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Natural Heritage Management in the Context of Economic Underdevelopment: The Case of Niger Delta Mangrove, Nigeria

1. Introduction

Today in a changing world, threats to the conservation and management of cultural and natural heritage are increasingly multi-dimensional (UNESCO, 2012). The threats have gone beyond the traditional and conventional scope of challenges posed by everyday wear and tear. Such challenges today include: the multiple dimensions of climate impacts, surging population, anthropocentricity, and false actors adopting the concept of sustainability out of context. These challenges, however, have stimulated an avalanche of ideas in research and prompted the 31st (2007) and 32nd (2008) sessions of the World Heritage Committee to adopt the publication initiative and request of the Advisory Bodies, the International Centre for Study of the Preservation and Restoration of Cultural Properties (ICCROM), the International Committee on Monuments and Sites (ICOMOS) and the International Union of Natural Heritage (IUCN), to proceed with the preparation and publication of a number of thematic Resource Manuals which respond to contemporary challenges (UNESCO, 2012). However, these Resource Manuals have not necessarily been able to provide a holistic solution to the challenges which have grown, over the years, into two main forces; economic development policies versus heritage conservation and management. This is especially true in the discourse of heritage in Africa. As a caveat, this paper has no pretension of discussing sustainability as a concept, but only as context to validate the argumentations of the paper.

Against this background, this paper takes a natural heritage case study, the Niger Delta Mangroves in Nigeria. In this context, the oil fields are located directly inside the mangroves and thus, the oil exploitation activities have caused degradation of more than (21,342 hectares) of the natural heritage between 1986 to 2003 (Adedeji, et al 2011: 308) and 40% since 1958 (Biomass Research Report, 2014: 5). This is due to gas flaring, oil pipelines explosions, deforestation for new oil sites and oil spillage. However, these losses are considered acceptable owing to the fact that petroleum supports 14% of the country's gross domestic product (GDP), about 95% of the country's export and well over 80% of government's annual revenue (Abdulkareem, et al. 2012: 1). Therefore, calls for the

stoppage of the production of the crude oil due to its impact on the natural heritage conservation will only live on paper. Moreover, several actors and stakeholders have been compelled to assume the populist idea that the state of degradation of the mangroves in relation to crude oil exploitation is part of the “resource curse” (Dode, 2012: 235; Watt, 2004: 49). This paper argues that this commonplace position is not necessarily true and that heritage protection and economic developments can co-exist, where possible, in a symbiotic association. With this in mind, what can be a solution to the discord which exists between the quest for economic development and environmental sustainability/natural heritage protection in the case of Niger Delta Mangrove?

To answer these questions this paper explores two main themes. Firstly, the paper investigates and discusses the notion of economic development in relation to environmental sustainability in the Niger Delta area. Secondly, the paper discusses the impacts of oil exploitation on the Niger Delta Mangrove and also the role of Mangrove in the context of environmental sustainability. To validate these objectives this research collects its data from existing professional perspective in contemporary literature. Conclusively, this paper posits that economic development and environmental sustainability can co-exist in a symbiotic association in the Niger Delta region of Nigeria, if the concept of sustainability is understood in its true tenet.

2. The Niger Delta Mangrove

The Niger Delta Mangroves is one of few recognised natural heritages areas in Nigeria. It is located in the Niger Delta region (see figure 1). The Niger Delta is located on the Atlantic coast of southern Nigeria. It is made up of nine oil-producing states namely; Abia, Akwa Ibom, Bayelsa, Cross River, Delta, Edo, Imo, Ondo and Rivers states (Biomass Research Report, 2014: 10). The mangrove forest is a hub of biodiversity, with a repository of flora and fauna of both scientific and cultural interest (Osuji et al, 2010: 116). It is third largest mangrove forest in the world, and the largest in Africa, covering an area of approximately 9,730 km² (Anon, 1995: 6; Adegbehin & Nwaigbo, 1990: 13). Owing to its value, it was listed on the United Nations Educational, Scientific and Cultural Organization (UNESCO) World Heritage tentative list in 1995.

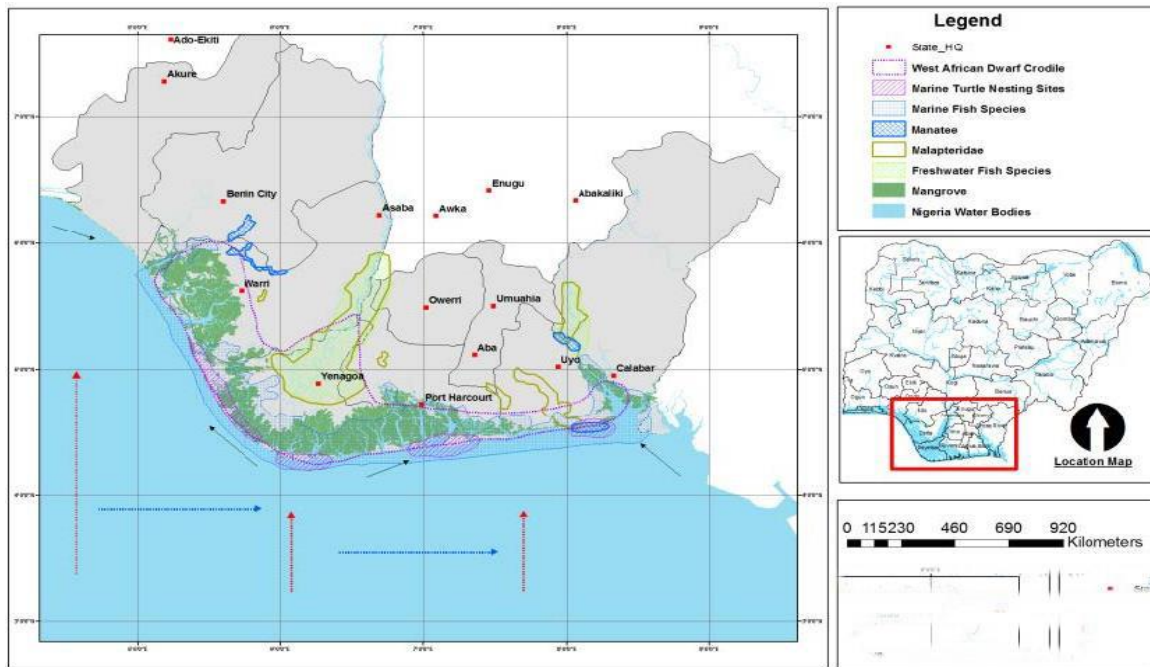


Figure 1. The map of Nigeria, showing the Niger Delta region (member states) and the Niger Delta mangrove (Source: UNEP-WCMC and Niger Delta Survey, 2005)

3. SETTING THE CONTEXT

3.1. Natural Heritage Management

In its over forty years of existence, the World Heritage Convention remains the most successful international legal instrument that propagates the protection of World Natural Heritage, characterized by outstanding biodiversity, ecosystems, geology or superb natural inherent congruent (UNESCO, 2012: 2). However, beyond recognising and nominating heritage site, States Parties to the Convention own the full responsibility for protecting and managing these natural places for the current and future generations (UNESCO, 1972; 3). In the process of management, however, site managers are confronted with multidimensional challenges. These challenges seem to have climaxed today in this era of Anthropocene; therefore, conservation methodologies should also address these trends (UNESCO, 2012:2). Today in Africa, moreover, the contemporary notion of development poses one of the greatest challenges to natural heritage sites. This is owing to a number of reasons and misconceptions. On one hand, this position is due to insufficient knowledge of values of natural heritage. On the other hand, there is currently a trend of misconception of the tenets of sustainable development in Africa.

3.2. Values of Mangroves in the Context of Natural Heritage

Value, both in its simple and conceptual context has been a subject of rigorous inquiry in contemporary research. Recent years have seen a proliferation of new and important ideas about value, provoked by the advent of challenges presented by global climate change. In this paper, three concepts of value are identified for the mangroves, namely, ecological, sociocultural and economic values of natural heritage (De Groot et al, 2006: 18).

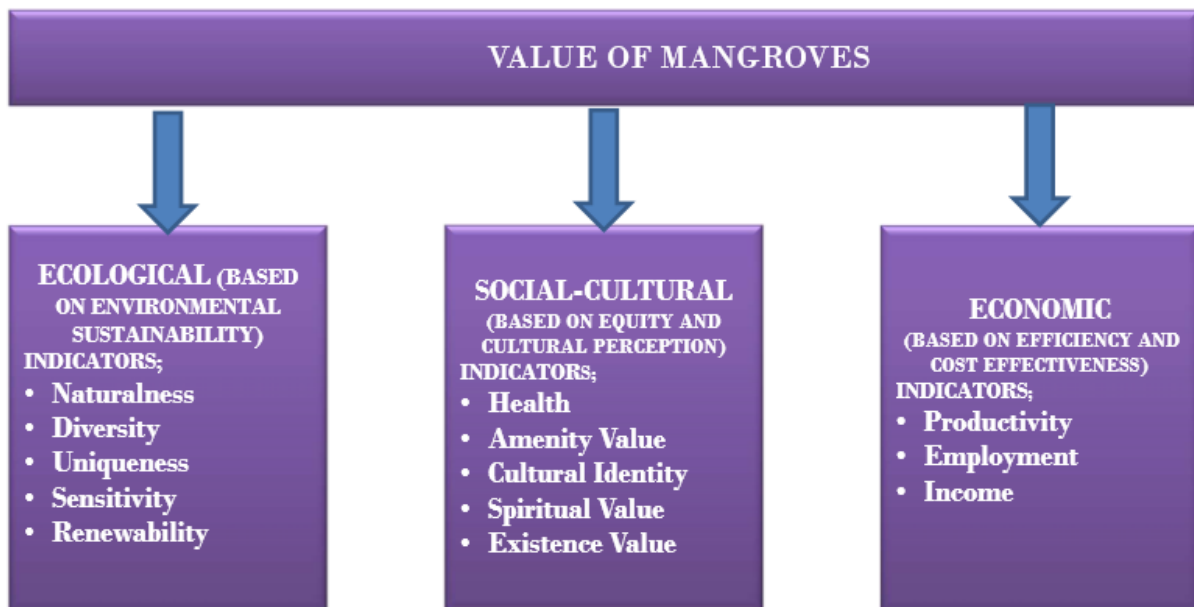


Figure 2. Total value of mangrove heritage (De Groot et al, 2006: 18, figure 5)

3.3. The Notion of Development

Literarily, according to the oxford dictionary, development is defined as “a specified state of growth or advancement”. This in itself is the genesis of the confusion that exists in the discourse of development. Generally, development is often confused with growth. However, a development is better understood as a concept rather than its literal delineation. The emergence of the term “development” is firstly connected with the material growth through centralized industrialization and communication (Flint, 2013: 6). Nevertheless, sociologists such as Maria Hoff (1998) and Warren Flint (2013) stress the importance of distinguishing between growth and development. Growth is about quantity, while quality is the main purpose of development (Hoff, 1998: 6-25; Flint, 2013: 6). Development as a concept is multifaceted and hence, must be approached and investigated as such.

In essence, it must be approached with a constructivist ontological perception and not with a positivist notion of truth as a brute fact. Therefore, relative to the context at hand, before Africa discusses the concept of development, it must lay aside the Eurocentric materialist perception of development. It must be investigated from the context in which it is to be applied, and not from blanket assertions.

3.4. Between Sustainability and Development

Generally speaking, sustainability is “meeting the needs of the present without compromising the ability of future generations to meet their own needs” (United Nations World Commission on Environment & Development: Brundtland Commission 1987: 8). This is the generally adopted notion of sustainability which witnessed widespread and frequent citation ever since it was pronounced in 1987 (Robert et al, 2005: 10). However, development, either qualitative or quantitative, will not conform to this definition if it does not incorporate the four dimensions of sustainability (environment, social, economic and, recently, culture) into its means of operation. The contemporary notion of development in the Niger Delta area of Nigeria does not conform to these tenets. In the quest to satisfy the fiscal need of the nation (economic), oil exploitation industries have degraded more than 21,342 hectares of the natural heritage of the Niger Delta Mangroves (environment) between 1986 to 2003 (Adedeji, et al 2011: 308)

Table 1. Concept of sustainable development (Robert et al, 2005: 11)

WHAT IS TO BE SUSTAINED	WHAT IS TO BE DEVELOPED
<p>Nature</p> <ul style="list-style-type: none"> • Earth • Biodiversity • Eco-system <p>Life Support</p> <ul style="list-style-type: none"> • Ecosystem services • Resources • Environment <p>Community</p> <ul style="list-style-type: none"> • Cultures • Groups • Places 	<p>People</p> <ul style="list-style-type: none"> • Child survival • Life expectancy • Education • Equity • Equal opportunity <p>Economy</p> <ul style="list-style-type: none"> • Wealth • Productive Sectors • Consumption <p>Society</p> <ul style="list-style-type: none"> • Institutions • Social capital • States • Regions

3.5 Towards Economic Development: A Niger Delta Context

No single definition has been able to necessarily capture the multifaceted dimensions of economic development. It is typically described in terms of its objectives, which in most common terms are the creation of jobs and wealth, and the improvement of the quality of life. In a general sense, economic development can also be perceived as a process that influences growth and restructuring of an economy to enhance the economic wellbeing of a community (IEDC, 2000: 3). Hence, the main goal of economic development is improving the economic wellbeing of a community through efforts that entail job creation, job retention, tax base enhancements and quality of life (Ibid)

In light of the above, what are the indicators to monitor economic development? The United Nations Development Program (UNDP) developed a framework named the Human Development Index (HDI) in 1990, and further refined it in 1994. This framework includes three items:

- Life expectancy
- Adult literacy
- Gross Domestic Product per capita

Therefore, within the Nigerian context, relative to the subject at hand, the following table shows the indicator based approach to validate the economic development in the Niger Delta region. It is a survey carried out in five of the nine states in the Niger delta.

Table 2. Comparison between economic development in the Niger Delta State and in Nigeria (Sources: NBS, 2009; NBS, 2004; NBS, 2006; NPC, 2006.)

Indicators		Niger Delta State				Nigeria
		Akwa Ibom	Bayelsa	Delta	Rivers	
Population (2006)	Census	3.9 million	1.7 million	4.1 Million	5.2 Million	149 million
Annual growth	Population (% total population)	3.4	2.9	3.2	3.4	3.2
Unemployment rate (% of working age adults) (2009)		34.10	38.77	18.40	27.90	19.70
Poverty incidence (%Total population)		34.82	19.98	45.35	29.09	54.40
Adult Literacy Rate		79.6	64.3	72.9	80.5	65.7
Safe Sanitation with access to safe sanitation	(%Total population)	4.8	12.7	34.3	19.7	57.6

Health Care (% Total population with access to health care)	25.5	52.6	47.8	42.3	55.1
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The above table demonstrates that while the environment and the mangroves are being degraded in the quest for economic development, the economic development in itself is not sustainable. Poverty in this region is still on the rise. Today, according to recent studies, the Niger Delta region is the most underdeveloped, poorest (income per capital) and has the lowest life expectancy (46.8year) in Nigeria (UNDP, 2006: 24). The human development report of UNDP (2006:9) also opined that, paradoxically, the Niger Delta region has enormous resources which account for upwards of 80 percent of Nigeria’s foreign exchange earnings and about 70 percent of government revenue, “[.....] yet, it is suffering from administrative neglect, management problems, crumbling social infrastructure and services, high unemployment, social deprivation, abject poverty, filth and squalor, and endemic conflict [.....]”.

4. Environmental Protection/Sustainability: The Niger Delta Case

Traditionally, environmental sustainability entails the ecosystem integrity, carrying capacity and biodiversity. It requires that natural capital (natural heritage) be maintained as a source of economic inputs and as a sink for greenhouse wastes. In its tenets, it stipulates that resources must not be harnessed faster than they can be regenerated, and waste must be emitted no faster than it is assimilated by the environment (Kahn, 1995: 65). Kahn (1995) also posits that economic, social and environmental sustainability must be integrated and interlinked. They must be coordinated in a comprehensive manner.

The deforestation and environmental pollution posed by oil exploitation in the Niger Delta further illustrate the relationship between environmental sustainability and quest for economic materialist development. This describes how the economic, the social, and the environmental substrates of sustainability relate to one another. Moreover, the scenario of destruction of the mangroves epitomises the misconception and minute knowledge of the contribution of natural heritage to environmental sustainability.

4.1. The Role of Natural Heritage (Mangroves) In Environmental Sustainability

Mangroves play an irreducible role in providing important ecosystem services and stabilising the ecosystem. Such roles are analysed under the provisioning, regulating and supporting stances in the table below.

Table 3.1 Importance of natural heritage in the context of environmental sustainability (Groot et al, 2006: 16, table 5)

PROVISIONING	
Food	Production of fish, wild game, fruit, grain etc.
Fresh Water	Storage and retention of water; provision of water for irrigation and drinking
Fibre and fuel	Production of timber, fuelwood, peat, fodder, aggregates
Biochemical production	Extraction of material from biodata
REGULATING	
Climate regulation	Regulation of greenhouse gases, temperature, precipitation and other climatic processes; chemical composition of the atmosphere
Hydrological regimes	Groundwater recharge and discharge, storage of water for the agricultural industry
Pollution control and detoxification	Retention, recovery and removal of excess nutrient and pollutant
Erosion protection	Retention of soils and prevention of structural change
Natural hazard	Storm protection and flood control
SUPPORTING	
Biodiversity	Habitats for resident or transient species
Soil formation	Sediment retention and accumulation of organic matter
Nutrient Cycle	Storage, recycling, processing and acquisition of nutrient
Pollination	Provision of support for pollutant

4.2. Economic Development versus Natural Heritage Management/Protection: The Dilemma of the Niger Delta Case

Generally, this contest has been the grounds of rigorous intellectual debate in the discourse of heritage in Africa. Should the oil exploitation stop in the Niger Delta Mangroves because of the threat it poses to natural heritage? Should the nation conserve the heritage at the detriment of the Gross Domestic Product (GDP)? Firstly, there is a misconception of the concept of growth and development. Therefore, in the insatiable drive to attain economic development, environmental protection has been relegated to a secondary role. In that vein, the eco-system stability, carrying capacity and biodiversity are in a state of jeopardy, if the current trend continues unattended. Moreover, the challenge also encompasses the misunderstanding of the value of natural heritage in its true context of environmental sustainability, which is caused by insufficient knowledge about the economic and ecological value of mangrove ecosystems, which provide important ecosystem services, such as fish, flood prevention, erosion prevention, water regulation, and timber products (Njisuh & Gordon, 2011: 217).

Table 4. Economic & environmental pillars of sustainability, criteria and the discord

PILLAR OF SUSTAINABILITY	CRITERIA	The Conflict in Niger Delta Case
Economic Sustainability	Growth Development Productivity Trickle Down	The Notion of growth and development in the Niger delta is not according to the tenets of sustainability; therefore, it is in discord with the integrity of the mangrove forest which is a hub of biodiversity in this region. Heritage management is also not a trickle down approach; it is only vested in the government. It is therefore not sustainable.
Environmental Sustainability	Eco-System Integrity Carrying Capacity Biodiversity	

5. Recommendations

One of the approaches to addressing the discord which exists between economic and environmental sustainability is by integrating and respecting the tenets of both economic and environmental sustainability. None of the pillars of sustainability are independent of each other, they are symmetrically dependent. Economic, social, cultural and environmental sustainability form elements of a dynamic system. They cannot be pursued in isolation for 'sustainable development' to flourish. Therefore, in the case of the Niger Delta Mangroves, while oil exploitation can continue, environmental protection policies should be installed and perpetuated. Also, the perception of

development in Nigeria has to be reconceptualised to follow the tenets of sustainable development as a concept in itself. Furthermore, heritage management can also play a vital role in the abatement of grassroots poverty if the management framework becomes inclusive. To achieve this, the heritage legislation in the country must be revisited and made a “bottom-up” approach instead of “top down approach”. The native traditional custodianship (Jopela, 2010) should also be reinvented, to actively involve the community in the management processes.

6. Conclusion

Natural heritage provides the collective resources we all draw from, eco-system support, carrying capacity and hosting of biodiversity. Therefore, the very existence of man depends on it. Irrespective of the thirst for development, these collective resources must be harnessed only sustainably. As emphasised in this paper, heritage management also plays an irreducible role in fostering grassroots development, if it is plural and inclusive in conformism with the Johannesburg Declaration on World Heritage in Africa and Sustainable Development (2003), which noted that management of heritage is an important tool for the promotion of sustainable development and poverty alleviation. In the case of Nigeria, heritage management can be inclusive if co-management is adopted. To achieve co-management, the Federal Decree No. 77 of 1979 (now NCMM ACT, Cap 242 of 2000), which leaves out the local in the management process, must be revisited and made to incorporate the locals in the heritage legislation for the management of heritage in Nigeria. Lastly, environmental protection policies must be stringently perpetuated to curb the incessant degradation of the Niger Delta Mangroves in the process of oil production.

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