

National Capacity Building Strategy for Sustainable Development through Environmental Management Education in Nigeria

Harrison, U. E¹; Eni, D. D²; Akintoye, O. A²; Ukata, S. U²; Harrison, Q. U³.

¹College of Education, Afaha Nsit, Akwa Ibom State, Nigeria.

²Department of Geography and Environmental Science, University of Calabar, Nigeria.

³Institute of Education, University of Uyo, Nigeria.

Corresponding Author: Harrison, U. E

Abstract

As Nigeria experiences a major thrust in economic development, there is the utmost need to ensure that the necessary social and environmental safeguards are put in place to guarantee a development that is sustainable, especially in the long run. This paper emphasizes the urgent imperative for a proper integration of environmental management education into the national capacity building strategy for a sustainable development which strives to ensure the balancing of economic, social and environmental forces in Nigeria's development process. Environmental management education basically aims at improving awareness, knowledge and skills, and actually changing the attitude of the people towards sustainable use of the environment. Serious efforts must be made to promote environmental studies if Nigeria intends to successfully combat her many environmental problems ranging from the threats of desertification and desert encroachment in the North to the menace of erosion, deforestation, oil spillage, sea level rise and coastal flooding in the South. Nigeria's environmental management education strategies are discussed while government's role in promoting environmental studies in schools is highlighted. The paper recommends the adoption of environmental management education as an important component of Nigeria's national capacity building strategy to ensure sustainable development.

Keywords: capacity building, sustainable development, environmental management, strategy, environment

INTRODUCTION

In keeping with Nigeria's development goals as enunciated in the national policy document, '*the vision 20:20:20*', the present government in Nigeria strives to transform the economy into one of the top twenty in the world by the year 2020. To actualize this vision, various policies and programmes have been implemented in virtually all facets of the economy. Consequently, various achievements have been reported in key areas of the economy ranging from agriculture, health, power, aviation, transportation and communication to housing, among others. It is important to ensure that these achievements are truly sustainable when considered within the wider context of ensuring a balance between the economic, social and environmental imperatives.

Cases abound in the literature where developing countries tended to place overwhelming emphasis on economic development often at the expense of social and environmental considerations (Nwafor, 2006; Mac Donald 1994; Angelson, 1994). The rich and the poor nations seemed to hold divergent views on the exact nature of the relationship between environment and

development (Nwafor, 2006). This seeming dichotomy in development priorities between the 'two worlds' was aptly captured by Goodland & Edmundson (1994) when they observed that in the poorest countries, where the ecosystem on which the people depend are threatened by population pressure, land and water degradation, deforestation and other forms of environmental stresses, economic development remained the greatest challenge; and in industrial countries where the level of consumption jeopardizes global sustainability more than population growth, the greatest challenge was moderating per capital impacts.

For instance, the current youth restiveness in the oil-rich Niger Delta region of Nigeria has been blamed majorly, on the unsustainable exploitation of oil in the area which over time, resulted in multiplicity of unresolved life threatening environmental and social problems. It is difficult to believe that the necessary environmental and social safeguards were put in place, from the beginning, to guide the operations of the oil sector in accordance with national and international standards. It is equally doubtful whether international best practices were

adopted in the exploration and exploitation of the oil resource. In this particular case, it is very obvious that the primary focus of the oil enterprise was the economic gains with very little attention paid to the environmental and social concomitants.

Due to the frustrations, disillusion and failures of previous development paradigm, there is now a general understanding and consensus across the developing and developed countries that development should be made more sustainable by ensuring that there is a balance of treatment between the economic, social and environmental considerations. It is agreed that sustainable development is capable of ensuring a sustained equilibrium between the economic, social and environmental forces at work in the development process. Sustainable development provides for present needs without jeopardizing the ability to meet future needs (WCED, 1987). It is a development that endures and is long-lasting. There is therefore, the utmost need for all countries to evolve strategies to help build capacities that will guarantee the sustainability of their development efforts.

The main objective of this paper is to outline the need for the integration of environmental management education in Nigeria's national capacity building strategy to guarantee sustainable development. According to Nwafor (2006):

There should be a convergence of thinking and practices which considers and gives due weight to environmental sustainability. ..., an essential ingredient of mobilizing minds for sustainable development is capacity building. This involves developing human resources through training and development, and providing an adequate institutional framework and material support to enable acquired skills to be fully utilized.

It is important that environmental considerations be sharply focused and properly integrated into the national development process through education and sensitization. Education, democracy and access to information are essential prerequisites for sustainability (Cunningham, Cunningham & Saigo, 2005). The work shall also examine Nigeria's environmental management education strategies while highlighting government's role in promoting environmental studies in schools, colleges and universities. The significance of the contribution of this work to current national effort to build capacity in environmental management in Nigeria cannot be overemphasized.

THE CONCEPT OF CAPACITY BUILDING

According to [Wikipedia, the free encyclopedia](#), capacity building, also known as capacity development, is a conceptual approach to development that focuses on understanding the obstacles that inhibit people, governments, international organizations and non-governmental organizations from realizing their development goals while enhancing the abilities that will allow them to achieve measurable and sustainable results. At the national level, capacity building aims at strengthening the knowledge, skills, competencies and abilities of people, organizations and communities to enable them overcome the causes of their exclusion and suffering.

The United Nations Development Programme (UNDP) (2011) conceptualizes capacity building as a long-term continual process of development that involves all stakeholders; including ministries, local authorities, non-governmental organizations, professionals, community members, academics and more. It is a process that uses a country's human, scientific, technological, organizational, institutional and resource capabilities. It may be seen as a process through which individuals, organisations, and societies obtain, strengthen, and maintain the capabilities to set and achieve their own development objectives over time. The primary goal of capacity building is to tackle problems related to policies and methods of development, while considering the potential, limits and needs of the people of the country concerned.

To the United Nations Disaster Risk Reduction Office (UNISDR) (2011), capacity building is a process by which people, organizations and society systematically stimulate and develop their capability over time to achieve social and economic goals, through improvement of knowledge, skills, systems, and institutions - within a wider social and cultural enabling environment. The importance of time and space to the achievement of the goals of capacity building cannot be overemphasized.

From the foregoing discussion, it is clear that capacity building is a process of change which may through up short-term issues which must be supported by a sustained commitment to yield the desired longer term results. It is an endogenous process which is specific about who and how and where the decisions are made, management takes place, services are delivered and results are monitored and evaluated. Capacity building takes place at three different levels: the individual level, the organizational level and the societal level which are interlinked and interdependent. The United Nations Development Programme (UNDP) and the United

Nations Committee of Experts on Public Administration (UNCEPA) (2006) outlined the components of each of these three levels as follows:

- **Individual Level** - Individuals, as the tissues of organisations and societies, represent the first layer of capacity. For societies and organisations to transform and grow, they need individuals with skills, knowledge and experience. At the individual level capacity development takes place through demand-driven processes of learning and knowledge acquisition and sharing, experiencing, participation, on-the-job training, mentoring and coaching and other learning techniques that empower and place the individual in a central and active position. This new approach to capacity development moves away from the traditional technical assistance, mostly based on supply-driven technical training and workshops. Community capacity building on an individual level requires the development of conditions that allow individual participants to build and enhance knowledge and skills. It also calls for the establishment of conditions that will allow individuals to engage in the "process of learning and adapting to change."
- **Institutional/Organisational Level** - The second layer of capacity is the organisational or institutional level. As individuals make up the tissues of organisations and institutions, the sharing of skills, knowledge, experience and values amongst individuals belonging to a group or organisation translates, over time, into the very organisation's capacity, consisting of procedures, systems, policies and culture. However, while the collective set of capacities of individuals ultimately translates into the organisational and institutional capacity, the latter, by far, exceeds the sum of the capacities of their individual members. Developing institutions' capacity means fostering change within their complex system of policies, rules, procedures, regulations and organisational culture. The process is endogenous and voluntary, fully owned and controlled by the organisations and institutions that are undertaking change. Capacity building on an institutional level should involve aiding and improving institutions in developing countries. It may not necessarily involve creating new institutions, rather, modernizing existing ones and supporting them in forming sound policies, organizational structures, and effective methods of management and revenue control.
- **Societal Level** - The third layer at which capacity building takes place is the societal level. This third level has been long neglected in development theory and considered an externality to the capacity

development process, which has traditionally focused on the individual and the organisational levels. Transformation and change that happens at the societal level overhauls and, at the same time, is driven by that which takes place within individuals and organisations that make that society. In turn, the values system of a society, its customs, body of laws and policies, the system of governance are all elements that impinge on the ability of individuals and organisations to develop their capacity. Although change in capacity at the societal level is a long process which is difficult to control and steer, it is not to be considered an externality or a variable that cannot be manipulated to achieve desired results.

ENVIRONMENTAL DIMENSION OF SUSTAINABLE DEVELOPMENT

The World Commission on Environment and Development in their 1987 report popularly known as 'our common future' or 'the Brundtland report' defined sustainable development as a development that meets the need of the present without compromising the ability of future generations to meet their own needs (WCED, 1987). Sustainable development gives a balanced consideration to economic, social and environmental factors while making provisions for present (short term) and future (long term) needs of the society.

The primary essence of sustainable development is to ensure that present needs are not satisfied at the expense of future satisfaction (Eni, 2005). Accordingly, present production and consumption patterns must not violate economic, social and environmental principles. It is a development model that provides a framework for the integration of ecosystem health, human needs and sustainable economic growth as shown in figure 1.

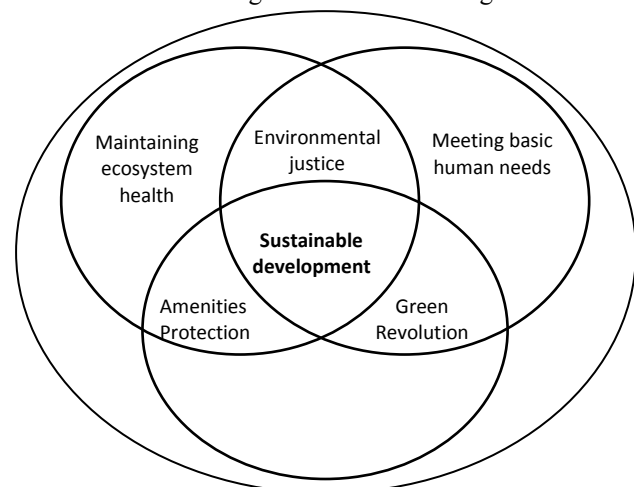


Figure 1: A sustainable development model for integrating ecosystem health, human needs and

sustainable economic growth (Cunningham, Cunningham & Saigo, 2005)

According to Cunningham, Cunningham & Saigo (2005), the goals of sustainable development as enunciated by the Council on Sustainable Development include to:

- Ensure every person benefits from a healthy environment.
- Sustain a healthy economy that affords the opportunity for a high quality of life.
- Ensure equity and opportunity for economic, social and environmental well-being.
- Protect and restore natural resources for current and future generations
- Encourage stewardship
- Encourage people to work together to create healthy communities

- Create full opportunity for citizens, businesses and communities to participate in and influence economic, social and environmental decisions that affect them.
- Move toward stabilization of the population
- Lead in developing and carrying out development that are sustainable
- Ensure access to education that will prepare citizens for meaningful work and a high quality of life, and give of them an understanding of the concepts of sustainable development.

The three major dimensions of sustainable development, namely: environmental, economic and social, could be conceptualized as a tripod which may conveniently be represented in a triangular form as shown in figure 2. From the environmental perspective, sustainability must focus on the overall performance or health of the ecological system (Goodland, 1995).

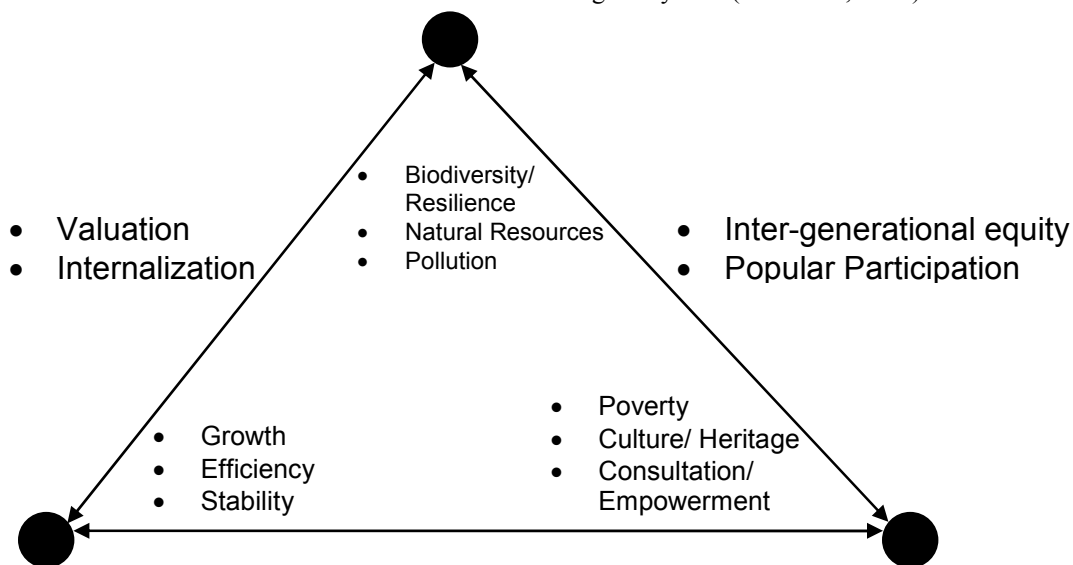


Figure 2: Elements of sustainable development (Munasinghe, 1993).

Attention is paid to ecosystem integrity, carrying capacity and conservation of natural resources including biodiversity. It is impossible to imagine a sustainable development without effective environmental management. The goals of environmental management are essentially similar to that of sustainable development. Sustainable human development is therefore, undermined by the absent of well set out environmental management strategies.

To ensure sustainable development in Nigeria, government has an action plan which sets out to achieve the following (NPE, 1999):

- Forest protection
- Erosion control

- Management of municipal wastes
- Combating desertification and mitigating effects of drought.
- Rational use of oil and gas resources
- Protecting water resources
- Sustainable human settlement
- Managing mining sites and restoring mining wastelands
- Managing toxic chemicals, hazardous and radio-active wastes.
- Emergency preparedness and management.
- Flood management
- Control of the infestation of water hyacinth and other invasive weeds.

- Strengthening, improving and co-coordinating implementation of environmental management.
- Strengthening the legal basis for sustainable development.
- Integrating environment into development plan and decision making.
- Harmonizing of federal, state and local responsibilities for environmental management.
- Creating and improving capacity for sustainable development.
- Internalizing environmental costs through the use of economic instruments in the management of natural resources.
- Alleviating poverty.
- Promoting the research and development of environmentally sound technology.
- Forging viable partnership among various stakeholders and interest group both at national and international levels.
- Managing environmental information for sustainable development.
- Financing environmental protection and natural resources conservation through national and international funding mechanism.

EDUCATION AND SUSTAINABLE DEVELOPMENT IN NIGERIA

For our purpose, it is instructive to see education as a process of raising individuals or groups along mental, physical, moral, spiritual and vocational dimensions through planned programme of instruction and other forms of relevant experiences (Noibi & Lawal, 1993). Uche, (1995) submitted that the type of society that would evolve at any period is dependent on the prevailing educational system that has been put in place and the educational goals that guide its operation. A country therefore creates the type of society it desires through its educational system. It trains the type of people it wants since man is the product of his education

Within the African sub-region, Nigeria stands out as the only country that spans the whole range of ecological zones, from the coastal mangrove in the south to the desert in the North. The country therefore, faces a conglomeration of environmental challenges from these ecological zones. This range from the threat of desert encroachment and desertification in the North, through erosion and deforestation in the middle belt to the menace of oil spillage, sea level rise and coastal flooding in the south, including climate change which affects all part of the country.

Given this state of affairs, education is seen as a veritable tool to create a society that is able to combat and contain these environmental problems. The educational system should assume a position of prominence and importance in an organized effort towards freeing man from the destruction occasioned by his ignorance of the dynamics of nature and the environment (Uche 1995). According to this author:

The destruction and devastation inflicted on the environment by man are in part due to his misconceptions about nature, his flawed attitudes to matters relating to the environment and his failure to regulate his activities on the planet. Education as an instrument of systematic change is fundamental if we are to successfully adjust or modify man's conception about nature, adjust his attitudes to the environment and make him perceive the essence of moderation in his various activities on the environment. The educational process may, therefore, be seen as a catalyst for effecting change in the conceptions of man about nature, his attitudes to and actions in the environment.

It is quite obvious that sustainable development can best be achieved through a well organized system of capacity building through education. The type of education recommended here is Environmental Management Education which can adopt both formal and informal approaches to help both local and global communities achieve sustainable development.

ENVIRONMENTAL MANAGEMENT EDUCATION STRATEGIES IN NIGERIA

Environmental management education basically aims at creating awareness and developing the right attitude and skills necessary to guarantee environmental sustainability (Harrison, Inyang & Udo, 2008; Harrison, Inyang & Ekott, 2014; Harrison, Bisong & Inyang, 2014). It is a form of education that provides a system of educating the citizens about matters and issues that affect our environment, our homes, villages, cities, farmlands, water supplies, forest and weather in order to improve our awareness and skills and engender a change of attitude towards our environment and thereby arouse concern about the problems around us (Peters, Ekpoh, & Bisong, 1995).

As an education programme, the aim is to stimulate, motivate and generate the commitment of the people towards the adoption of habits and lifestyles that are consistent with the practice of sustainable development, focusing on both the school and non-school public

(Uche, 1995). According to this author, the focus should be on the cognitive, affective and psychomotor dimensions of human development.

The major objectives of environmental education were well articulated in the Belgrade charter of 1989 (Anijah-Obi, 2001). They include: the creation of environmental awareness, acquisition of knowledge and understanding of the total environment, change of attitude towards the environment, development of skills required to solve environmental problems, evaluation of environmental measures and participation in finding solutions to environmental problems. These objectives should be pursued concurrently in any programme of environmental management education.

Realizing the indispensability of environmental management education in her quest for sustainable development, the Nigerian government endorsed a strategy that encouraged the incorporation of environmental education in the curriculum of schools. It similarly established environmental management education department in various universities, polytechnics and colleges of education. Other components of the strategy include: the development and use of common curricula for schools, preparation of textbooks and teachers' guide on environmental education, conducting orientation workshops and seminars for teachers, inauguration of environmental based clubs in schools, organising in-service and pre-service training for teachers and the provision of adequate funds for environmental management education programme and activities.

For very obvious reasons, different strategies are used in educating the school and non-school public about environmental management education. The non-school category comprises two major groups - those that have finished school and those that have never attended school (illiterates). Effective strategies for this category depend on the age and educational level of the target group. The strategies which may be used include: drama/popular theatre (enter-educate), targeted message on radio, television, posters/pictorials, newspapers advert and hand bills, campaign trains/puppets shows, use of town criers, use of guests speakers and use of youth clubs. For the school children, the following strategies may be used: story-telling, singing of songs, field trip/excursion, environmental awareness/conservation clubs, lecture/discussion and projects based approaches.

GOVERNMENT ROLE IN PROMOTING ENVIRONMENTAL EDUCATION IN NIGERIA

The National Policy on Environment (NPE), as revised in 1999, recognizes education as a dynamic instrument of change that should provide the foundation for developing sound and sustainable means of resource exploitation in Nigeria. Education, according to this policy, should promote public awareness towards changing and strengthening attitudes, values and actions that are congruous with sustainable development. Governments saw the necessity to develop and support the education sector to ensure its responsiveness to changes and demands of all the other sectors, and facilitate the inculcation of environmental ethics, values and skills in the people and mobilizing them individually and collectively to accept the responsibilities of protecting the environment and ensuring rational utilization of available natural resources.

To this end, the policy states that Nigerian government shall:

- Promote comprehensive curriculum reviews that integrate environments and development concept in the educational system.
- Support the development of courses and programmes leading to the award of degrees and diplomas in environmental management and technology.
- Encourage gender sensitive education at all levels including continuing education opportunities and literacy programmes.
- Encourage practical training programmes for graduates of tertiary institutions to prepare them for labour market requirements and sustainable livelihood.
- Strengthen vocational training that facilitates the development and assimilation of environmentally sound, socially acceptable and appropriate technology.
- Establish support centers of excellence in interdisciplinary research and education in that area of environmental and sustainable development.
- Emphasize training and retraining of teachers, and school administrators in the area of environmental education and development issues.
- Assist schools to design and sustain environmental related activities including establishments of environmental awareness clubs and association.
- Support educational institutions including NGOs and the private sectors to develop and provide appropriate training programmes on environment

and development issues to decision makers, business men, journalists, community leaders etc.

- Promote research on and development of indigenous knowledge to facilitate sustainable adaptation of relevant technologies.
- Adopt community based approaches to public education and enlightenments through culturally relevant social groups, voluntary associations and occupational organizations.
- Collaborate with the media, entertainments and advertising firms to promote environmental awareness.
- Encourage the United Nations and other donor agencies to emphasize capacity building in all development programmes through adoption of the multidisciplinary approach to skills transfer.
- Encourage research linkages and staff/students exchanges between Nigerian educational institutions and institutions abroad in the area of environmental studies and sustainable development.
- Encourage public relation activities which tend to provide a forum and context for the debate on sustainable development and the articulations of the collective vision of the future.
- Promote public awareness activities through traditional; and mass media and encourage the participation of social; and political structures to keep them, informed about all aspects of the policy.
- Support public participation in acidities covering formal and non-formal education and training to help carry out needed changes.
- Support environmental information at the national, regional and global levels.

CONCLUSION

As the world passes through the current phase of economic development, there is the utmost need to ensure that the necessary social and environmental safeguards are put in place through an effective programme of capacity building to guarantee a development that is sustainable, especially in the long run. The increasing trend of threats posed by diverse environmental challenges in all parts of the country has made the integration of environmental management education into the curriculum of schools at levels a national priority which should be handled with great urgency. Environmental education basically aims at achieving the following major objectives: creation of environmental awareness, acquisition of knowledge and understanding of the total environment, change of attitude towards the environment, development of skills required to solve environmental problems, evaluation of

environmental measures and participation in finding solutions to environmental problems. It is doubtful to imagine a sustainable development without a well set-out programme of environmental management. The adoption of environmental management education as an important component of Nigeria's national capacity building strategy is a sure guarantee for sustainable development in Nigeria.

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