

Energy Resources Management for Sustainable Development in Nigeria Niger Delta Region: Women Issues and the Environment

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Abstract—There is an urgent need to conserve the biological diversity of the Nigerian Environment for the future and present generation in the face of current energy resources development. This paper gives an in-depth analysis of the impact of oil and gas activities on the biological diversity of the Nigerian Niger Delta area and its consequences on the sustainable development of the host communities as it relates to their social, economic and environmental issues, particularly on the womenfolk who are the key managers of environmental resources. Also reviewed is the frustration of these communities that is reflected in unending conflicts.

Keywords—Biodiversity, energy resources, sustainable development, and women issues.

I. INTRODUCTION

THE study area Nigeria is located in the Sub-Sahara Africa within geographic coordinates 4⁰N - 14⁰N and 3⁰E and 15⁰E, having a total area of 923,800 sq km which is about 14% land area of West Africa [1]. Nigeria is the most populous country in Africa with a population of about 140 million people. The ecosystem diversity of the country include forests, savannas, pasture and rangeland, deserts, tundras, mountains, lakes, rivers, coral reefs, wetlands, seas, coastal areas and islands, farmer's field and gardens, botanical gardens and zoos. The country is richly endowed with energy resources, the main being crude oil (petroleum) and natural gas deposits - which are Nigeria's main source of energy and foreign exchange; coal tar sand and biomass. These deposits are concentrated at the Niger Delta region which has attracted the presence of multinational oil/gas companies to the area. The Niger Delta region consists of the largest mangrove forest in Africa and one of the largest wetlands in the world. The ecology of the area is influenced by the tides of the Atlantic Ocean and the flood plains of river Niger. The whole of the region is described as one of the most sensitive ecosystem of the world that supports very important local and commercial fisheries. Human activities particularly those of the oil/gas

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industries alter the characteristics and biotic components of the ecosystem of the region, which in turn affects the livelihood of the local communities that depends on ecosystem services for sustenance.

The Niger Delta region spans over 70,000sqkm, being made up of nine (9) states divided into 185 local governments, comprising of 800 communities of 12 major ethnic groups, with about 30 million people, as shown in Fig. 1. Traditionally women are the managers of the ecosystem in this region though subsistence agriculture and fishing are the main source of livelihood of the people [2].



Fig. 1 Map of Nigeria showing the states of the Niger Delta

II. HISTORY OF ENERGY RESOURCES DEVELOPMENT IN NIGERIA'S NIGER DELTA

Crude oil exploration in Nigeria dates back to 1908 with the discovery of deposits at Araromi area in Ondo State. Later in 1946 Shell D'Aracy the predecessor of Shell Petroleum Development Company (SPDC) of Nigeria discovered oil in Oloibiri and made exploration of oil in commercial quantity in 1956. By 1961 a host of other multinational oil companies have made their way into the Nigeria Niger Delta region both on-shore and off-shore. These early callers include Gulf Oil (now Chevron), Safrap (now TotalFinaElf), Tenneco and Amoseas (now MobilTexaco) and Agip. Presently there are bee-hive of oil and gas activities in the region with over 400 oil and gas production and storage facilities and the criss-crossing pipelines scattered all over the region with its challenges on ecosystem sustainability.

A. Energy Resources Management Trends in Nigeria

The trend of activities of the energy sector in the oil-bearing zone of Nigerian Niger Delta leaves traits of degraded environment and fractured livelihoods. The obtrusions impacts of oil & gas operations on the environment results in biodiversity loss, deforestation, soil fertility loss, low

agricultural yield, fishery resource decline, flooding & coastal/marine erosion and health decline. These impacts on the environment have debilitating effect on the host communities that depends solely on ecosystem resources and biological diversity of the area for sustenance.

Energy development in the region is expected to be sustainable. Sustainable development depicts that production systems must not cause undue depletion of the natural resources or threaten the environment. Sustainability therefore marries economic processes with social systems and environmental factors. This interdependence has since been identified as stressed in the United Nations Conference on Environment and Development (UNCED)[3] 1992, which called for the integration of environment and development in decision making; and integral approach to planning and management of natural resources. The action plan formed at the summit stress; (i) eradication of poverty, which is an indispensable requirement for sustainable development (principle 5), (ii) that environmental protection must be an integral part of the development process (principle 4), (iii) women play a vital role in environmental management and development, as their participation is essential to achieving sustainable development (principle 20), which is backed up with the Beijing declaration 1995, that promulgated a platform for action for economic and political empowerment of women[4]. These principles are long term strategies for economic and social progress without exploitation of the natural resources.

Development is considered to be sustainable when it “meets the needs of the present without compromising the ability of the future generations to meet their own needs”[5]. In this instance the present needs of the host communities are far from being met. The declaration of the World Summit on Sustainable Development, held in Johannesburg in 2002, assumes a collective responsibility to advance and strengthen “the interdependence and mutually reinforcing pillars of sustainable development – economic development, social development and environmental protection at local, regional and global levels”[6]. Sustainable local development hinges on improving the quality of life of the local population, with a transition towards meeting their basic needs; and reducing hunger and poverty (MDG 7)[7]. Sustainability issues are becoming more complex and interrelated with other dimensions of human life. The dimensions of the Human Development Index (income, education and health) are used to determine the main outcomes of sustainable development which are similar with the Millennium Development Goals (MDGs).

In Nigeria oil wealth alone accounts for 97% of the total foreign exchange earnings. Although this wealth of over the past five decades are generated from the oil and gas activities in the Niger Delta region, yet the region paved in abject poverty. The delta’s human development index shows a paradox even when compared with other oil-bearing zones of the world. The regions human development index- HDI (longevity, knowledge and decent standard of living) score is of low value 0.504; a value far below those of other oil

bearing countries or regions such as Saudi Arabia 2000 HDI- 0.800. United Arab Emirates (UAE), Kuwait, Libya, Venezuela and Indonesia 2003 HDI scores were 0.849, 0.844, 0.799 and 0.697 respectively[8].

B. Biodiversity and Women Considerations

As indicated above the activities of the oil/gas industry in the Niger Delta region has adversely affected the biodiversity of the region. Biodiversity, otherwise known as biological diversity refers to variety of life forms; living organisms and the environment in which they live. Biodiversity in a broad sense is nature’s wealth and is usually described at three different levels: genes, species and ecosystem diversity. The benefits of biological diversity can be considered under ecosystem services, economic and social values.

Naturally the female species (women) are endowed with the nurturing of all life forms. Traditionally in the Niger Delta region women are the managers of the environment and ecosystem resources. They are responsible for the day to day running of their homes (requiring for continuous interaction with the ecosystem services; fetching water, firewood and fodder), farmlands, forestry and fishery resources. They account for about 90% of food production, processing and marketing.

III. WOMEN ISSUES AND THE ENVIRONMENT

The economic value of the environmental resources on which these women rely on to run their homes are enormous. Nature’s wealth is expressed in its biological diversification; therefore its loss affects life – human life at that.

The Nigeria’s Niger Delta region is one environment that is richly endowed with human and natural resources, but heavily populated with very improvised people. The reason is not far fetched, the local communities who are mainly farmers and fishermen depend on the natural resources; agricultural soil, fisheries, and forest for their sustenance. Due to poor management of the energy resources (oil & gas) within this region, the environment is degraded and this has negative implications on the livelihood of the host communities particularly the women, since they depend on these resources for their existence. It is common knowledge that reduction in productivity due to pressure on the environment will strip the people of the ability to generate meaningful income, thereby making them poor. Poverty can drive the poor to deplete the resources on which they depend on, further deepening their misery. Damage on the environment triggers a chain reaction that can result in ecological disasters; e.g deforestation by wood-take for fuel and logging that can result in flooding/erosion.

Women are the principal custodians of the environmental resources. Women in the Niger Delta region are the major income earners. They provide the basic needs of their household – food, fuel and fodder. The oil and gas industries in this region are given priority in land-take as they are projects that stimulate national economic growth. Therefore women of the host communities come under pressure to over-exploit the slim natural resources available to them – land,

water and forest; since there is no other economic opportunity to fall back on. It then follows that due to severe stress on the limited carrying capacity of the natural resources and increasing environmental degradation, the women see poor agricultural yield, decline in fishery resources and income generated, though with large family to run.

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