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### Abstract

*This paper examines the Millennium Development Goal number Seven, which is on ensuring Environmental Sustainability. The main thrust of this paper is to examine the role of education in ensuring environmental sustainability in Nigeria. The concept of environmental sustainability, the need and value of sustainable human environment were examined. Challenges facing efforts to ensure environmental sustainability were identified, which include deforestation, ignorance, poverty and emission of gases by industrial activities among others. Lastly, the paper recommends that government should use institutions and agencies as mechanisms for environmental protection and sustainability. This would be achieved, the paper concludes, by making all educational institutions to adopt environmental education as a compulsory subject at the various levels of our education system.*

### Introduction

There is a growing desire for a sustainable environment by many nations of the world today. This desire can be seen as part of the global efforts towards achieving human development, reducing poverty and achieving sustainable rational development. The Millennium Development Goals recognize these needs and one of the areas it places premium on is environmental sustainability; the efforts of which is towards achieving economic and social well being of individuals and nations. This involves ensuring safe exploitation of natural resources; discouragement of unhealthy or unsafe exploration of the natural resources, which causes damage such as environmental pollution and global warming. It also involves a concern for the enhancement and promotion of healthy, safe and good living.

According to the United Nations Development Programme (UNDP, 2007), human environmental development, which implies protecting and sustaining natural environmental resources, is facing a lot of challenges and problems in view of the experiences of various countries. Man is presently vulnerable to the environment as the environment is potentially posing various continuous challenges to scholars, researchers and policy makers all over the world. These challenges are many, some of which include human advancement that is on a slow move; global warming and backward development, which remain a great threat to human progress and development. The Millennium Development Goal number Seven is concerned with "ensuring environmental sustainability". This encompasses everything on the planet earth; all that is on the land, water and sky. Therefore, educating people on natural disasters, effects and impact of natural disasters on human development has become necessary and remains a great challenge.

Furthermore, unplanned urbanisation and the increasing unsecured environment and its vulnerable impact on the globe require lasting institutional strategies, policies and programmes. It is only through institutional action that we can reduce natural disasters. The millennium declaration is a programme initiated to be achieved by the year 2015. The United Nations (2008), itemized the Millennium Development Goals, which are sought to be achieved by the year 2015 as follows:

- Eradicate extreme poverty and hunger
- Achieve universal primary education
- Promote gender equality and empower women
- Reduce child mortality
- Improve mental health

- Combat HIV/AIDS, Malaria and other diseases
- Ensure environmental sustainability
- Develop global partnership for development.

The thrust of this paper is on the 7<sup>th</sup> Millennium Development Goal. By adopting the millennium declaration in the year 2000, the international community pledged to save, or free men, women and children from abject dehumanising conditions of extreme poverty. This paper examines precisely how through education we can ensure environmental sustainability in Nigeria.

### **Conceptualising Environmental Sustainability**

Hall (2003), endorsed that, sustainability requires a dynamic balance between various factors such as, social, cultural and economic demands of population and the need to safeguard the natural environment of which humanity is a critical part. In other words, that humanity and its environmental security is the ultimate goal. According to Hughes and Kroehler (2008), environmental sustainability is the ability to maintain and protect the qualities that are valued in the physical environment. This involves sustaining or maintaining human life, the capabilities that the natural environment has to maintain, the living conditions for people and other organisms. These natural resources include clean water, air, a suitable climate to protect the aspects of environment that produce renewable resources such as timber, fish and solar energy. The functioning of society, despite non-renewable depletion as well as the quality of life for all people, the liveability and beauty of the environment are also part of this.

Environmental sustainability should not be on resources alone. The Millennium Development Goals (2005), strongly give emphasis on the wider environment. This means, there is the need to sustain environment and this covers themes like forest preservation, managing the water-shed, land area, trains, hills-side and more. It is observed that management of forests will result to sustainability; this factor should cover healthy fisheries and coastal environment. This practice supports the local and national livelihood in terms of food security. Healthier sustainability supports the fishing and tourism industries. The target of environmental sustainability is the integration of the principles of sustainable development into the various policies and programmes of nations of the world. It was meant to reverse the losses of environmental resources. Sustainable development should focus on utilisation, preservation, exploration and protection of environmental resources for the present and future generation with a maximum profit.

### **Challenges for Ensuring Environmental Sustainability**

Global and national efforts are crucial in ensuring an enduring healthy environment. A number of nations have taken steps, in line with MDGs, to achieve environmental safety. Agencies like the World Bank, UNDP and Action Aid International have joined in providing funding and strategies for ensuring a sustained safe environment. Yet, as Igbuzor (2006) observes, there are a number of challenges that can be faced in securing sustainable safety of the environment especially in developing nations. Some of these challenges include formulation and implementation of policies, transparency, overcoming institutional constraints, promoting pro-poor development and endangering social and cultural re-orientation. This implies that the major challenge facing the achievement of the Millennium Development Goal number Seven in many Nations is formulation and implementation of policies and programmes that would ensure a sustained effort in the right direction. Policies and strategies need to be developed to cater for factors that pose a threat to the environment.

However, some of the major challenges that could be described as militating against sustainable environment are briefly identified as follows:

- Deforestation remains a major challenge. Even though the net loss of forest areas is slowing down and this is due to the rising forest planting, land restoration and the natural expansion of forest; the problem of deforestation continues to be a major challenge. Deforestation of about 13 million hectares per year resulted in an estimated net decline of 7.3 million hectares of forest area per year over a period of years 2000-

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2005. This is in comparison to 8.9 million hectares annually in the previous decade (CES, 2006). The various forms of damages of environment are caused by human usage of environment and that which occurs to the environment, in the upland areas of water-shed especially to the forest. These damages affect the down stream and coastal areas through excessive sedimentation, chemical and biological pollution. Therefore, managing and ensuring maximum benefit from the environment is an enormous task on policy makers and a challenge to the Millennium Development Goals education policies and programmes.

- Carbon dioxide and other gas emissions are on the increase despite national and international efforts to address the problem.
- Ignorance about the Millennium Development Goals. The majority of the world population and Nigeria (not an exception) have no clear picture of MDGs or are not well educated and well informed about these goals. The effort to ensure environmental sustainability requires a growing awareness and improvement in local facilities to cope with the demand.
- According to the Millennium Development Goals (2005), 2.5 Billion people, which are almost half of the developing world's population, live without improved or good sanitation. An additional 1.5 percent of the world's population use sanitation facilities that do not ensure hygienic separation of human waste from human contact. The habit of open human waste jeopardizes an entire community; not just to those who practice it, because of an increased risk of diarrhoea diseases, cholera, worm infections, hepatitis and other related diseases but to the entire community.

In view of the above challenges facing environmental sustainability, it can be stated without fear of contradiction that the problems of poverty, ignorance and lack of education are playing greater role in compounding the problems of achieving sustainable environment in Nigeria.

#### **The Millennium Development Goal 7 and Attainment of Environmental Sustainability in Nigeria**

According to Igbuzor (2006, p.6), the details of the situation as contained in the MDGs (2005) with regard to goal number Seven are to

Integrate the principles of sustainable development into country policies and programmes and reverse the loss of environmental resources by 2015 target, reduce by half the proportion of people without access to clean drinking water and basic sanitation. By 2020 achieve a significant improvement in the lives of at least 100 million slum dwellers. The country is endowed with abundant environmental resources. However, high population growth rate and increasing demand for these resources threaten environmental sustainability. The environmental situation is challenged by myriad of problems, which impact negatively on the utilisation of the resources for development and poverty alleviation.

The position of MDGs right from inception till 2008 and 2009 respectively shows some higher level of commitment to what is fully known and acknowledged to be the protection of human race and protection of the environment in which human beings live. According to the UN (2008), there is remarkable progress made as far as the MDG number Seven is concerned; this is with regard to its original aim and plan. In view of this, the following can be said to have been achieved:

- With regard to safe drinking water, some 1.6 billion people have gained access to safe drinking water since 1990 and this equally is provided with the consideration of gender and social status of the rural and urban areas.
- Presently the use of ozone one-depleting substances has almost been eliminated and this has contributed to the effort to reduce global warming, for the advantage of human environment and security.

The factors for ensuring environmental sustainability by the year 2015 are geared towards integrating the principles of sustainable development programmes and reverse the loss of environmental resources. These principles can be sighted by the indication of proportion of land covered by the forests, land protection and maintaining biological diversity (UN, 2008). It is in view of this, that reports of MDGs (2005), strongly believed that coupled with the challenges of environment, there is lack of awareness of the value and relevance of MDGs programme at the grass root levels. Therefore, the need to make concerted efforts to educate people on the existence and the relevance of MDGs in Nigeria cannot be over emphasized.

Furthermore, the Nigeria Millennium Development Goals (2005) maintain that, by 2015, with the efforts of governmental and non-governmental agencies through proper information dissemination and improved knowledge on the subject, the proportion of people without safe drinking water would be reduced. In the light of the drive of "Goal Number Seven" that is to, "ensure environmental sustainability", it will definitely lead to the reduction of poverty, improvement of social development, prevention of the deterioration of natural resources and securing a better environment. With the investment in human capital through educational institutions via non-formal and self-directed education, there is hope that natural resources and our natural heritage would experience a rise in productivity, income and social welfare in Nigeria.

Generally, water remains a basic human need and it is also a basic right for survival as a component of environment. Ensuring its availability, access and safety poses immense challenges to the society. This is more particular to the inhabitants of the African continent and particularly the sub-Saharan countries which include Nigeria. Asian countries are also inclusive (UNDP, 2007). Ensuring environmental sustainability, through the provision of safe drinking water for human survival and reducing water scarcity is undergoing various challenges. These challenges include lack of education and enlightenment on the uses, preservation and safety of water. This therefore, requires stakeholders like governmental, non-governmental, regional communities and households to tackle the problem (Singh, 2007).

The commitment of citizens with regard to water conservation practices, protection of water from contamination, varies from one community to the other. Most decisions are discriminatory in nature when it comes to execution. In most cases the discrimination is based on gender, economic level and status of people in the society. Thereby, making some people dissatisfied because they are left out of the picture of what is happening. The resources in the society hardly reach them, for example, the poor segment of the society does not have direct access to health and educational facilities. So their level of poverty continues to grow. But, in spite of these challenges and lack of access to water, which some people and communities are experiencing, effective management of water-sheds are yielding collateral benefits. The Millennium Development Goal number Seven is helping in eradicating hunger, poverty, providing safe drinking water, ensuring sanitized environment and guarantee co-operation in the society. The United Nations (2008, p. 38), posits that:

In response to the loss of global biodiversity, the international community has encouraged land and marine protection; as a result, about 21 million square kilometres of land and sea out of 12 nautical miles were put under protection by 2007. Despite their importance to the sustainability of fish stocks and Coastal livelihoods, only 0.7% of the world oceans that is about 2 Million squares kilometres were protected. Moreover, protection alone is insufficient. All protected areas must also be managed effectively for conservation.

In the light of the above, the contention that preserving and sustaining the environment is yet to reach its optimal level in terms of awareness is a fact to consider. Therefore, educating people remains the lasting channel that would ensure that every one has and gains access to information about the impact or necessity of contributing to environmental sustainability.

### Environmental Education for Environmental Sustainability

Education programmes and their roles for ensuring sustainable environment, means the ability of education content and programmes for environmental sustainability. The aims are to encourage and equip people to make changes in their own lives and in the lives of their communities in areas that are meant to improve their quality of lives and maintain or improve the environment. This type of education should cut across individuals, organizations and governments. All stakeholders need to be actively involved in learning to achieve sustainability. This means that to ensure the success of Millennium Development Goal number Seven, the issue of mass education must be addressed. In other words, this goal can only succeed or be achieved through education. Therefore, it will be very important for educational institutions to provide knowledge for the preservation of the environment. This would encompass knowledge on the richness and wealth found in forest namely, a suitable ecosystem; the generation of revenue, such as, timber, carbon sequestration; avenue for ecotourism activities and ecological services. It also includes other advantages of the forest such as maintaining and protecting the hill side soil, provision of inland water ways and preventing erosion on costal area forms. Knowledge of the above advantages with regards to the preservation of the environment is capable of making it safe (Sigh, 2007).

In relation to the needs of educating people towards sustainability with regard to environment, the categories vary; there is the formal and informal category. Farmers, households, fishermen and the like are in the latter category. The former category includes the population of our society that can be reached through institutions. Education, as asserted by the United Nations (1992), Uche (1995), UNESCO (1997) and Inyang- Abia (1998, 2001) cited in Kalu, Uwatt and Asim (2008), is believed to be the hope of humanity and most effective way to achieve sustainable development. This may be because sustainable development requires particular skills, knowledge, attitudes and values in whatever sector of development. In respect of environmental development, there is no doubt that special skills, knowledge, values and attitudes are necessary for sustaining a conducive environment thereby leading to development. In Nigeria, like many parts of the world, efforts are made to ensure environmental sustainability. Efforts have been made in creating awareness and educating the masses on environmental issues through the media, Non Governmental Organizations and Government Agencies as Uche (1995) observed.

In addition to the efforts above, as Kalu (2008), observes there has been a growing interest among policy makers in Nigeria on the need for a sound environmental base for development. This is perhaps why Nigeria established bodies like the Nigeria Conservation Foundation (NCF) in the 1980s; the National Conservation Strategy (NCS) in 1986, the National Resources Conservation Council (NRCC) in 1988 and the launching of the National Policy on the Environment in 1989. These were directed towards environmental sustainability and resource conservation, all in the context of education and environmental sustainability.

To further facilitate the education of the citizenry in this direction, the Nigeria Government included topics on environmental sustainability in the National Curriculum for Primary Schools. Some of the topics included were population, soil management, pollution, waste and waste disposal, drugs and drug abuse and so on.

In relation to the above, other workable educational tools for ensuring environmental sustainability as endorsed by Singh (2007) are as follows:

- Teachers should provide environmental education and provide guidance for checking environmental pollution of all kinds.
- Schools should set examples to the community. They should engage in planting trees as well as expose students to tree planting. The schools could also organise campaigns on environmental protection through tree planting within the villages or communities they are located. Emphasis should be on maintaining a clean environment, having access to clean water and improve sanitation facilities.
- Educational institutions at various levels should provide information on how to protect and preserve rivers and ponds from dirty water floods.
- Environmental protection information in schools should focus on environmental pollution, the lowering of the quality of environment caused by human activities such

as exploitation of natural resources and causes of environmental degradation. Knowledge of how to maintain the environment at local, national, regional and global levels should be imparted in the minds of our younger generation.

- Organizing orientation programmes and courses for administrators, executives and the authorities at different levels, at both the local, state and federal levels.
- Interdisciplinary seminars, conferences, group discussions at regional and local levels should be organized.
- Environmental education should be made a compulsory course at all levels of our educational programmes. This should particularly include teacher education programme; they should capture or reflect this content.
- Scholars can engage in research for providing solution to environmental problems. These can go a long way to ensure environmental sustainability.

### **Conclusion**

The Millennium Development Goals and environmental sustainability have become global issues in view of their enormous importance. It is believed that it can be attained through education. This can be seen in the response by the Nigerian government when it made sure that the content of environmental education is infused into the school curriculum at various levels as well as the establishment of various bodies and organisations that are directed towards environmental sustainability and resource conservation. The Nigerian government is facing the challenge of preserving, protecting the environment and ensuring safety in the usage and exploration of natural resources. These challenges are more on forest, water, environmental sanitation and good health. This is as a result of lack of information or lack of proper knowledge in terms of the importance of natural resources in our environment. There is need for people to be aware of the causes and risks involved when the environment is hazardous and environmentally unsafe.

### **Recommendations**

In view of the enormous role of education in ensuring environmental sustainability in the context of the Millennium development Goals, the following recommendations are put forward.

The government should put in place policies that would make various institutions in the society as machineries for environmental protection. This should go hand in hand with the provision of adequate information and knowledge to the public about preserving the environment.

The use of environmental resources such as the forests, waters, hills and so on, should be guided by laws that ensure safety with regards to exposure of waste materials. Exploration tariffs and investment in environmental resources should focus on environmental sustainability, reforestation and the prevention of deforestation in Nigeria.

The Nigeria education system should make environmental education one of the compulsory subjects at all levels of our educational system. This will help in providing knowledge about environmental preservation, exploration protection and sanitation as well as become aware about the causes of environmental pollution and prevention of environmental risks and damages with a view to enhancing environmental sustainability.

Environmental education should not be delivered in a manner that will be perceived as a threat by profit seeking sector. Sustainable development should be communicated in an understandable manner to the public. It should be closely related to the local needs and interests of various groups in the society.

Environmental education should make individuals realise how their attitude and behaviours towards the environment contribute to environmental problems and how they can be part of the solution to the multifarious environmental problems.

Environmental education should employ the use of formal, non-formal and informal communication methods in addressing environment risks and problems. Therefore, indigenous knowledge should be integrated with the current environmental education model with a view to making it more relevant to the needs and aspirations of the society.