NIGERIA: ENVIRONMENTAL ASSESSMENT OF PROPOSED COMMUNITY BASED POVERTY REDUCTION PROJECT

May 25, 2000
O. Olaniran

Submitted to: The World Bank
TABLE OF CONTENTS

1.0 INTRODUCTION 1

2.0 LEGAL AND INSTITUTIONAL FRAMEWORK FOR ENVIRONMENTAL REVIEWS 1
- Legal and Organizational Framework 2
- Implementation of International Environment Conventions 4
- Review and Evaluation of Applicable Environmental Laws in the States visited (Cross-River, Ekiti and Kebbi States) 6
- Institutional Assessment: Composition of the Governing Boards of the Community-Based Poverty Reduction Agency 8

3.0 CAPACITY BUILDING FOR ENVIRONMENTAL ASSESSMENT FOR STATE SOCIAL FUNDS 9
- Training of Staff, Executing Agencies, SEPAs and Beneficiaries 10
- Estimated cost of Training 11
- Air/Soil/Water Analysis Laboratory Equipment 12
- Logistical Support and office accommodation 12

4.0 PROPOSED SUBPROJECTS FOR COMMUNITY BASED POVERTY REDUCTION PROJECT (CPRP) 13
- Proposed Cross-River State subproject components 13
- Proposed Kebbi State subproject components 13
- Proposed Ekiti State subproject components 14

5.0 ENVIRONMENTAL IMPACTS OF SOCIAL FUNDS ON COMMUNITY BASED POVERTY REDUCTION PROJECT 15
- Overview of Environmental Impacts caused by Social Funds (SF) subprojects 16
- Positive Environmental Impacts of SF subprojects 16
- Negative Environmental Impacts of SF subprojects 17
- Environmental and Social Checklists 17
- Environmental Review Checklist 17
- Limited Environmental Assessment 19

6.0 ENVIRONMENTAL ASSESSMENT WORKPLAN 23

TABLES:
Table 1: Checklist of Recommended Environmental Assessment Screening 17
Table 2: Environmental Review Checklist 18
Table 3: Calendar of Activities and Indicators for Measuring Impacts 23

FIGURES
Figure I: Checklist for the Categorization of EIA Projects
1.0 INTRODUCTION

1.1 The proposed Community Based Poverty Reduction Project will be instituted within the overall framework of the Nigeria Poverty Reduction Strategy. It will be in two parts namely: (1) Federal component which will be managed by the National Planning Commission (NPC) and (2) State components involving social fund mechanism in six pilot States which will finance community designed and implemented subprojects. NPC, the focal point for poverty policy development will coordinate and facilitate the new CPRP.

1.2 With increase in environmental awareness and the cumulative environmental impacts recently known to be created by SF subprojects, donor agencies are now insisting on Environmental Assessment (EA) for project screening. The Nigerian Government also have an Environmental Impact Assessment (EIA) legislation and procedure by which project proponents are required to abide. Therefore, as part of the CPRP preparatory process, an environmental assessment (EA) of the possible impact of proposed activity under the project is mandatory. EA is initiated as early as possible in the project processing and is integrated closely with proposed project's economic, financial, institutional, social and technical analyses. EA also ensures that (a) anticipated negative impacts are mitigated, prevented, minimised by improved project selection, siting, formulation, design and implementation and (b) quality decision are made on environmental soundness and sustainability of a project.

2.0 LEGAL AND INSTITUTIONAL FRAMEWORK FOR ENVIRONMENTAL REVIEWS

2.1 As stated in the National Policy on Environment, Nigeria is committed to ensuring public and community participation in the definition of environmental objectives, decision-making and natural resources management. This strategy is to be complemented by other strategies and approaches, which would ensure, among others, that:-
(i) environmental concerns are integrated into major economic
decision-making processes;
(ii) environmental remediation costs are built into major
development projects;
(iii) economic instruments are employed in the management of
natural resources;
(iv) environmentally friendly technologies are applied;
(v) environmental impact assessment is mandatory before any
major development project is embarked upon; and
(vi) environmental monitoring and auditing of existing major
development projects are routinely carried out.

2.2 The national environment policy is built on a number of principles,
a major one being the principle of participation which requires that
decisions should as much as possible be made by communities affected
on their behalf by the authorities closest to them. In enunciating the
national policy on environment, cognisance was taken of the various
institutional settings as well as socio-economic and legal considerations
involved in the implementation of measures to solve environmental
problems and achieve sustainable development.

**Legal and Organizational Framework**

2.3 In order to provide effective co-ordination of environmental matters
in the country, all environment-related functions and responsibilities
hitherto performed by various sectoral Ministries and agencies at the
Federal level were transferred to the Federal Ministry of Environment,
which was created mid 1999. Prior to the establishment of this Ministry,
the overall responsibility on environmental management was vested in
the Federal Environmental Protection Agency (FEPA) established
pursuant to Decree 58 of 1988 as amended by Decrees 59 of 1992 and
14 of 1999. The Agency has now been absorbed by the new Ministry.

2.4 Since FEPA was a creation of statute, it becomes imperative for the
FEPA Decree and other associated environmental laws to be reviewed
with a view to consolidating those functions and powers to the Ministry
and giving proper legal effect to the mandate of the Ministry through a
legislative process. One of the decrees requiring review is the

2.5 The EIA Decree gives specific powers to FEPA to facilitate EIA on
all new projects in Nigeria and make EIA mandatory for new major public
or private sector projects. This Decree runs into 32 pages and is in three
parts:- Part I is on General Principles of EIA while Part II is on
Environmental Assessment Process and Part III is on the powers of
FEPA. Section 13 and the schedule to the Decree contain a list of
mandatory study activities relating to 19 vital sectors of the economy.
2.6 The Decree makes EIA requirement compulsory for project in Agriculture, Forestry, Manufacturing Industry, Mining, Quarrying, Land Reclamation, dams, drainage and irrigation, fisheries, tourism and recreation. Other areas covered include petroleum and petrochemicals, infrastructural development including airports, roads, harbours, seaports, housing, transportation, railways, electricity, domestic water supply and sanitation. The Decree also prescribes requirements for the EIA process, follow-up actions, exemptions, decision points, sanctions and conditions for Nigeria and transboundary cases.

2.7 The vital link between Decree 86 of 1992 and its implementation is a set of Procedural Guidelines developed by FEPA and the Ministry of Environment for EIA. The guidelines contain such activities as proposal screening, scoping, EIA Study and Report, Review decision making/Conditions for approval and certification, mitigation compliance monitoring, and environmental monitoring. The attached flow chart summarizes these technical activities.

2.8 The Procedural Guidelines also confirm to project proponents via a checklist, the categories of projects for either full-scale EIA (Category I), partial EIA (Category II), or no EIA necessary (Category III) projects, that essentially have beneficial impacts on the environment.

2.9 The Federal Ministry of Environment has a Department of Environmental Assessment which handles EIA and analytical matters. The department is staffed with qualified multidisciplinary personnel and has adequate analytical capabilities required for fieldwork, laboratory testing, research and data processing. This capability is however lacking at the state level despite the fact that state institutions are normally carried along during the EIA process. Although environmental issues are in the concurrent lists of the national constitution, the EIA decree vested most powers on the Federal authority. This, however should not completely preclude the States from making their own EIA laws targeted at smaller and less sensitive projects outside the mandatory study activities as defined in the EIA Decree.

2.10 The implication of transferring environmental assessment functions from FEPA to the Ministry of Environment needs to be properly assessed in the nearest future as there are indications that bureaucracy, the bane of ministerial settings in Nigeria may arrest the progress already made by FEPA in the EIA process.

2.11 The National Parks Service has the overall responsibility for the protection and conservation of biodiversity in the national parks. At the State level, Ministries of Environment and Environmental Protection
Agencies have been established for general environmental management in the respective States. There has also been a marked increase in the number of Civil Society Organisations including non-governmental organisations (NGOs) and community-based organisations (CBOs) which are concerned with the environment. The prominent NGOs include the Nigerian Conservation Foundation (NCF), Forestry Association of Nigeria (FAN), the Nigerian Environment Study/Action Team (NEST), Savannah Conservation, etc. The Federal Ministry of Environment through FEPA had some useful experience in community based environmental improvement efforts during the recently concluded World Bank assisted Environmental Management Project.

Implementation of International Environment Conventions

2.12 Nigeria has played very active roles in negotiating international agreements related to the environment and is party to several Conventions for the protection of the environment. This report documents Nigeria's effort to achieve the objectives of a few of the Conventions including those on biological diversity, desertification, and climate change and ozone depletion. Given the positive role which the Nigerian government played in the process leading to the establishment of these conventions, the country appears determined to join the rest of the world to successfully implement the relevant articles of these Conventions.

2.13 In implementing the Convention on Biological Diversity which was ratified in 1994, Nigeria has prepared the first National Report for the Conference of Parties and developed the National Biodiversity Strategy and Action Plan. The country has also taken steps to integrate biodiversity concerns into the development process through the formulation of policies on conservation and sustainable use of biological diversity, development of a national guideline for biosafety, assessment of biodiversity status and the EIA process. Community based activities in the support zones of national parks are on going activities which require encouragement and support.

2.14 Nigeria’s efforts at implementing the Convention to Combat Desertification which was ratified in 1995 also appear encouraging. As a party to the Convention, the country has adopted the participatory, multisectoral and integrated approach to combat desertification. The National Action Programme (NAP) for implementing the Convention in Nigeria has reached an advanced stage of finalization. In addition, a number of pilot projects are being developed for implementation in the affected northern States of Nigeria e.g. Kebbi State. These projects include measures to restore degraded lands, alleviate poverty, promote alternative energy sources, conserve biodiversity and enhance environmental education and develop institutional capacities.
2.15 The National Programme for the Protection of the Ozone Layer in Nigeria was developed in fulfillment of her obligations under the Vienna Convention for the Protection of the Ozone Layer and the Montreal Protocol on Substances that Deplete the Ozone Layer both of which Nigeria ratified. As a party operating under Article 5 of the Montreal Protocol, Nigeria has set up the mandatory national implementation structures consisting of the National Advisory Committee and the National Ozone Office. The country programme which affects all ODS consuming sectors, describes the overall framework under which assistance would be provided. Many investment projects particularly in the refrigeration and foam sectors have been approved for Nigeria. Furthermore, ODS awareness seminars have been conducted for industrialists while institutional strengthening was undertaken to enable the Ministry cope with programme coordination and implementation.

2.16 Nigeria's concern on the potential impacts of Climate Change led her to ratify the Framework convention on Climate Change in 1994. Apart from the country's active participation on all the international meetings of the Convention, the country has packaged a Climate Change Mitigation programme involving inventorization of greenhouse gases such as carbon dioxide, nitrous oxide and methane in the country's atmosphere as well as field study in various locations which are vulnerable to the impact of Climate Change. Environmental awareness campaigns and workshops have been organized while a National Action Plan to mitigate the effects of Climate Change is under preparation.

2.17 Some model "waste to wealth" pilot projects have been included in the 2000-2002 National Rolling Plan as a means of combating poverty and ensuring cleaner environment. This is why Nigeria has not considered it fit to ban the importation of recyclables e.g. used plastics which are secondary raw materials for the plastic industry in Nigeria. This is in compliance with relevant articles of the Basel Convention on Transboundary Movement of Hazardous Wastes and Substances which Nigeria has also ratified. Below is a list of major international environmental conventions ratified/signed by Nigeria:

1963 Act Regarding Navigation and Economic Cooperation between the States of the Niger Basin
1964 Agreement on the River Niger Commission on Navigation and Transport
1964 Convention on the Development of the Lake Chad Basin
1968 African Convention on the Conservation of Nature and Natural Resources
1971 International convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage
1972 Convention on the Protection of the World Cultural and Natural Heritage
1972 Convention on the Prevention of Marine Pollution by the Dumping of Wastes
1973 Convention on International Trade in Endangered Species
1979 Convention on the Conservation of Migratory Species of Wild Animals
1982 Convention on the Law of the Sea
1985 Vienna convention for the Protection of the Ozone Layer
1987 Montreal protocol on Substances that Deplete the Ozone Layer
1989 Basel convention on the Transboundary Movement of Hazardous Wastes and their Disposal
1992 Framework convention on Climate Change
1993 Convention on Biological Diversity
1994 Convention on Desertification

Review and Evaluation of Applicable Environmental Laws in the States visited (i.e. Cross-River, Ekiti and Kebbi States)

2.18 State Environmental Protection Agency (SEPA) Edict

The governments of Kebbi and Cross River States enacted the laws establishing the SEPA in 1995 and 1996 respectively whereas Ekiti State borrowed her edict from Ondo State. Its composition under this law is in line with both National and International Standards, but it has obvious shortcomings that makes it short of being ideal for environmental protection purpose. The Agency's function should not be restricted to only advisory and policy formulation. It must be equipped to provide facilities used in environmental protection e.g. landfill sites, incinerators, laboratories etc. It must also have power to make regulation and enforce same.

2.19 Other defects of State Edicts include:

- Lack of provision for establishment of a Technical Committee. This is a serious omission as appropriate technical opinions on environmental issues are essential for proper and efficient functioning of the Agency.
- Lack of provision for Environmental Audit unless so delegated by FEPA. The Agencies cannot set Environmental Standards in the States hence will be unable to effectively monitor the States' environment.
Forestry Law

2.20 In Ekiti State for example, the entire provisions of the Forestry Law are inadequate to protect the forests and to provide compensatory financial returns. Also, the composition of the Forestry Advisory Commission is grossly inadequate, while the law lack biodiversity and sustainable development focus and not in consonance with National policy on combating deforestation. The Forestry Commission must include a representative of the State Environmental Protection Agency, local communities and other stakeholders. It is known that the participation of communities who live in or near forest areas has resulted in effective prevention of deforestation and ensured proper compliance and enforcement of the law as exemplified in Cross River State, a collaborative project with British Department for International Development (DIFD). In all the States, the penalty of contravention is out of date and therefore too paltry for meaningful enforcement. An upward review is needed. In addition, the current regulations on permits and licenses on forestry activities cannot adequately protect the forest, wildlife and conservation areas of the State. Kebbi State Forestry Edict was revised in 1997 and Cross River State has in fact enacted laws that established her Forestry Commission.

Mining and Quarrying Registration Edicts

2.21 Generally, these edicts were primarily enacted to generate revenue hence they have serious environmental defects, such as:

- Lack of provision for Environmental Impact Assessment (EIA) to be carried out before the commencement of the operations.
- No representative of the State Environmental Protection Agency (SEPA) is included in the Mining and Quarrying Committee.
- The provision of the Ekiti State's edict states that "any nuisance or inconvenience resulting from operation shall be remedied within thirty days is against all moral and environmental ethics". Such a length of time would be enough for a substantial damage to be done to the community that is affected by the nuisance.

The Control of Bush Burning Edicts

2.22 These edicts prohibit the setting of fire to or burning of any bush without permit in the States. Some level of bush burning is permitted provided it is strictly confined to the cleared area of land. The power to make regulations for the prevention of bush burning, control and monitoring of land clearing is conferred on the Commissioners responsible for Forestry matters in each State.

2.23 The penalties for contravention are not firm. Although the penalty as to the term of imprisonment is deterring enough, the stipulation as to
fine, is not adequate to command proper compliance in Ekiti State but Kebbi and Cross River States have increased the fines considerably.

**Fisheries Edicts**

2.24 The Directors of Fisheries Services have powers to enforce the provision of these Edicts, including registration of fishermen, and license of cold store operators in the States.

2.25 The Edicts have admirable provisions prohibiting the dumping of poisonous chemicals or other pollutants into any inland water body; fishing methods using chemicals, herbs, guns, explosives etc. and preservation of fish and fish products with insecticides or other dangerous chemicals but the penalties for breach of the said provisions are paltry as to make enforcement laughable.

2.26 This undesirable shortcoming has been remedied by way of revision and amendment in the proposed Fisheries Edict in Ekiti State.

**Institutional assessment: Proposed composition of the Governing Boards of the Community-Based Poverty Reduction Agency**

2.27 The proposed composition of the Executing Agencies varied markedly from one State to another. The chairperson ranged from the Governor in Cross River State to Special Adviser to the Governor in Ekiti State to the Permanent Secretary in Kebbi State. The proposed Governing Board of Kebbi State Poverty Alleviation Fund predominantly comprise civil servants and at the other end of the scale is the entire Cross River State cabinet as members of the State Poverty Reduction Agency. This will surely create some administrative bottlenecks and it is contrary to the World Bank recommendation of less government officials. It is also noteworthy that a strong political support is one of the attributes of SF mechanism, but the community participatory strategy is to foster commitment, involvement, implementation capacity building and sustainability of subprojects. No representative of environmental agencies is included.

2.28 The proposed Government Boards of the three States executing agencies are listed below:

**Proposed Governing Board of Cross River State Poverty Reduction Agency**

- Executive Governor (Chair)
- Other members of the State Executive council
- Community Development Committee Representatives
- Representative of the private sector
- Representative of the NGOs
• Representative of the Women’s group.

**Proposed Governing Board of Kebbi State Poverty Alleviation Fund**
- Permanent Secretary (Budget and Economic Planning) (Chair)
- Permanent Secretary or representative of Ministry of Women Affairs
- Permanent Secretary or representative of Ministry of Works
- Permanent Secretary or representative of Ministry of Finance
- Permanent Secretary or representative of Ministry of Agriculture
- Permanent Secretary or representative of Ministry of Health
- Permanent Secretary or representative of Ministry of Education
- 2 independent members

**Proposed Governing Board of Ekiti State Poverty Reduction Agency**
- Special Adviser to Governor (chair)
- 2 representative of State Planning Commission and Ministry of Finance
- A representative of the Chairmen of LGAs
- 3 non civil service representatives which will be elected members of CBOs of which two must be women
- General Manager (Secretary to Board)

3.0 **CAPACITY BUILDING FOR ENVIRONMENTAL ASSESSMENT (EA) FOR STATE SF**

3.1 The State Environmental Protection Agencies (SEPAs), and the Federal Environmental Protection Agency have responsibility for the protection of the environment, biodiversity conservation and sustainable exploitation of the State’s natural resources in general and environmental technology, including initiation of policy in relation to environmental research and technology. Other duties of SEPAs include:

- formulate environmental protection policy guidelines and any such policy and standards existing at the Federal level and to ensure that such state standards are not below the Federal Government set standard guidelines;
- to carry out research and development activities for environmental protection;
- to monitor and survey all potable water distributed in the State for purposes of controlling its quality;
- to monitor and survey solid, gaseous and liquid wastes generated in the State;
- to educate the general public on the types of disposal methods acceptable to the State Government for domestic and industrial wastes;
• to initiate environmental protection legislation and its constant review in order to reflect latest discoveries and observations;
• to conduct environmental impact assessment (EIA) of new and existing projects and make recommendations for corrective measures;
• to monitor and control all types of erosion in the State and liaise with the appropriate Federal Government agencies charged with erosion control;
• to monitor, regulate and approve the installation of any pollution control, waste treatment and disposal system;
• apply adequate enforcement measures to combat environmental pollution.

3.2 Discussions at Cross River State Environmental protection Agency, Calabar or Ekiti State Environmental Protection Agency, Ado-Ekiti or Kebbi State Environmental Protection Agency, Birnin-Kebbi show that none of them has the capacity to perform effectively the above statutory duties. However, the staff have the potential to provide technical support or oversight of the future screening and review process for the environmental impact assessment of State Social Fund. Particularly as SF systems may be staffed with only administrative, scientific or engineering specialists. SEPA staff may be useful in educating other stakeholders e.g. local government staff, non-governmental organisations, community-based organisation and the local community at large, through seminars, workshops or public enlightenment campaigns.

Training of Staff, Executing Agencies, SEPAs and Beneficiaries

3.3 It may be necessary to organise a train-the-trainers workshop for at least two or three members of staff of each of the SEPA of the pilot States to inculcate a business-like attitude in them. They will in turn train the entire staff of the State Poverty Reduction Agency and representatives of local governments, non-governmental organisations, community-based organisations and other members of the local communities.

3.4 Alternatively, a consultancy team working on environmental issues for the State Social Fund can organise one or two week workshops at each of the six pilot States of Community-Based Poverty Reduction Project. The focus should be to:-

• ensure that the environmental issues and their importance are emphasised to the participants at all levels;
• educate participants on the environmental requirements of the State Social Fund mechanism;
• ensure that environmental assessments are considered at the early stages of the sub project cycle and are in conformity with national/state environmental strategies;
• emphasise the need to identify and analyse environmental impacts and provide appropriate mitigation measures for the sub projects;
• emphasise the importance of compliance with environmental clauses in the contract documents and the penalties for non-compliance;
• need for know-how to monitor and evaluate work done during sub project implementation.

3.5 There are certainly three categories of people to be trained on environmental issues of the SF. They are namely SF staff, executing agencies/SEPA, local governments, and beneficiaries (including NGOs, CBOs and individuals).

3.6 It is very important to provide a general environmental awareness training to all staff. This requires a special effort and patience to make SF staff to appreciate the consequences of environmental assessment and appropriate mitigation measures to the overall success of the SF portfolio. It is essential that the environmental sensitization and education must begin with the SF senior management which can then flow down to the staff.

3.7 Training of staff of the State Poverty Reduction Agency and the re-training of those of the State Environmental Protection Agency and the local government as well as the representatives of community leaders, community-based organisations (CBOs), non-governmental organisations (NGOs) and contractors at a two-week-workshop can significant improve attitudes to environmental issues of SF. It is known that effective training and awareness of the beneficiaries can determine the success or failure of a sub project. In addition, adequate remuneration of staff can also make the difference between functional and sustained sub project and an abandoned one.

**Estimated Cost of Training**

3.8 Technical assistance and training shall be required at State, local government and community levels to implement the environmental management plan of the CPRP. Financial support will also be required for monitoring the actual environmental and social impacts of the projects. No assistance is however needed for EIA public review and public hearing since the sub-projects are classified as Category II using the Nigerian procedure or Category B in the World Bank parlance.

The estimated cost of the required technical assistance and training is as follows:
(i) Two weeks EIA training workshop for officials of the SEPAs, Social Funds and L.G.A. in each of the affected States

US $ 510,000.00

(ii) One week training workshop on EIA Mitigation Compliance Monitoring and Environmental Auditing for CBOs and other Community level stakeholders in each of the affected States

US $ 300,000.00

(iii) Development of EIA Management Plans for each of the subprojects

US $ 200,000.00

(iv) EIA Mitigation Compliance Monitoring (prior to commissioning) – 4 Year period

US $ 320,000.00

(v) Environmental Auditing (Post Commissioning)

US $ 80,000.00

Total

US $ 1,410,000.00

Air/Soil/Water analysis laboratory equipment

3.9 It will be recalled that the World Bank provided assistance to FEPA and SEPAs through the Environmental Management Project to develop capacities. Part of this assistance is the provision of laboratory equipment.

3.10 Of the three State Environmental Protection Agencies visited, only KESEPA at Birnin Kebbi collected, installed and is using the air/soil/water analysis laboratory equipment provided under the FEPA/World Bank assisted Environmental Management Project. These are located in two laboratory rooms – one of the rooms is fully air-conditioned and the other one is not. CREPA at Calabar has collected the equipment but they are not installed yet due to some administrative problems, whereas ESEPA, Ado-Ekiti has not even collected the equipment from FEPA in Lagos. Each of the Agencies is encouraged to expedite action to facilitate proper functioning of the laboratory.

Logistical support and office accommodation

3.11 Generally, logistical support (vehicles, motorcycles, speedboats etc.) are lacking or inadequate in all the SEPA offices visited. The office accommodation for senior staff are substandard and grossly inadequate. For example a Deputy Director and another officer are sharing office space in Cross-River and Ekiti States.

4.0 PROPOSED SUB PROJECTS FROM THREE OF THE SIX PILOT STATES FOR CPRP

4.1 The proposed subprojects from three geo-ecological zones were largely extracted from the reports of social and institutional assessment survey and the operational manuals prepared by Cross River, Ekiti and
Kebbi State governments and was confirmed by interviews during visits to the States. There are several CPRP activities commonly requested for by the States.

**Proposed Cross-River State subproject components**

4.2 The major environmental problems of Cross-River State include deforestation, loss of biodiversity, coastal and gully erosion and pollution. These problems are aggravated by poverty and rapid population growth. The identified poverty reduction subproject components include the following:

- Development of rural infrastructure such as access roads, bridges, water, electricity, health centres, primary and secondary schools.
- Provision of food processing equipment to boost food security in the rural areas.
- Boosting of social infrastructures such as equipment in hospitals, public health centres, laboratories and libraries in schools.
- Capacity building at different levels.

**Proposed Kebbi State CPRP subproject components**

4.3 The environmental problems identified by the stakeholders include deforestation, desertification, soil erosion, biodiversity loss, flooding, water pollution, solid waste disposal, fire hazards, drought and air pollution. Kebbi State is geographically located on the fringe of the Sahara Desert making it prone to desertification. The poor agricultural management system being practised i.e. the monoculture type of farming and the total removal of plant residues from the farmland at harvest worsened the problems enumerated above. Some classical corrective measures were recommended as follows:-

- integrated afforestation programme;
- comprehensive plan for sustainable land use;
- poverty alleviation strategies;
- adequate channelisation of urban streams;
- environmental education;
- adequate refuse disposal;
- enforcement of existing laws and regulations on the environment.

4.4 In order to translate these recommendations into reality, a "Bottom-up" community participatory approach must be adopted. The ecology of Kebbi State is fragile and requires concerted efforts to save it.
The CPRP subproject components identified by stakeholders in the State include:

- Provision of potable water
- Construction of large markets at outskirts of towns
- Rehabilitation and construction of rural roads, culverts etc.
- Television viewing centres
- Cash loans/credit facilities – provision of sewing and knitting machines
- General Hospitals/Dispensaries
- Secondary and Primary schools
- Provision of electricity.

Some items that did not fit into the SF portfolio were deleted. They include provision of farm inputs and befitting palaces.

**Proposed Ekiti State CPRP subproject components**

4.5 Ecologically, Ekiti State predominantly exhibits tropical rain forest characteristic of the southern part of the State whereas the landscape of the Northern part of the State is dominated by derived savanna type of vegetation. The main environmental problems collectively identified are:

(i) Deliberate violation of the bush burning control edict annually which resulted in steady loss of biodiversity through environmentally unfriendly traditional agricultural practices. Moribund cocoa plantations are constantly being destroyed by fire (slash and burn system) in order to cultivate rice. As a result of complete vegetation clearing, the soils are made bare resulting in erosion and loss of soil nutrients.

(ii) Protracted use of cocoa agro-chemicals i.e. insecticides (Gamalin 20 giving way to Basudin which is environmentally more friendly) and fungicides (i.e. Copper Sulphate) certainly had negative environmental impacts on the soil, water, air and biological life.

(iii) Deforestation – This is as a result of extensive lumbering activities over several decades and consequently severe loss of many native timber species.

(iv) Erosion and flooding – Generally the topography of the State and all environmentally destructive activities (including depositing of solid wastes into natural and artificial drains) encouraged these processes.

The classical amelioration practices should be adopted with the active involvement of communities, CBOs, NGOs and LGAs.
4.6 The Community Based Poverty Reduction activities proposed by Ekiti State is as follows:

- providing rural feeder roads and culverts to link communities with Federal and State road networks;
- improving and extending the supply of potable water;
- improving and extending the supply of electricity (Rural);
- improving existing healthcare delivery systems and extending their reach to the rural poor;
- rehabilitating/establishing modern infrastructure for existing primary and secondary schools and tertiary schools;
- providing effective environmental (ecological and erosion control), sanitation (waste disposal management systems);
- establishing small/cottage industries to enhance income generating activities of communities and improving employment possibilities;
- provision of market stalls; and
- creation and provision of easily accessible micro-credit facilities and services.

5.0 ENVIRONMENTAL IMPACTS OF SOCIAL FUNDS ON COMMUNITY-BASED POVERTY REDUCTION PROJECT

5.1 There are different Environmental Assessment (EA) instruments developed by the World Bank that can be applied in the process of screening a subproject. This include Environmental Review (ER); Limited Environment Assessment (LEA); Environmental Assessment (EA); Environmental Impact Assessment (EIA); Environment Audit; Hazard or Risk Assessment as well as Environmental Management Plan (EMP). Depending on the type of project any of these instruments or a combination of their component parts could be applied.

5.2 Using these EA instruments, projects could be classified into Categories A, B and C using the World Bank model which largely agrees with the Nigeria's Federal Environmental Protection Agency (FEPA) classification of Categories I, II and III. Category C or III (see Fig. 1) projects scarcely have any adverse environmental impacts. Generally, SF subprojects are likely to be in Category B or II where the potential adverse environmental impacts on human population or environmentally sensitive ecosystems (e.g. coastal areas, wetland, forests, grassland etc) are less adverse than Category A. Mitigative measures can easily be designed to prevent, minimise or compensate for the potential adverse environmental impacts than for Category A or I. The EA instruments may vary from project to project.
5.3 The subprojects that the SF finance are known to vary widely from rural road to construction of market to basic water and sanitation requirements. It is anticipated as found in other parts of the world, especially in Latin America, the Caribbean and Africa that the volume of subproject activities to be funded by SF in Nigeria will undoubtedly raise issues associated with environmental impact assessment because of the perverse level and rampart nature of poverty in the nation. Nigeria has environmental policies and/or regulations in operation to varying degrees. The merits and demerits of the environmental edicts and laws, implementation of international conventions, procedures, institutional arrangements are reviewed in the preceding section of this document, so as to meet with the current awareness of both the SF operators and donor agencies.

5.4 Our concern in this document is how to sensitize all stakeholders on the importance of environmental impacts on community-based poverty reduction subprojects or activities. More importantly however, are the incorporation of mitigable or remediable measures that must be put in place, from the on-set of subproject to combat any negative environmental effects as a result of the activities of the sub-projects.

Overview of Environmental Impacts caused by SF subprojects

5.5 Environmental impacts of SF could be positive or negative. However, remedial or mitigable measures must be applicable to ameliorate negative impacts. EIA must consider not only the physical (land, air, water) and biological environment (fauna and flora) but also the social environment (aesthetics, cultural sites, human health etc.) of the affected community.

Positive Environmental Impacts of SF subprojects

5.6 Health centre or dispensary is likely to have positive environmental impact under normal conditions. However, if its waste disposal is not properly handled, it could cause serious havoc e.g. if syringes used to take the blood samples of an Acquired Immune Deficiency Syndrome (AIDS) patient were dumped on a rubbish heap, some ignorant careless children could pick them up and playing with them could accidentally pick or wound themselves resulting in contacting AIDS. Also an improper disposal of a poison or toxic substance container could cause death or very serious sickness if the container is just rinsed and used indiscriminately as a drinking cup or water storage facility.

Negative Environmental Impacts of SF subprojects

5.7 A very wide variety of subprojects are usually financed by SF which include: rural roads, water supply, culverts and bridges, schools (primary and secondary), health centres, markets etc. Some of these common SF subprojects activities are meant to ameliorate or improve community-
based poverty reduction project could result in indirect or cumulative impacts because of series of effects generated by an intervention or series of the same intervention. The aggregate of many subprojects of the SF or any demand-driven investment fund could result in commutative impacts whereas individual subprojects may have insignificant impacts.

**Environmental and Social Checklists**

5.8 For the purpose of screening each of the identified subprojects for their potential and cumulative environmental impacts, the following table presents a summary of recommended categories of environmental assessment:

**Table 1: Checklist of Recommended Environmental Assessment**

<table>
<thead>
<tr>
<th>Sub-project</th>
<th>Recommended Environmental Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>None</td>
</tr>
<tr>
<td>1. Health Centres, Dispensaries and Clinics</td>
<td></td>
</tr>
<tr>
<td>- Rehabilitation</td>
<td></td>
</tr>
<tr>
<td>- Construction</td>
<td></td>
</tr>
<tr>
<td>2. Primary, Secondary &amp; Technical Schools</td>
<td></td>
</tr>
<tr>
<td>- Minor rehabilitation</td>
<td></td>
</tr>
<tr>
<td>- Rehabilitation with major construction</td>
<td></td>
</tr>
<tr>
<td>- New Construction</td>
<td></td>
</tr>
<tr>
<td>3. New rural roads, culverts &amp; bridges</td>
<td></td>
</tr>
<tr>
<td>4. Rehabilitation of rural roads, culverts and bridges</td>
<td></td>
</tr>
<tr>
<td>5. Potable water and sanitation</td>
<td></td>
</tr>
<tr>
<td>6. Market Stalls</td>
<td></td>
</tr>
<tr>
<td>7. Rural Electrification (solar, biogas, wind)</td>
<td></td>
</tr>
<tr>
<td>8. Income generating activities (e.g. cottage industries, fish farms, vegetable farms)</td>
<td></td>
</tr>
<tr>
<td>9. Solid Waste Disposal</td>
<td></td>
</tr>
<tr>
<td>- Existing waste disposal facilities e.g. dumpsites</td>
<td></td>
</tr>
<tr>
<td>- Construction of new facilities (e.g. incinerators and dumpsites)</td>
<td></td>
</tr>
<tr>
<td>10. Flood and Erosion Control</td>
<td></td>
</tr>
<tr>
<td>11. Institutional strengthening, capacity building and community development</td>
<td></td>
</tr>
</tbody>
</table>

**Environmental Review Checklist**

5.9 The recommended screening procedure as indicated above is based largely on the existing guidelines approved by FEPA and the World Bank. Furthermore, the list of the subprojects are derived from demands of the various communities and State authorities in 3 of the 6 CPRP pilot States.

5.10 Arising from this initial environmental screening, the following Environmental review checklist including impacts description and
mitigation measures should be useful for assessing those subprojects identified as requiring only ER.

### Table 2: Environmental Review Checklist

<table>
<thead>
<tr>
<th>Type of Expected Impact</th>
<th>Description of Impact</th>
<th>Proposed Mitigation Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A. Rehabilitation &amp; Minor Constructions (Health facilities, Schools, Flood &amp; Erosion Control)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Soils</td>
<td>* Contamination from waste materials e.g. cement and paints, engine oil etc.</td>
<td>* Control and daily cleaning of construction sites; provision of adequate waste disposal services</td>
</tr>
<tr>
<td>2. Water Quality and Flow</td>
<td>* Water contamination due to materials and chemicals</td>
<td>* Proper disposal of chemicals and other hazardous materials * Regular clearing od drains</td>
</tr>
<tr>
<td>3. Air Quality</td>
<td>* Dust, Noise, Odour and indoor pollution</td>
<td>* Dust control by water * Appropriate design and siting of subproject * Restrict construction to certain hours</td>
</tr>
<tr>
<td>4. Biodiversity and Forests</td>
<td>* Disturbance of National Parks and other protected areas</td>
<td>* Consideration of alternative sites or alignments * Minimise loss of vegetation during construction * General surveillance</td>
</tr>
<tr>
<td></td>
<td>* Vegetation Loss</td>
<td></td>
</tr>
<tr>
<td></td>
<td>* Poaching of Wildlife</td>
<td></td>
</tr>
<tr>
<td>5. Social Environment</td>
<td>* Increased refuse</td>
<td>* Pegular cleaning-up</td>
</tr>
<tr>
<td></td>
<td>* Construction accidents</td>
<td>* Provision of first aid facilities</td>
</tr>
<tr>
<td></td>
<td>* Medical wastes</td>
<td>* Special measures for medical waste disposal</td>
</tr>
<tr>
<td><strong>B. Potable Water &amp; Sanitation</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Soil</td>
<td>* Soil degradation</td>
<td>* Revegetation and physical stabilization</td>
</tr>
<tr>
<td>2. Water Quality and availability</td>
<td>* Water contamination</td>
<td>* Adequate protection from livestock; minimal distance from settlements and farms * Proper aquifer studies * proper drainage</td>
</tr>
<tr>
<td></td>
<td>* Over exploitation of aquifers</td>
<td>* Water treatment including appropriate technology for waste water treatment</td>
</tr>
<tr>
<td></td>
<td>* Inadequate waste water disposal</td>
<td></td>
</tr>
<tr>
<td></td>
<td>* Creation of stagnant water pools</td>
<td></td>
</tr>
<tr>
<td>3. Air Quality</td>
<td>* Noise</td>
<td>* Proper selection of site</td>
</tr>
<tr>
<td>4. Biodiversity and Forests</td>
<td>* Disturbance of wildlife</td>
<td>* Proper selection of site</td>
</tr>
<tr>
<td></td>
<td>* Loss of vegetation</td>
<td>* Protection of vegetation during construction</td>
</tr>
</tbody>
</table>
5. Social Environment

- Increased refuse problems
- Waterborne diseases and malaria infestation
- Unpleasant odors from latrines include odor control technology in design
- Regular clean-ups
- Proper design of facility, quality testing and disease control

C. Solid Waste Disposal
(No Construction)

1. Water Quality
- Point source pollution from dumpsites
- Seepage of pollutants into aquifers
- Proper siting and design
- Ensuring adequate drainage

2. Air Quality
- Smoke arising from garbage burning
- Foul odor
- Control burning
- Cover garbage properly

3. Biodiversity and Wildlife
- Loss of vegetation and wildlife disturbance
- Adequate siting

4. Social environment
- Marred landscapes
- Disease transmission from animals and insects
- Safety and health hazards
- Adequate waste collection and disposal, waste treatment and recycling
- Provide medical facilities
- Health education and awareness

Limited Environmental Assessment

5.11 The sub-projects identified as requiring limited environmental assessment include construction of new roads, culverts and bridges and rehabilitation of existing ones as well as new construction and major rehabilitation of schools, markets and health centres. Others are construction of new waste disposal facilities and development of income generating activities such as cottage industries, fish farms, vegetable gardens etc.

5.12 In the 3 pilot States visited, the transportation and communication network remains grossly inadequate. Basic social and economic infrastructures have deteriorated or even non-existent. The primary objectives of the required infrastructural programmes and income-generating activities are therefore to reduce poverty, improve quality of education and wellbeing and ensure environmentally sustainable development.

5.13 In carrying out a limited environmental assessment of each of the subprojects, the following checklists of impacts and mitigation measures adapted from the FEPA technical guidelines need be considered:

1. **Road Construction and Rehabilitation:**

   (a) Description of the existing route selection
• In the project area, are there:
  - areas of unique or exceptional aesthetic quality
  - an overcrowded area
  - important ground or surface water resources
  - tourism attraction
  - social infrastructures e.g. schools, hospitals, recreational centre
  - nature conservation areas
  - unique ecosystems of important wildlife habitats or endangered species
  - important archeological, cultural or historical areas/resources
  - steep slopes or other erosion-prone areas

(b) Associated/Potential Environmental Impacts

Identify and predict the impact of the construction activities and component on the environment:

• What impact will the:

  - construction materials exploitation (e.g. quarrying), handling transportation and storage
  - construction activities (e.g. land clearing cut and fill, blasting and drilling land reclamation ditching and draining spoil disposal, etc)
  - construction of bridges and culverts

have on:

  - the areas of unique or exception aesthetic quality and ecosystem
  - hydrology and drainage patterns
  - erosion levels and soil quality
  - air quality
  - public health and safety
  - archaeological, historical, cultural or scientific values
  - wildlife (e.g. habitats, migration routes, endangered species)

• What impact will migration, displacement and resettlement of people have on the migration and settlement patterns: the population structure and dynamics social structure local life style and values, and land tenure, land-use rights and land values.
• What is likely to be the problem with population resettlement and the provision of social services

(c) Mitigation Measures:

• Is there any hospital around in case of accident and emergency?

• What measures could be taken to guide against adverse environmental impacts due to the operations on the roads

• Is there any need for zebra crossing area, bye-pass or overhead bridge for the safety of pedestrians?

• What precautions should be taken towards sudden emergency of market around the road as a result of large traffic volume?

(d) Environmental Management Plan

• What are the parameters to be monitored e.g. erosion?

• By what means and method shall the parameters be monitored?

• Which personnel shall be involved with the monitoring activities?

• Is there any need to establish a monitoring committee?

• Should the nearby community be involved in the monitoring activity?

• If the community will be involved, what roles shall they play?

• What shall be the monitoring schedule?

2. Building Construction and Rehabilitation (Schools, Health Centres, Markets, etc.)

• Identify and predict impacts of any activities/components which are part of a specific investment on:

  - areas of unique or exceptional aesthetic quality and unique ecosystems;
  - hydrology and drainage patterns, flooding;
  - erosion levels and soil quality;
- surface and ground water quality;
- land use, such as agriculture, forestry, tourism, recreation;
- aesthetics;
- fisheries;
- wildlife (e.g. habitats, migration routes, endangered species);
- air quality;
- noise and vibration levels;
- local traffic;
- public health and safety;
- archaeological, historical, cultural or specific value;
- migration and settlement patterns (controlled and uncontrolled), population structure and dynamics;
- employment;
- income distribution;
- social structure, local life style and values;
- land tenure, land-use rights and land values;
- social services.

**Mitigation Measure**

- proper drainage and waste management facilities to prevent health hazards;
- encourage local residents participation in project planning/execution;
- buffer zones should be provided;
- safety measures should be taken to warn the public when around danger zones such as energy sub-stations;
- measures to avoid conflicting land use should be preferred;
- there should be adequate space for expansion to take care of the inherent population explosion around such project sites;
- provision of comprehensive urban design with respect to a planned provision of adequate service such as water, energy, schools, medical care etc.;
- adequate resettlement/compensation programmes should be incorporated into the population during design, and planning.

**Environmental Management Plan**

- buffer zones should be monitored to prevent unauthorized development;
- distribution of revenue, and benefits should be checked;
- there should be a schedule indicating where every plant, materials and equipment is positioned to monitor their use;
- establishment of a maintenance department to carry out repairs. Detailed survey of the site location so that unplanned changes can be checked and/or easily identified.
6.0 ENVIRONMENTAL ASSESSMENT WORKPLAN

6.1 In order to ensure compliance with identified mitigation measures, the following activities and indicators shall be used to measure the actual environmental and social impacts of executed work over a 7 year period beginning with project construction.

TABLE 3: Calendar of Activities and Indicators for Measuring Impacts
<table>
<thead>
<tr>
<th>Activity</th>
<th>Indicator</th>
<th>Yr. 1</th>
<th>Yr. 2</th>
<th>Yr. 3</th>
<th>Yr. 4</th>
<th>Yr. 5</th>
<th>Yr. 6</th>
<th>Yr. 7</th>
</tr>
</thead>
<tbody>
<tr>
<td>A Rural Feeder Roads, Culverts &amp; Bridges</td>
<td>Particulate generation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Quarrying and burrowing</td>
<td>Noise Measurement</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Material handling, transportation and storage</td>
<td>Noise Measurement (decibels)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Construction of bridges and culverts</td>
<td>Erodibility</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Vegetation Clearance</td>
<td>Disturbance of surface waterflow</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Deposit of Spoils</td>
<td>Road damages</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Construction of embankments</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Vehicular Traffic</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Construction of drainages</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Wastes Deposition</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Potable Water Supply &amp; Sanitation</td>
<td>Particulate generation, Noise level</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Digging of ground for reservoirs and pipes</td>
<td>Erodibility &amp; greenness</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Reforestation and revegetation</td>
<td>Water Quality</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Water Quality Testing</td>
<td>Water Quality</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Water Treatment</td>
<td>Level of Air Pollution</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Well lining</td>
<td>Reduction in water supply</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Water transportation</td>
<td>Rate of infections</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Maintenance and repairs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Community Hygiene education</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

27
<table>
<thead>
<tr>
<th>C</th>
<th>Building Construction and Rehabilitation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Site preparation</td>
</tr>
<tr>
<td>2.</td>
<td>Construction and/or Rehabilitation of buildings</td>
</tr>
<tr>
<td>3.</td>
<td>Maintenance</td>
</tr>
<tr>
<td>4.</td>
<td>Operation of utilities</td>
</tr>
</tbody>
</table>