

Challenges of Sustainable Environmental Management in Nigeria

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Abstract

Against the background of the recognized fact that man's activities in the environment have impact on the life of human beings, this paper presents an overview of the factors militating against the achievement of Sustainable Environmental Management in Nigeria making use of historical survey approach. The paper notes that Sustainable Environmental Management is far from being achieved in Nigeria and that the activities of man still degrade the environment. The country can only be sustainably developed if it can pay attention to environmental sanitation and conservation.. However, the major hindrance to this was traced to poor funding; the paper concludes by suggesting possible sources of sustainable fund for the country to move forward.

Keywords- Environment, Environmental Sanitation, Finance, Man's activities, Sustainable Environmental Management.

1 INTRODUCTION

ALL biological life depends on a wholesome and well functioning ecosystem and the earth has no limit less supply of resources which must be proportionately shared by all living things {1} Human beings disobey the law of nature at their risk while human success results from co-operation with nature, fitting into the web of life {2}

In Nigeria, Environmental Management has remained consistently bad over the years and the problem has become a monster that is difficult to solve in spite of all efforts from all arms of government. Consequently, the environment continues to deteriorate while environmental related diseases aggravate poverty {3}

Also, the population has risen rapidly to about 140 million going by the latest National Census (2006) without commensurate provision of infrastructure and supporting services to cope with the rising population. The implication is poor environmental sanitation which is visible in form of increase waste generation, over utilization of limited existing facilities, inadequate supply of potable water, poor land use, conversion of residential accommodation to commercial use, increase in urban screen and shanties on the edge of the city as a result of acute rural- urban migration and a general decline in the quality of human life.

The goal 7 of millennium development is to ensure environmental sustainability and achieving sustainability means ensuring that current actions do not lead to future declines in human well being. However, apart from the fact that environmental sustainability is far from being achieved in Nigeria in the different spheres of life, it is clearly evident that our current activities can lead to future declines in human well being if care is not taken.

It is against this background therefore, that the paper presents an overview of the factors militating against the achievement of Sustainable Environmental Management in Nigeria. The paper concludes by making suggestive solutions towards achieving it.

2 THE ENVIRONMENT

The Oxford Advanced Learners Dictionary {4} defines environment as condition, circumstances, influences etc. affecting people's lives. It is the complex of physical, chemical and biotic factors that act upon an organism or an ecological community and ultimately determines its form and survival. According to Environmental Impact Assessment Act of 1992, the environment is defined as:

1. Land, water and air, including all layers of the atmosphere
2. All organic and inorganic matters and living organisms on, in and below the earth's crust.

However, these definitions do not include man's activities on earth. According to {5} the environment is the sum total influence which modifies and determines the development of life and character. This embodies the entire atmosphere and biosphere. The atmosphere is the layer of gases which envelops the earth, while the biosphere is a thin layer of solids, water and air, in which all lives exist. The built environment embodies all the land uses, associated infrastructure and recreational space which enhance the people's standard of living. This definition conforms to the Federal Environmental Protection Agency (FEPA) Act (1988), which sees the environment to "include water, air, land and all plants and human beings or animals living therein and the interrelationship which exist among these or any of them" . In the opinion of {6}, the environment includes the ways in which the

environmental media interacts with one another and the ways in which they interact with manmade environment and the fauna and flora which inhabit them. The environment should therefore be seen to cover the natural environment given by God for man's usage and the built environment designed and developed by man.

However, the primordial aim of development in the environment is to improve the quality of life and enable people to realize their potentials and lead lives of dignity and fulfillment. Development is real only if it makes human lives better in all these respects. A development pattern that pays little or no regards to environmental issues is essentially a disaster right from the conceptual framework {3}. Sustainable development therefore, is the development that meets the needs of the present generation without compromising the ability of future generations to meet their own needs. Sustainable development is economic and social development that ensures that the environment is conserved to perform its various functions including the functions to humanity. It is development that is pro-people, pro-nature and pro-job {7}.

Environmental management on the other hand according to {8} is the process of putting together those items of environmental nature where man exists so that man's penetration and exploitation do not have adverse effect on the environment. This is aimed at ensuring that the environment is free from abuse, and misuse that may result in pollution and degradation. It is aimed to promote development compatibility, balance urban land use value and upgrade the environment for present and future generation.

However, it is pertinent to note that sustainable environmental management can only be achieved through Environmental Sanitation. Environmental sanitation as defined by the National Environmental Sanitation Policy is the principle and practice of effecting healthful and hygienic condition in the environment to promote public health and welfare, improve quality of life and ensure a sustainable environment. Thus, environmental sustainability can be measured with sustainable development indices, which measure the quality of human life and the quality of the environment. These indices are HUMAN DEVELOPEMNT INDEX, which are the barometer for measuring change in human welfare. They cover the following three dimensions of human well-being;

1. Knowledge or educational attainment.
2. Income and decent standard of living (as measured by the Gross Domestic Product (GDP) per capital in purchasing power (PPP) in US Dollars).
3. Health – living a long and healthy life (as measured by life expectancy at birth).

For a nation, state or local government areas or society to be environmentally sustainable, it has to consciously develop policies that deliberately promote and enable individuals to achieve a high quality of live in ways that do not impact or degrade the environment. {9} advocate for Education of all concerned in the process of making environment more wholesome.

3 HOW SUSTAINABLE IS NIGERIA?

Nigeria environment is not yet sustainably developed because it has not achieved a high quality of life in that the activities of man degrade the environment. According to {9}, it can be sustainably developed if attention can be positively focused at addressing problems in the following areas of environmental sanitation.

1. Housing and urbanization
2. Adequate potable water supply
3. Management of urban drainage system
4. School sanitation
5. Noise pollution
6. Energy and Environmental Sanitation
7. Pest and vector control
8. Disposal of the Dead (Human and livestock)
9. Control of reared and stray animals
10. Hygiene Education and Promotion
11. Partnership
12. Improved Governance
13. Municipal Solid Waste Management
14. Medical Waste Management
15. Excreta and sewage management
16. Food sanitation
17. Market and Abattoir Sanitation

4 FINANCIAL NEED FOR ENVIRONMENTAL MANAGEMENT IN NIGERIA

It is pertinent to note that the unachievement of sustainable environmental management in Nigeria is partly attributed to poor funding. Environmental protection particularly in the developing countries has been grossly underfunded from the past. {10} observed that while the demand for funds for environmental protection is increasing, the actual financial resource allocations relative to other sectors have declined considerably. There are also considerable evidences to show that even the little financial input to environmental protection in most developing countries are not properly managed, thus, there are no corresponding outputs. The funds are often misdirected to other uses or embezzled. This situation is but a reflection of the poor economic management by the leadership in such countries. There are also considerable evidences to show that foreign aids and loans in these countries have decreased in recent years. The declining contribution from foreign donors and creditors has been attributed to poor accounting on the part of the recipients, declining economy of donor countries, poor debt servicing and low economic performance and credibility of developing countries.

Unfortunately, information on the current levels of financial demand and budgetary expenditure on environmental management are not available in most developing countries. The financial need has been enormous, yet often underrated. {10} noted that good projection and appreciation of financial need in this sector could be derived by categorization into components. Such categorization could enable relevant authorities to obtain and appreciate estimates of financial proposals. World Bank's list include major areas such as staffing, administrative costs, laboratory facilities, data collection, analysis and storage, education and awareness programmes, and specific environmental protection programmes and projects. Meeting this challenge of fund mobilization for sustainable environmental management under these circumstances is disturbing. It has become an important local and global issue.

In Nigeria, financing environmental management was seen as a primary responsibility of the government. But in recent times, government has been unable to shoulder this responsibility solely due to the increasing financial demand from other sectors of the economy. Examples of Federal government ministries and agencies involved in environmental management are Ministry of Environment, Federal Environmental Protection Agency (FEPA), and Niger Delta Development Commission (NDDC). At the State level, environmental agencies include State Environmental Protection Agency, (SEPA) and Ministry of Agriculture and Natural Resources while local governments operate through the Department of Community Development, Department of Agriculture and Forestry. Often, these government agencies have laudable plans and programmes but many of the programmes fail because of problems of finance and its management. The crucial issue of flow of financial input expected from the government is not reflected in the plan and the extent to which they conflict with meeting the other national priority objectives. Government has not placed priority attention on the activities of these agencies in areas of environmental protection. Rather government prefers to channel substantial financial resources to targeted popular programmes such as poverty alleviation.

Also, in Nigeria, government is yet to regard environmental management as a priority in National development. They start with an enabling legislation and standards. Environmental agencies are set up but with insufficient operating resources. Political support is generally weak. Often, in these countries, political attention on environmental problems comes only after a catastrophic event. For example, serious attention on environmental protection started in Nigeria only after the Koko toxic waste incidence in 1988. {11} examined the roles of the tiers of government in environmental management and ways to co-ordinate the roles. Federal government plays some roles through its ministries and parastatals. Federal government sets policies, provides funds and supervises states and local councils on environmental protection projects. It secures funds from external sources and channels the funds to the lower governments. This supervisory role is more on externally funded projects as well as projects with in-built implementation and monitoring strategies that are strictly adhered to as required by the conditions of contracts with aid agencies. Despite this wide scope of functions by government, environmental management suffers low budgetary allocation in Nigeria. There is little or no evidence of increased government budgetary allocation to infrastructure and environment related sectors in the country in recent years.

Rather government speaks of rationalization of its expenditure {12}. Some studies examine the impact of public expenditure rationalization on the environment focusing on what the rationalization of public spending meant for environmental protection. The World Wildlife Fund study linked public sector expenditure reform to reduced environmental management facilities. Heavy external debt was considered also a major factor responsible for the increasing level of environmental degradation in developing countries {12}.

The huge debt forces these countries to accelerate the exploitation of natural resources while funding of environmental management is reduced. Unfortunately, an attempt to conduct a cross-country comparison of government expenditure on environmental management in Nigeria is difficult. This is in part due to lack of firm data from the different levels of government. In other countries, the role and performance of lower levels of

government are expanding. An OECD report analyzing pollution prevention and control experience in East Asian countries observed that central and local governments in Japan spent an estimate of \$3.6 billion (1.2% of Japan's GDP) in 1991 on environmental protection and management. Of this, \$2.5b was spent at the local government level. This demonstrates one relevant point, that is environmental protection at local level is emphasized. In supports of this approach, Habitat 21 emphasizes the need to strengthen national and local economies and their financial and economic base with a view to addressing the needs of sustainable human settlements. Government of this level, including local authorities should seek to provide an enabling framework, which aims to strengthen as appropriate the capacity of local authorities to attract investments.

5 SOLUTIONS TO SUSTAINABLE ENVIRONMENTAL MANAGEMENT IN NIGERIA

The problems of financing environmental protection lie mainly on the supply side. Adoption of an effective and sustainable financial system requires an intensive extensive exploration of available sources of fund. Several sources of environmental fund in Nigeria have not been explored. The possible sources of sustainable fund for environmental management in Nigeria according to {13} are discussed below:

5.1 Federal Government Budgetary Allocation

Traditionally, government funds environmental programme through budgetary allocation. The financial expenditure of government on environmental management in semi-arid and sub-Saharan Africa has traditionally been highly limited, so reducing government budget and expenditure which have drastic impact {12}. Public finance can be categorized into capital investment from development budget and allocations from concurrent cost budget of institutions. A combination of both sources provides a better approach for improving the finance for environmental management. Mono channel budgetary allocation is less effective but it can be improved through diversification and combination of investment financing and recurrent cost expenditure. This requires proper planning and supply projection. In projecting financial need for environmental management, it is important that all levels of government make adequate budgetary provisions. The new initiative on public finance is on how to support the increase in allocation with other public oriented strategies for mobilizing additional financial resources.

5.2 Fund from States and Local Government Authorities

States and local governments are by law supposed to be responsible for management of some environmental issues. Often, many local governments and state agencies plead lack of fund to handle this responsibility. For example, in Nigeria, urban solid waste management is a statutory responsibility of the local government. But it often pronounced that local authorities are fiscally incapacitated. Some state governments have taken up the responsibility. Yet, the state governments failed much like local government authorities {8}. In developed countries, the situation is different as local authorities have performed marvelously in environmental management. For example, London Borough of Sutton developed and funded schemes including projects on environmental appraisal techniques and waste minimization. Other cities with high reputation for environmental management are Leicester, Lead and Peterborough. In these cities, several demonstration projects on energy conservation, environmental protection and community facilities were implemented {14}. Local and State governments provide environmental finance through the annual budgetary allocation, grants and special funds. State and local authorities can enter into partnership agreement with international donors on environmental protection projects. Local councils in Europe today vote huge sum of money to eco-management {15}.

Similarly, state and local councils can contribute significantly to environmental finance in Nigeria through direct funding and external fund procurement. Studies on the funding experiences in East Asian countries offer encouraging revelations. The budgetary allocation for pollution control in Taiwan in 1991 was US\$1.1b (0.7% of GDP). The federal government provided only one third of the fund. The remainder was provided at the lower level. Solid waste management gulped the largest share (56%), but subsequent plans witnessed an increase in investment in sewerage management with an estimation of US\$3.5 billion in its 1990-95 plan {10}. Similarly, Korea spent US\$660 million on environmental protection in 1991. The largest part of the fund went to pollution control, with 82% (about 0.2% of GDP) going to urban water supply, sewerage, sanitation and solid waste management. Thailand spent an estimate of US\$350-500 million a year, about 4.4% of the GDP, on pollution control. Future plans for Bangkok include sewerage treatment system (US\$800-1200 million), hazardous waste treatment facilities (US\$200 million) and additional investment in solid waste disposal. These examples demonstrate three relevant points. Firstly, local government is a major financier of environmental management. Secondly, environmental protection is treated as a priority in all levels of government. Thirdly, internal funding is emphasized as a primary source of fund. Such experience is relevant to lower levels of government in Nigeria in their participation on environmental protection. Conclusively, lower levels of government can exercise high

level of commitment to funding environmental protection and management. Fund from Natural Resource Management Fund for environmental protection can be generated through improvement in the management of natural resources. Public sector investment to improve the management of such natural resources as parks, forests reserves and tourist attractions is relatively modest. Revenue from existing resources could be used to finance the cost for some sectors of the environment that need protection. Successful management and protection of natural resources require an initial funding through a combination of investment and recurrent cost expenditures. The appropriate future expenditure could be expected to be covered with revenue obtained from the use of the reserve areas as recreational and tourist centres. Expenditure for effective management of parks and reserves vary widely. The {16} estimate for Indonesia is from US\$1.8 - US\$8.00 per hectare depending on the level of management complexity involved. In Nigeria, estimate should reflect the desired level of facilities, management demand and implementation capacity. The issue of demand for the facilities should as well be considered along with the cost. Financing through Infrastructure investment improvements in water supply, urban waste management, electricity and other amenities require a substantial increase in public sector investments. Governments have often financed infrastructure development and improvement through planned increase in investments. In Nigeria, investment on infrastructure development declined drastically over the last two decades leading to cumulative backlog of unmet needs. Poor financial discipline partly accounts for the decline. However, there is new indication that government will expand infrastructure development in the future as the shift in government priority tend to favour the sector. Infrastructure is the engine of growth and productivity and through which more funds could be available for the development of the sectors. For example, with better service of electricity and water supply, users will be encouraged to pay for services received. Urban residents may be willing to pay for service upgrading. But given their past experiences they have no confidence on agencies on the basis that their money will be invested to upgrade infrastructure facilities. The decline in infrastructure investment has considerable implications for environmental protection. A change for better will enhance environmental sustainability and reduce degradation. For example, constant electricity will reduce the use of firewood and gasoline fuel for domestic and industrial energy and thus reduce the level of air pollution and deforestation in the county. Infrastructure investment adds value to the economy. It accounts for 7-11 percent of the GDP in developing countries and 20 percent of the total national investment {16}. Low level of operating efficiency of infrastructures – losses and excessive costs resulting from inefficiency – leads to high economic costs. {10} showed that the savings which could be achieved by raising operating efficiency of energy, water and road up to the level of current best practices will amount to \$22 billion – equivalent of about one quarter of the annual infrastructure investment in developing countries. Improvement in infrastructure would raise an additional \$123 billion, equal to 60 percent of annual investment (World Bank, 1994). Ecological fund is presently employed by the Federal government to finance environmental management in Nigeria. The fund is channelled through the state governments. In the order of the distribution of the fund, Lagos State received the highest share in the year 2000 amounting to #184m out of the #1.2 billion. Kano followed with #183m. In these States, the amounts were like a drop of water in an ocean of ecological fund requirement when compared to the magnitude of environmental problems in the country. More funds can be generated from this source if properly mobilized, managed and directed.

5.3 Fund from the Oil Revenue

Huge revenue accrues to the Federal government of Nigeria from the oil industry. The management of the oil revenue in the past has been highly disappointing. The flow of financial resources from the sector was ineffective in inducing commensurate economic development because of widespread leakage. In the expenditure pattern, the protection of the environment of the communities where oil is derived is not given due consideration. At the time OMPADEC was inaugurated in October, its financial position was N3,412,587,785.50 (credit balance in the 1.5% Presidential Task Force fund as at May, 1992); N 2,411,421,327.38 (debit balance); and N1,001,166,458.12 (net credit balance). The sum of N 1,001,458.12 was shared, based on the oil revenue sharing formula at that time, among the six oil producing states.

5.4 Eco-Tourism

This as a source of fund according to {17} presented a compelling case for the integration of biodiversity conservation with economic development. It highlights the extent to which eco-tourism can be harnessed to reconcile economic utilization of an area with nature conservation and to finance the management of tourism. Eco-tourism is that which is based on the appreciation of the richness of species and environmental integrity. There are no available data on the performance of tourist centres in Nigeria such as Yankari Games Reserve and Obudu Ranch etc. But a developed tourist park with adequate infrastructures and services could yield financial returns much higher than that from alternative uses for the land. In countries like Kenya and Zimbabwe, eco-tourism is a major source of income and alternative employment for the local people. Through eco-tourism, the

habitat is protected. Eco-tourism is therefore, both a protective strategy and a source of finance for management. It provides fund for the management of protected areas and environmental protection related activities.

5.5 Fund from Environmental Taxes

Environmental taxes are considered among the most attractive environmental policy instruments. But the implementation of environmental taxes has been poor in developing countries. {18} examined the economic feasibility, practical policy considerations and design of environmental tax instruments and ways to make them attractive. He also modeled the ways federal and regional governments using tax rates on pollutant emission determine suitable policies and plans. Environmental tax if fully introduced in Nigeria, could generate huge fund from many areas including mining, oil exploration, forestry, urban industry and transportation. In developed countries, environmental tax debate has taken a wider dimension. Proponents believe that the primary reason is to reduce environmental problems. For instance, urban air pollution can be reduced through automobile tax. {19} study on the design and effects of automobile tax on pollution emission in US justifies this claim. He used simulation model to analyze the sensitivity of travel demand and the resulting emissions to different tax rates and demand elasticity. He remarked that emission tax has the potential to significantly reduce emission from household vehicles, even when travel demand is relatively price inelastic. {20} also studied the potentials of ecological tax reform and its adoption in the Nordic countries and observed that good information on the functioning of household and market decisions and the link between changes in pollutant emission and environmental and financial costs are needed to develop a suitable environmental tax system. The tax could account for large proportion of fund needed to manage the system and to finance other aspects of environmental management.

5.6 Fund from Pollution Abatement

A popular aspect of public tax for environmental protection is pollution abatement. {10} analyzed the strategy as adopted by OECD countries. Pollution abatement tax is intended to force the private sector to internalize the cost of pollution. The argument arising from this is that polluters should be made to bear the cost of the pollution they create. This is termed "end of the pipe abatement fee" which implies that the charge on pollution should be commensurate with the volume of pollution. Opponents argue that high abatement could discourage production as it encourages environmental protection. But where polluters are made to pay high abatement, the financial liability will discourage pollution. Moreover, huge sum of money is realized from pollution abatement in some OECD countries. It could equally be a viable source of fund for environmental protection in Nigeria if well adopted. A data base system is required for proper assessment of charges and the design of collection mechanism. Apart from being a sustainable source of environmental fund, it is a useful tool for encouraging environmentally responsible public behaviour.

5.7 Forestry Rent

Forestry departments all over the world have been very weak, under-funded and under-equipped. But rent and taxes from the forestry sector could reduce forest lost as well as provide fund for environmental protection. High rents and taxes will lead to higher domestic prices of logs, induce greater efficiency in their uses, create more competition in the wood processing industry, put less pressure on the natural forest and create less production wastes to be absorbed by the ecosystem. But essentially, forest tax would mean more funds for the substantially increased demand for environmental protection. Another potential source of finance from forestry is pharmaceutical royalty. This involves royalty and other payments by companies for access to medical resources in the forest and share of the patient that ensues from samples removed from the forests. The growing popularity of the trado medical industry indicates a good potential source of fund for ecological environmental protection. The federal government has set up an institutional framework for the development of the trado-medical industry. But forest royalty remains unexplored in the country.

5.8 Fund from the Oil Sector

In the oil industry, the Nigeria government set some guidelines which make it compulsory for concerned oil firms to finance some development projects in host communities. Several projects have been executed by oil firms in the oil producing communities with fund from outside the ecological tax and oil royalty. In the area of environmental protection and management, such programmes and projects include mangrove replanting, plantations, agricultural extension programmes, drainage and spill cleaning. The main problem of this approach is lack of proper monitoring and standard from the government. Host communities in the Niger Delta complain that the oil firms are not doing enough to protect their environment. As a matter of equity, a firm that contributes to the degradation of an environment should bear the cost of managing the situation. In this case, a public

process is required to measure the costs, transform them into an effective public standard and follow it up with a pressure on the concerned firms.

5.9 Fund from Corporate Organizations

A number of Corporate organizations embark on community development particularly in the area of environmental management. This attitude is informed by the notion that the whole essence of an organization is to contribute to the development of the society such organizations implement programmes and projects directly or channel the fund through government agencies, NGOs and benefiting communities. In Nigeria, oil companies spend heavily annually on community programmes. Shell Petroleum Development Company (SPDC) in a five year plan period spent #12.6 billion on environment and community issues (SPDC, 1996). Similarly, other oil firms like Agip, Elf, Pan Oceans and Chevron show some financial commitments to the protection and management of the Nigerian environment. Chevron specifically allocated \$5 million to development in the Western Niger Delta in the five year plan (1997 – 2001) and some \$400 million to facility upgrading within the same period (SPDC, 1997). Similarly, other local and multi-national organizations could make voluntary financial contribution to environmental protection in Nigeria.

5.10 Fund from Non-Governmental Organizations (NGO)

Some environmental problems are highly complex that they require some special agents to handle them as large financiers like government and international donors do not have the facilities to effective implementation. Hence, Non-governmental Organizations (NGOs) are involved in environmental management, awareness, research and project development. The number of NGOs in Nigeria has increased tremendously in the last few years. UNICEF identified 225 registered NGOs in Nigeria in 1995. Some of them are environment based, handling primarily projects on environmental conservation, protection and education. International agencies including the World Bank and UNDP consult with these NGOs on environmental projects in Nigeria. Environmental NGOs are primarily involved in mobilizing fund for environmental programmes and projects. Many projects are carried out in collaboration with the local communities and sponsored by oil companies and development agencies. {21} examined the activities of Pathfinder International, an NGO, in the Niger Delta on health, environmental and economic enhancement of local communities. Africare, an NGO, through its rural environmental programme mobilized fund for the environmental problems in the drought prone Gourtex Rural District of Niger Republic. Some 10,000 people in 200 villages benefited from agricultural projects under this programme. NGOs mobilize large sum of money but their main contribution is in mobilizing people into organized groups with the goal of self-reliance and development. Some NGOs have well organized plan of activities and huge annual budget {22}. Their sources of fund include initial capital and savings, internally generated fund, aids from other organizations, long term loans on low interest rates, capital stock including investment in liability companies, endowment fund for some specific purposes and grants from foreign NGOs and international agencies. Others are aid from semi-government bodies and inter-governmental ventures, national agencies financing international projects, fund from multi-national organizations and fund from private donors such as charitable organizations. The major problem of NGOs in Nigeria is fund. Most NGOs start with internal fund, which often do not sustain them in business for too long when they have no access to external aid. Moreover, some NGOs are run by unscrupulous individuals who see it as a source of wealth. This situation discourages donors. However, the government makes compulsory for every NGOs in Nigeria to register with a body, Association of Non-Governmental Organizations (ANGO) to enable it monitor the activities of the NGOs.

5.11 Fund from Volunteer Organizations

The low fiscal resources from the government imply that external bodies including volunteer organizations have to assist government in funding environmental protection. Volunteers and philanthropic organizations fund infrastructure facilities in local communities. They sponsor projects on flood and erosion control, water supply and reforestation programmes. International Union for the Conservation of Nature (IUCN) in particular funded a study, an inventory of animal and plant species in the Niger Delta. Volunteer organizations sometimes complement projects with other bodies. For example, Global 2000 Foundation in alliance with the World Bank and Anambra State Government implemented water rehabilitation projects in Anambra State in late 1990s. Nigerian government should therefore design a system for encouraging fund flow from these organizations.

5.12 International Donor Agencies

International agencies exist primarily to promote development in countries. They provide fund, material and technical aids to local communities through their national governments. Some international agencies exist as multi-lateral agreements of nations. The agencies include United Nations Development Programme (UNDP), United Nations Environmental Programmes (UNEP), Food and Agriculture Organization (FAO), World Health

Organization (WHO), International Monetary Fund (IMF), the World Bank, European Development Fund (EDF) and African Development Bank (ADB). The agencies at times enter into alliance to carry out environmental programmes. World Bank in particular has a good framework for co-financing agreement with other participants on environmental protection. The procedures for financial alliance are flexible, well specified and easily adaptable to African situations {10}. But in the international community, the level of Official Development Assistance (ODA) received by Nigeria is very low and decreasing. In 1992, it was only 0.5% of the total ODA for the year. But Asian countries such as India received 5.2%, China 6.5%, Indonesia 4.6% and Pakistan 2.6%. The recent decrease in the financial assistance from these agencies to African countries is attributed to economic recession and low political willingness of member countries, which reflects on the financial buoyancy of the donor organizations. Another reason is the poor credibility on the part of the developing countries. {23} therefore suggested improvement in aid coordination, wider popular decision making process, transparency and capacity building in the receiving nations.

5.13 Fund from Bilateral Agreements

Provision of financial assistance for environmental protection and management to developing countries is popular among advanced countries. Countries like the US, Germany, Canada and Switzerland established special fund to assist developing countries in solving their local development problems. The fund is channeled through special agencies such as Swiss Development Co-operation, Japanese Policy and Human Resource Development Fund, British Department for International Development and USAID. Nigeria should intensify its position on the use of this fund through good financial reputation and management transparency.

5.14 Fund from the Local Communities

Informal self-help provision is the most elementary contribution of communities to environmental protection. Communities could initiate, plan, fund and implement projects on community facilities and environmental protection. In recent years, there is a global emphasis on capacity building and support for community based improvements and credit aids for self help programmes. Self help funding of community projects is not new in Nigeria. The potential of this source of fund has to be fully exploited for environmental protection programmes. The effectiveness of this source of fund depends on level of awareness and willingness to participate. This approach could begin with public awareness building to sensitize the local people, promote environmental behaviour and encourage willingness to participate in funding and project implementation. For example, community participation in programmes in Cirebon, Indonesia began in the 1970s with a campaign to improve public awareness of environmental health issues and requirements for systems use, protection and maintenance {10}. With support from Swiss Development Corporation, the Cirebon Urban Development Project (CUDP) was initiated in 1978 with the primary goal to improve water supply. Subsequently drainage, sanitation and solid waste improvements were introduced. In 1993, a Community Participation Programme (CPP) was introduced as a public campaign on proper use of the newly provided facilities. The scope of the programme was later expanded to cover physical projects based on community financing. By mid-1993, 68% of the projects was funded by the communities. The important lessons from this programme are cost reduction and improvement in local financing. In 1993, Cirebon received the Adipura (Clean City) Award following its tremendous improvement on environmental management. In the Community Infrastructure Projects (CIP) in Northwest Frontier Province, Pakistan, communities financed 20% of the investment cost of facilities and 100% of operations and maintenance cost. The programme was initially designed by the World Bank and financed by Swiss Development Cooperation and Japanese Policy and Human Resource Development fund. CIP involved water supply, drainage systems and flood protection, and sanitation and solid waste management. These Asian experiences show that sustainable domestic funding and cost minimization could be achieved through the local communities. In Nigeria, local communities have good organizational framework through which community environmental projects can be carried out. The framework could be a channel for finance mobilization and delivery for environmental protection in local communities.

6 CONCLUSION

This study has shown that Sustainable Environmental Management is yet to be achieved in Nigeria. This is because government is yet to regard Environmental Management as a priority and also, due to lack of fund. If the various sources of finance explored in this write –up can be utilized, this will go a long way in improving the environmental conditions of the country. However, everybody has a role to play in this regard as all stakeholders have to work together for the betterment of Nigeria.

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