian academicians and technocrats and knowledgeable concerned Nigerians, the opportunity of the Nigerian Federal Government commitment to improved funding of Nigeria University system, should be used to map out new strategies towards research activities. Such opportunities may not be easy to come by in future. As the Yoruba people will say in one of their adage that it is very rare to succeed in shooting at a bull twice! These research activities must be such that should be capable of propelling Nigeria of the 21st century, to an era of sustainable development, through

a multidisciplinary approach. In making this appeal to Nigerian academicians and intellectuals, to open a new chapter in their commitment to research activities and intellectual input into the management of Nigerian state for sustainable development, a certain fact must be underscored. This fact is that in spite of all constraints to optimum performance by every academicians, Nigerian academicians and intellectuals have done a lot, in terms of researches and other diverse intellectual inputs, to move Nigeria forward in the past. These have been through individual and collective efforts, such as those of academic and professional bodies and groups. What is been requested now, is a renewed effort to build on their achievements of the past, in taking the country to a greater height, that is befitting her status, not only in Africa, but in the comity of nations, world wide.

This proposal is being made, to make the country be in total compliance with the requirements of the 21st century, a knowledge-based century – a century in which specialized knowledge has become a handy tool, for providing solutions to all issues of life. The proposal if embraced, will make the nation contribute to evolving appropriate solutions to the myriad of challenges that are global in nature, that have been catalogued for the century, which have become a reality within the first decade of the century. They will also be able to equally address a large number of others that are peculiar to the country, with examples such as political and financial corruption, violence, insecurity and mass unemployment, which Nigerians have thrusted on themselves and those thrusted on the country by the mismanagement of our natural environment. The proposal will enable Nigeria to key into the invaluable role of the natural environment as a strategic area of importance, which as earlier noted, has been singled out by world reknowned thinkers, as the priority area of focus of the world, in maximizing the opportunities for all-round development in the 21st century.

The proposal will also make the contributing researchers among our academicians and technocrats, write their names in gold, for their patriotic effort in not only salvaging the country from her present multifarious challenges, but charting a course of sustainable development for her, within the 21st century.

The benefits of this proposal

The proposal will make research activities in Nigerian educational system, be directed towards suitable themes, built around the earlier-listed environments, that are relevant to the country's sustainable development.

The companion paper to this one, on the title "Managing Nigeria's natural environment in the 21st century for sustainable development, through a multidisciplinary approach." This paper provides an example of how research activities can be built round the themes on the major issues implicated as areas in which the natural environment of Nigeria, is facing a number of challenges. Another paper in the Series, on the title "Nigeria's quest for sustainable development in the 21st century: The imperative of a multifaceted approach to tackling the nation's challenges" is based on the challenges of other environments besides the natural environment. It is expected that researchers will build the themes of their researches around these challenges. These papers are designed to serve as Agenda for action, on the proposal in this paper.

The proposal contained in this write-up, represents **a call to action**, for all Nigerian academicians and intellectuals, to be involved in the quest by Nigeria, to attain sustainable development within this century – a knowledge century. The proposal will make research

activities in our tertiary institutions, become better focused and priotized, such that they are directed to specific issues of national importance to the country, with some of them being of international relevance. This will help in reducing to the barest minimum, researches that are of esoteric nature, that is, "knowledge for knowledge sake."

The proposal will engender multi-disciplinary as well as multi-zonal approaches, in our collective endeavour to place our country on the path of sustainable development. By multi-zonal is meant, the different geographical zones, into which the country is presently classified. This approach will besides giving a sense of belonging to people of diverse zones, enable the findings to accommodate possible variations from diverse localities, in which such studies are carried out.

The proposal will engender an even, equitable as well as balanced development of the country, in all sectors of development, such that no sector is left behind. Similarly, no zone of the country, will be left out.he proposal if adopted, will make all our people irrespective of the diverse nature of their educational background, get involved in the development of the country. Such people include the academics, environmentalists and specialized academicians. Other groups of people include the technocrats, policy makers, as well other "knowledge leaders," who though are not academicians who ply their trade in Nigeria's Ivory Towers, can still lay claim to having imbibed the intellectual culture. A large number of them are actually making use of the tools of academics in the practice of their own professions. All the diverse groups of people of Nigeria, will through their collaboration in diverse researches, be able to appreciate the overlapping influences of diverse environments, in national development.

The proposal will if embraced and adopted, send a positive (salutary) signal to all and sundry, including the leaders of the nation, as well as observers of events around the world, that Nigerian academicians are not only aware of the challenges facing the country, but are more that ever before, determined to pool their resources to evolve solutions to them. The success of the proposal will encourage other countries of developing world, particularly the African countries, adopt similar strategies in evolving solutions to the challenges of their own countries. They may even opt for collaboration with Nigeria in what ever way it is possible, to find solutions to their own challenges.

The proposals will end up producing for the nation, a number of templates on the issues researched upon, after the researches and their findings have been adequately subjected to several sessions of brain-storming, before they are finally adopted for use in the country. Such templates will in future constitute the yard stick for measuring the performance of governments and effectiveness of governance, under any administration of the country, at the three main tiers if government. They will in essence, serve as the **Agenda for action**, on diverse issues of governance, for any government in power in the country, no matter the tier of government. They will also constitute part of the appropriate yard sticks, to measure the performance of such a government.

Possible Strategies for Working on each Theme, as earlier on listed for the diverse environments.

Articulating the Problems and Challenges of the Nation in the particular environment, around which the theme is built. Organizing the problems and challenges of each environment into researchable topics, on which research efforts could be concentrated. Such

research efforts include students undergraduate projects, masters projects and doctoral research efforts, as well as individual and group interdisciplinary research efforts. Many institutions can also collaborate on such researches.

Making a large number of the key issues in the national problems and challenges, attract special funding from the envisaged Federal Government funding, irrespective of the nature of the institutions, whether public or private, whether federal or state and whether faith-based or owned by individual entrepreneurs.

Making the key issues become focus of regular academic review exercises, such as quarterly or annual academic conferences, technical review workshops, symposia and lectures. Such reviews could be made to start at unit or departmental level, through faculty, institutional, to zonal as well as national and international levels.

Making the key issues become subjects of policy documents, after the researches have gone to appreciable and implementable level.

Making each state of the country, have a befitting zonal branch of the National Library, which will be stocked with up-to-date titles sourced from across the countries of the world.

Making each state of the country, have befitting central laboratories, that could boast of state of the art equipment and other materials, that can facilitate researches on issues of importance in national development.

To demonstrate how research activities can be built around major themes, which are of importance in sustainable development, a companion paper to this one on the title "Managing

Nigeria's natural environment in the 21st century for sustainable development, through a multidisciplinary approach." The natural environment is used as the main example in this proposal, as a result of its unique importance in accelerating sustainable development in the 21st century, which has earlier on been underscored.

The other themes built around the diverse man-made environments of socio-economic, the built, the political/governmental and the spiritual environments, have a paper written on them, in which the challenges of the diverse environments are highlighted. It is expected that the paper on the natural environment, will be a good guide to organizing research activities, in these other environments. It is hoped that having made an attempt to highlight the challenges facing the separate environments, the specialist researchers will provide possible research topics on the highlighted challenges. It must however be recognized that any list of challenges drawn up at any time for each of the environments, is at best an open-ended list. Such a list can be updated from time to time, as new challenges spring up, in the process of producing researchable topics from the list of challenges, or as a result of the dynamics of the challenges over a period of time, as the case may be.

It will be noticed that the researches to be conducted around the major themes built around the diverse environments, will require the expertise of specialist researchers. The efforts of such specialists will be needed to dig into the hidden issues in many of the topics around which the researches are based. However for a large number of others, only deep-seated thoughts that are made possible by in-depth knowledge, found among intellectuals are needed. This is particularly so, with many of the challenges of the socio-economic, political/governmental and spiritual environments. Academicians and other categories of intellectuals, who are so endowed

or who are familiar with the challenges and are deeply concerned about some of the issues involved in the challenges in these environments, can make meaningful contributions on them. Examples of such issues may include values, corruption, violence, youth issue, leadership issue and education issue, among others. Such contributions can be in forms of suitable titles based on these challenges, occasional write-ups as readable articles on them in the daily publications and periodicals. They could also be made titles of lectures and symposia, that can be produced to appropriate groups, such as students, youths and other categories of people to which such titles are relevant.

CONCLUDING REMARK

The write-up in this proposal, would have served as an eye-opener to our academicians and intellectuals that their God-endowed knowledge, is required much beyond the confines of their knowledge domain – their specialized programmes. Such knowledge is required to be deployed appropriately, to assist in combating the multifarious challenges of the country. These challenges are documented in some details, in the proposals for the diverse environments of our country Nigeria that accompany this main proposal.

The supervising agency of Nigerian universities – the Nigerian Universities Commission (NUC), has the roles expected of it stated in the statute that established this commission. It is expected that these roles would definitely extend to some issues as are likely to be involved in this project. Such issues include coordinating the research efforts, supervision of disbursement of funds, supervision of research facilities that are recommended to be put in place, across the geographical zones of the country and coordination of the review workshops and conferences, on the themes of the projects. It would also need to cooperate with the leadership of the research groups, in seeing to it that those projects that are completed, are brought to the attention of appropriate bodies that will work further on them to fashion appropriate policies around them. Some of the projects that mature after series of researches and review exercises, may also have to become subjects around which appropriate legislations have to be made, before they can be adopted for use in the country.

There is no doubting the fact that it will be desirable to have a solution to the diverse challenges facing the country, as a first step in the nation's bid for marching towards sustainable development. Once these challenges are fixed, the coast will definitely become clear, to take the researches to a next level, that will launch the country to an-all-round sustainable development. Such development will not only help in boosting the image of the country, but also help in making the country justify the numerous human and materials resources, the Almighty God has endowed her with. There is no doubting the fact that Nigeria needs to take a bold step in the 21st century, towards sustainable development. She must be ready to deploy appropriate knowledge to tackle what could constitute major obstacles to this development, which are the present multifarious challenges. It is in this issue of knowledge, that the repository of knowledge in most nations of the world-the universities come in. It is to make the knowledge have a maximum impact possible on development of the nation, that the multienvironmental landscape approach, is being recommended. This approach if adopted, will not only fast-track the nation's journey to providing solutions to her present challenges, it will also make attainment of sustainable development, the nation's ultimate dream, to become easier to achieve. There is no doubt about the fact that the multifarious environmental landscape of Nigeria, is in dire need of exploration for the benefits of the people of Nigeria and in particular, set the country on the path to a much-needed sustainable development. It must be underscored

that this is a special assignment that will involve all Nigerian Universities, irrespective of their ownership and location. It is an assignment which is a call to duty. It is like the National Youth Corps, which embraces all youths that are products of Nigerian tertiary institutions. It is an assignment the nation can not afford to leave behind certain categories of universities. It is a knowledge-based assignment, that knows no borders or boundaries and which gives no room for discrimination. It is an assignment all universities must be involved in, to have the contribution of knowledge from all and sundry, among the nation's academicians and intellectuals. This is one important way the desired impact by Nigerian University system on sustainable development of the country, can be made.

REFERENCES

Adeboye, E. A (2012): Keynote Address at the 2012 Annual

Convention of The Redeemed Christian Church of God, on the Theme: Signs and Wonders. Mowe, Ogun State. Nigeria.

Adelegan, A (2009): Life in the 21st Century: Maximizing your

potential to prosper. Lecture delivered at the Special Convocation week of Joseph Ayo Babalola University. Ikeji Arakeji. 6Pp.

Ajisegiri, M. A (2011):Environmental Economics: Issues and Applications. In Environment and Sustainability: Issues Policies & Contentions. University Press Ibadan. Pp 34 – 66.

Fatubarin, Ayo (2009): Tropical Ecology. Keynotes Publishers Ltd. Ilesa. Nigeria. 127Pp.

Fatubarin, Ayo (2013):Our Environment, Their Environments and The Sustainability of Our Environment. Proceedings of the 6th Annual conference of the Institute of Ecology and Environmental StudiesObafemi Awolowo University. Ile – Ife.

Vol. 6: 89 – 97.

Lawal, B, M (2011): Learning for a Sustainable Future. In Environment and Sustainability. Issues, Policies and Contentions. University Press. Ibadan. Pp 115 – 127.