THE WORLD BANK/IFC/M.I.G.A.

OFFICE MEMORANDUM

DATE: March 8, 2001

TO: Mr. Ken King, Assistant CEO, GEF Secretariat
Att: GEF PROGRAM COORDINATION

FROM: Lars Vidaeus, GEF Executive Coordinator

EXTENSION: 3-4188

SUBJECT: **Country Name: Nigeria**
Project Name: Micro-watershed and Environmental Management Project
Submission for Work Program Inclusion

Please find enclosed the electronic attachment of the above mentioned project brief for work program inclusion. We would appreciate receiving any comments by March 15, 2001.

The proposal is consistent with the *Criteria for Review of GEF Projects* as presented in the following sections of the project brief:

- **Country Drivenness**: Strong ownership of the program is demonstrated at all levels of government as well as at the community level. Please see Section D4 for an assessment of country ownership of the MEMP.

- **Endorsement**: endorsement letter dated February 21, 2001 from GEF Focal Point, Alh. Y. Tanko, Director, Federal Ministry of Environment, Nigeria is attached.

Program Designation & Conformity: please see section B1 (a) (Global Operational strategy/Program objective addressed by the project**).** The conservation and protection of biodiversity in arid and semi-arid lands is increasingly being recognized as a global priority. Numerous species that were prevalent in the Savannah, Sudan and Sahelian regions of Nigeria several decades ago, have virtually disappeared. Protection and conservation of biodiversity in these areas is particularly important since the degradation of habitat and ecosystems and the disappearance of indigenous species increases the potential for serious degradation of these areas. The objectives of the program are fully consistent with guidance from the Conference of Parties of the Biodiversity Convention ratified by Nigeria on the 29th of August 1994 and also supports other biodiversity conventions, including the Bern Convention on Migratory Species as it protects habitats of Palearctic migratory birds.

- **Project Design**: please see section C (Project Description Summary) and Annex 1 (Project design summary – logical framework) and Annex 2 (Protected Areas Targeted under the Project: Biological Features, Threats and Activities to address the Threats). The project will support the establishment of an enabling policy and institutional framework and investments for promoting sustainable natural resource management and biodiversity conservation. Activities to be funded by GEF will aim to strengthen institutional and organizational capacity of a number of agencies for effective participatory protected area management in selected protected areas and their support zones. Additional investments will promote sustainable livelihoods while emphasizing the linkages between biodiversity conservation and benefits for communities neighboring the protected areas

- **Sustainability**: please see section F1. Sustainability of investments will depend on the ownership and continuity of micro-projects by beneficiaries. Continued involvement of key stakeholders during project preparation and implementation, improved livelihoods, incomes and access to basic services as well as reduction of conflicts between user groups will contribute to sustainability of interventions. Greater community participation in managing the protected areas, incentives for maintenance of ecosystem services, and promotion of sustainable livelihoods for communities in the support zones will contribute to conservation and sustainable use of biodiversity. The support and services to be delivered to the communities in the support zones will assist in testing options for co-management of resources within protected areas. The project will build on the experience of National Parks and NGOs such as Nigerian Conservation Foundation, Savannah Conservation in supporting direct investments and sustainable livelihood programs in the support zones. The comprehensive Social Assessments that are currently underway, will also help ensure that the project is properly targeted, implementable and socially sustainable.

- **Replicability**: please see section D (Project Rationale) and Section F (Sustainability). The successful implementation and financial viability of the micro-projects will be an indication that they will be continued beyond the life of the project and replicated in other micro and macro-watersheds with similar issues and opportunities. Replicability and scaling up of pilot initiatives will depend on the relative wealth of populations, the willingness of beneficiaries to pay, and also the asymmetries in the costs and benefits of individual micro-projects. By the end of the third year of implementation, the incentives will be assessed and revised based upon observation of demand and feedback from beneficiaries. The findings will be incorporated into the subsequent phase of the program, where additional investments and geographical areas will be identified for intervention. Within the support zones, pilot activities for promoting sustainable livelihoods will be initiated during project preparation, to assess acceptability. These and other projects that are socially acceptable and financially viable, will be promoted within the targeted support zones and in other support zones through the involvement of National Parks management and other partners including conservation NGOs.

- **Stakeholder Involvement**: please see section E4.1 (Institutional: Executing Agencies) and E6.1 to 6.5 (social issues and participatory approaches). PRAs and informal interviews were carried out in the target six states early on in preparation to test the viability of a community driven approach. These studies confirmed that communities are already implementing their own projects and using transparent and accountable procurement, financial management and internal auditing procedures. More detailed social assessments are now being carried out and consultations are being held with a broad range of stakeholder groups including federal, state and local levels of government, NGOs and community organizations. These assessments will use focus groups to involve the community in discussions about priorities, socially acceptable community projects, maintenance of ecosystem services and sustainable livelihood options within the support zones of the protected areas. Focus groups will be inclusive and ensure that there is adequate representation across gender, age, ethnicity, social status and income. The detailed implementation and financing arrangements for implementing the program were developed in close consultation with the different levels of government and community based organizations. The arrangements outlined in section C.4 have been agreed upon by all stakeholders. The endorsement of the different roles and responsibilities with regard to the channeling of technical and financial resources directly to Community Organizations indicates the level of cooperation and support for the program from the different levels and groups.

- **Monitoring & Evaluation**: Annex 1 outlines preliminary indicators which will be refined during appraisal. The indicators were developed during a logical framework workshop held in Abuja in April 2000 with the participation of federal and state counter-parts. These indicators will form the basis for the preparation of a detailed monitoring and evaluation plan which will be managed by the Federal Program Support Unit. The plan and indicators will be assessed at mid-term and at the end of this phase of the program. The findings will be incorporated into the development of the next phase of the program. Responsibility for process and impact monitoring will be contracted out to an independent firm to assess the social, economic and conservation impact of investments as well as the effectiveness of the participatory process for community involvement and ownership.

- **Financing Plan**: please see the summary project cost table in Section C1 and the broader incremental cost assessment in Annex 3. Four out of the five components: community driven investments in micro-watershed development, strengthening environmental institutional and legislative framework, strengthening environmental management support services and the development communication components are fully funded by IDA. It is proposed that GEF support the protected area and biodiversity management component, which is currently costed at US$8.0 million. The cost estimates for the different components are outlined in section C1.

- **Cost-effectiveness**: Given that Nigeria is just emerging from a period of isolation, there is little recent project experience in Nigeria on which to base assessments of costs against the

effectiveness in achieving objectives. Empirically, it is known that effectiveness and sustainability of these types of projects can be greatly enhanced by placing resources directly at the community level. Therefore over 70% of the project resources will be channeled directly to communities. The MEMP is designed to be demand driven by communities. Communities will be presented with a multi-sectoral menu of investment options and encouraged to prioritize based on their needs. It is therefore difficult to assess, *ex ante,* the fiscal and economic impact of the investments since the mix of micro-projects to be funded cannot be pre-determined. Nevertheless, an Indicative Financial and Economic Analysis is being prepared. This will look at the cost- benefit ratios and Internal Rates of Return of specific prototype technologies/investments to be included in the menu of options. Sensitivity analysis will calculate the impact of changes in output/input prices, productivity effects, costs, exchange rate fluctuations and implementation delays on the IRR Models. This study is estimated to be completed by End March 2001 (see sections E1 and E2).

- **Core Commitments and Linkages**: please see section B1 of the project's linkage to the Bank Group Interim Country Strategy Note.

- **Consultation, Coordination and Collaboration between IAs**: The project team will liaise closely with preparation teams for the: Reversal of Land and Water Degradation Trends in the Lake Chad Basin Ecosystem (World Bank/UNDP); the Biodiversity Country Studies program (UNEP); Promoting Best Practices for Conservation and Sustainable Use of Biodiversity of Global Significance in Arid and Semi-arid Zones (UNEP); and Reversing Land and Water Degradation Trends in the Niger Basin (World Bank/UNDP) to ensure complementarity and to avoid duplication of efforts.

- **Response to Reviews**: At the time of PDF Block B approval, the Secretariat team recommended that the Bank preparation team address key issues relating to sustainability, replication, stakeholder involvement, monitoring and evaluation, financing plan, agency coordination and consultation. These issues are dealt with under the corresponding criteria. We also like to stress that the project document will be undertaking an internal Bank Quality Enhancement Review in the coming weeks.

Please let me know if you require any additional information to complete your review prior to inclusion in the work program. Many thanks.

Distribution:

Messrs.: R. Asenjo, UNDP
A. Djoghlaf, UNEP (Nairobi)
K. Elliott, UNEP (Washington, DC)
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cc: Messrs./Mmes. R.Sullivan, C.Crepin, I.Hewawasam (AFTES); T.Esmail, J.Baah-Dwomoh (AFTR2); K.Mackinnon, G.Castro, R.Khanna, D.Aryal (ENV); ENVGC ISC, Relevant Regional Files

PROJECT BRIEF

1. IDENTIFIERS:

PROJECT NUMBERS:	: GE-P071817/P069892
PROJECT NAME:	**Nigeria: Microwatershed and Environment**
DURATION:	5 years
IMPLEMENTING AGENCY:	World Bank
EXECUTING AGENCY:	Federal Ministry of Environment and partner organizations
REQUESTING COUNTRY:	Nigeria
ELIGIBILITY:	Ratified CBD on 29th of August 1994
GEF FOCAL AREA:	Biodiversity
GEF PROGRAMMING FRAMEWORK:	Operational Program No. 1: Arid and Semi-arid Ecosystems

2. SUMMARY:

The proposed project aims to identify and support mechanisms for the protection of globally significant biodiversity and genetic resources including important horticultural crops, medicinal plants, forest trees, pasture grasses, legumes and wildlife occurring within macro-watersheds. The GEF supported activities will contribute to the broader objective of establishing an enabling environment for the integrated use, regulation and treatment of water and land resources in the watersheds. Focusing primarily on biodiversity conservation and management, the GEF supported activities will seek to promote community involvement in the management of biodiversity and wildlife and also identify potential initiatives for subsequent phases of the project.

3. COSTS AND FINANCING (USD M):

GEF:	Project:	8.00
	PDF:	0.35
Subtotal GEF:		**8.35**
Co-financing:	IDA:	95.00
	Govt:	12.00
Total Project Cost:		**115.35**

4. ASSOCIATED FINANCING (MILLION US$) N/A

5. OPERATIONAL FOCAL POINT ENDORSEMENT:

Name: Alh. Y. Tanko Title: Director
Organization:Federal Ministry of Environment, Nigeria Date:Feb. 21, 2001

6. IA CONTACT:

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A. Project Development Objective

1. Project development objective: (see Annex 1)
Populations in the target macro-watershed areas including those within support zones around targeted protected areas, will have adopted integrated, environmentally sustainable, approaches to management of natural resources within a strengthened institutional framework at local, state and federal levels.

2. Global objective: (see Annex 1)
Promoting conservation and sustainable use of biological resources in target areas.

3. Key performance indicators: (see Annex 1)
The following indicators will be used to assess achievement of the project development and global objectives:

1. By year 5, 50% of beneficiary communities express satisfaction with processes in place for delivery of services.
2. By year 5, 50% of independent actors (States and NGOs) express satisfaction with processes set in place at the federal level.
3. By year 5, environmentally sustainable practices are incorporated into national developmental programs implemented by the Federal Ministry of Environment.
4. By year 5, 50% beneficiary community groups will have the capacity to identify, implement and manage development projects.
5. By year 5, participatory co-management plans involving communities and the National Parks Service (NPS) are in use within the two National Parks.
6. By year 5, biodiversity assessments within the protected areas targeted under the project, indicate an increase of up to 25% of specific species identified as being threatened.
7. By year 5, 50% of the targeted beneficiary community groups are implementing ecologically sustainable livelihood projects within the support zones.

A draft monitoring and evaluation plan will be prepared by FPSU by project effectiveness. This draft plan will be finalized during the first year of implementation.

B. Strategic Context

1. Sector-related Country Assistance Strategy (CAS) goal supported by the project: (see Annex 1)

Document number: 20309 Date of latest CAS discussion: May 18, 2000
The Bank is currently preparing a full-fledged CAS; in the meanwhile the Bank Group Interim Country Strategy Note (Report No. 20309, May 18, 2000) provides the basis of the proposed project. Its overarching objective is to assist the Nigerian authorities in their efforts to rapidly reduce poverty. One of the key elements of the interim strategy is to prepare a set of priority projects aimed directly at poverty reduction through sustainable natural resource management. This project is in keeping with the recommendations in the Nigeria Interim Country Strategy Note to support community-based initiatives in natural resource management.

1a. Global Operational strategy/Program objective addressed by the project:

The conservation and protection of biodiversity in arid and semi-arid lands is increasingly being recognized as a global priority. Numerous species that were prevalent in the Savannah, Sudan and Sahelian regions of Nigeria several decades ago, have virtually disappeared. Protection and conservation of biodiversity in these areas is particularly important since the degradation of habitat and ecosystems and the disappearance of indigenous species increases the potential for desertification of these areas. Additionally, the degradation of these ecosystems has marginalized communities living in these areas, reducing their options to earn a livelihood, which in turn increases the pressures on protected areas as well as on fragile ecosystems. Limited information exists on existing species diversity in the forest and game reserves other than the protected areas demarcated as National Parks. The government recognizes that knowledge of the characteristics of these ecosystems and their genetic diversity is important in conserving the remaining species including micro-organisms. The objectives of the program are fully consistent with guidance from the Conference of Parties of the Biodiversity Convention (ratified by Nigeria on the 29th of August 1994) regarding conservation, sustainable use of biological diversity and support for the active involvement of local communities as managers and beneficiaries of sound natural resource management.

2. Main sector issues and Government strategy:

The Nature of the Problem

Nigeria is emerging from a long period of international isolation. Public institutions are weak and unable to address the problems of environmental degradation, natural resources depletion and unsustainable use of biological resources. At the same time, poverty is pervasive: 75 million people live in the rural areas, of which 60% are considered to be living in poverty. The majority of the rural population are directly (or indirectly) dependent on the non-oil natural resource base for their livelihoods. Furthermore, Nigeria facing the daunting task of achieving growth rates of greater than 5% in the non-oil economy to reduce poverty rates.

The Importance of Natural Resource Management to the Nigerian Economy

Nigeria occupies 923,773 Km2 with a coastline that extends about 960 Km along the Atlantic Ocean. It is a country with marked ecological diversity and climatic variation. The natural vegetation reflects the topographic and climatic diversity. Rainfall gradient, the minimum relative humidity, and the length of the dry season are the predominant influences on vegetation types. Principal vegetation types range from the dense mangrove forests of the Niger Delta and the rain forests of the south, to the dry grassland of the north, and also include montane grasslands on the Jos and Mambila Plateaux. Soils are largely of the ferruginous tropical type, with alluvial deposits along the major rivers - the Niger and Benue. The nation is endowed with a rich diversity of plant and animal species, many of which are of global significance. Natural Resources Management (NRM) concerns the sustainable use of major natural resources such as land, water, air, minerals, forests, fisheries, and wild flora and fauna. Together these resources produce ecosystem services that underpin the existence and welfare of human life.

The majority of the poorest people in Nigeria depend directly on natural resources for their livelihood. In addition, the society and the national economy also depend on services provided by natural resources. These services are the foundation of Nigeria's economy - agriculture, livestock, water supply, forests, fisheries, and non-renewable energy. Ecological processes support Nigerian rural life and the local economy through maintaining soil productivity and protection, the recycling of nutrients, the cleansing of air and water, and maintenance of climatic cycles. At the genetic level, diversity found in natural life forms support the breeding programs necessary for the improvement of cultivated plants and domesticated animals to enhance food supply and security. Wild flora forms the basis of a very significant

pharmacological industry and the traditional use of medicine for human and livestock needs, as well as other non-timber forest products critical to local communities. However, unsustainable land-use practices, over-exploitation of natural resources and ineffectively managed protected areas and their support zones all pose a serious threat to the maintenance of ecosystem and habitats. In Nigeria, the links between poverty and natural resource management are very clear. Large scale land clearing results in serious erosion and soil loss into rivers which in turn causes mass-scale river siltation and flooding. Soil loss threatens the agricultural productivity base of communities, while floods destroy fields and homes, leaving many communities poorer with each passing year.

Sector work carried out as part of the preparation of the 1990 World Bank (*Towards the Development of an Environmental Action Plan for Nigeria*, IBRD report no. 9002-UNI, 1990) noted that land degradation is the most serious environmental problem affecting Nigeria. Three aspects to the problem were identified: soil degradation, affecting 50 million people with an annual impact in excess of US$3 billion, water contamination, affecting 40 million people and costing more than US$1 billion to correct, and deforestation, affecting 50 million people with sustainable production from forest resources worth US$750 million annually. In aggregate, the costs of these sources of environmental degradation were estimated to be as high as US$5 billion annually (at 1990 prices).

A National Biodiversity Strategy and Action Plan was adopted in November 1997 and ratified by the Federal Government in December 1997. The broad goals of the Strategy and Action Plan are to: (a) conserve and enhance the sustainable use of the nation's biodiversity and biological resources; and (b) integrate biodiversity considerations into national planning policy and decision-making. The strategy emphasizes the potentially significant economic benefits to be derived from the commercial, subsistence, recreational, scientific and cultural/psychological uses of biodiversity and their ecosystem functions, noting that the contribution from all biodiversity species to the nation's economy would be in the region of US$2.92 billion.

Government Strategy

In 1999 the Federal Environmental Protection Agency (now the Federal Ministry of Environment) produced a *"National Policy on the Environment"* and also *"Nigeria's National Agenda 21"*. These policies recognize that sustainable livelihoods require the pursuit of policies and strategies that simultaneously address issues of development, sustainable resource management and poverty alleviation. These policies provide a broad framework for support to environmental issues and strategies for promoting sustainable natural resource management. However, the framework is too broad and does not prioritize issues to enable the design of a targeted program intervention. The Federal Ministry of Environment is also the lead agency collaborating with the Global Mechanism for implementing the United Nations' Convention to Combat Desertification. The Global Mechanism is co-financing the development of a strategic plan on Integrated Management of Land and Water in the Shared Catchments in the Transboundry Area between Nigeria and Niger.

The National Biodiversity Strategy and Action Plan acknowledges that efficient management and protection of biological resources have been constrained by the lack of information and data on biological and genetic diversity as well as by the lack of financial resources. According to the strategy, the information is particularly weak regarding plant biodiversity. Existing inventories identify 7895 plant species, 484 of which are endangered. Many of these plant species include wild relatives of important domestic species, medicinal plants, and other plants of economic value. The use of medicinal plants has also been endorsed by government in its Health Strategy and Action Plan. The Biodiversity strategy

further notes that Nigeria has a very rich and diverse mammalian fauna including 24 species of primates. In addition to the total of 274 mammalian species documented by the strategy to date, 831 species of birds, 19 species of amphibians and 166 species of fresh water fish are also recorded. A significant percentage of the species documented in the strategy occur within the 6 states targeted by the MEMP. The strategy notes however, that exact numbers of species has been difficult to determine due to inconsistency in nomenclature and inadequate investigation.

The enabling policy environment outlined in the Biodiversity Strategy aims at: a) improving conservation through the national system of protected areas, b) promoting sustainable use of biological diversity through improved management; and c) mainstreaming both conservation and sustainable use into decentralized development by means of an integrated approach to land use planning at the local level. The following actions are prioritized in the strategy: (a) the protection of ecosystems, especially watersheds, fresh water systems and tropical high forests; (b) improving yields of both indigenous and exotic species facing high economic demand to sustain their supply as well as protect their substitutes; (c) managing the fragile soils to provide conditions conducive to the perpetuation of species of economic, medicinal and genetic conservation value; (d) regulating and purifying water flow and protecting valley forests and wetlands; (e) maintaining conditions vital to the sustenance of protected areas and critical habitats that threaten species used for breeding and feeding; (f) enhancing the efficiency of biodiversity resource use to reduce their exploitation rate.

Strategic Objectives

Support for environmental and natural resources management in Nigeria commenced with the support provided to the government to formulate the National Environmental Action Plan. This work resulted in the analytical report entitled: *"Towards the Development of an Environmental Action Plan for Nigeria"*" in 1990. Subsequently, additional sector work was carried out resulting in *"Land Resource Management: Technology, Policy and Implementation"* (1992). This support was followed by an investment and capacity building program, *"Nigeria: Environmental Management Project" (1994) (EMP*). The EMP provided support for building capacity for environmental management, essentially at the federal level, with some limited support at the state level. The project also supported the development of a strategy to address environmental issues in the Niger Delta *"Environmental Development Strategy for the Niger Delta" (1994)*. In 1999 a desk review of the existing sector work resulted in *"Community-Based NRM: Issues and Options for Program Intervention"*. This provided the basis to enter into a dialogue with the Government that led to the identification of this program.

A recent Bank-financed desk review of the previous sector work on Nigeria (*Community-Based NRM: Issues and Options for Program Intervention, 2000*) concludes that an NRM program with a poverty reduction focus should be designed to address four strategic objectives namely:

(a) To maximize the use of its *renewable resources* such that their regenerative capacity is not jeopardized, and that the negative impact on the poor is minimized. Because, it is usually the poor whose resource base tends to be narrow and less easily shifted geographically and sectorally;

(b) To minimize the depletion of the *nonrenewable resources* so that sufficient savings in man-made, human, or social capital, are ensured for the benefit of all, specifically for the poor;

(c) To minimize pollution and its attendant negative impact on the environment, human health and ecosystems functions. Here again, the maximum negative impact would be borne by the poor;

(d) To decentralize the responsibility for management of natural and financial resources to the community level as a means of establishing local ownership of program investments and also to build local organizational capacity.

Previous government projects have tended to have a sectoral focus relying upon a few technological solutions to address the multi-faceted issues relating to increasing soil and moisture loss, land degradation, sedimentation, irregular stream flows, gully erosion, declining soil fertility and deforestation. Among others, these projects/agencies have included: the Directorate of Food, Roads and Rural Infrastructures; National Agricultural Land Development Authority, and the Agricultural Development Programs. However, most of these programs have had limited impact on the poor. They have been poorly targeted, sectoral in nature and have often been imposed from above with little, if any, commitment/involvement of the communities they are ostensibly attempting to help. The broad range of social, environmental, institutional and economic issues related to the problems in the different agro-ecological zones requires an integrated approach.

The complex issues of natural resource and environmental degradation can best be understood in the framework of watersheds as physical planning units. Put simply, a watershed is a coherent geographical unit covering the whole area from which water drains into a river, from its source to its mouth. Watershed management is concerned with sustainable development, based on the use of the natural resources of the watershed. It incorporates conservation practices in maintaining natural vegetative cover to help control erosion, reducing sedimentation and flooding downstream, and regulating stream flow. But this conservation is directed at maintaining the productivity of the environment for the use of those communities within the watershed. Watersheds provide a natural basis around which different stakeholders can combine their efforts to utilize land. Effective watershed management assists stakeholders to evaluate the potential and limitations of these land resources and to resolve conflicting issues that arise during their exploitation. Through this process optimal land use practices in different areas of watersheds are identified, which safeguard those resources on which people depend for their needs. The centerpiece of a proposed program strategy should therefore be to work at the local level, but a number of these activities, although identified locally, will have to be supported by federal and state policies and programs. The local groups may also have to rely on federal and state technical support, and – at least initially - in some cases on active involvement of state officials.

All the Nigerian National Parks and Protected Areas reside within macro-watersheds. Conservation and management of the natural resources within the Parks and Protected Areas are therefore integrally linked to the sustainable management of natural resources in the watershed as a whole, including communities in the support zone. The Nigerian National Parks Service Decree (No. 46 of 1999) provides strategic direction toward the improved conservation and management of Nigeria's National Parks. The decree outlines clear organizational reforms and improved participatory management principles, and prioritizes a number of activities for the Nigerian National Parks Service (NPS). The Decree requires that each of Nigeria's National Parks prepare a comprehensive management plan. The plan should include: a) a map of the Park and proposed facilities; b) an inventory of resources in the Park; c) assessment of wildlife population trends in the Park; d) assessment of wildlife interference and plans for controlling it e) a description of proposed research activities, infrastructural development and wildlife resource management in the Park f) plans for administration of the Park; g) plans for the development of national and international tourism; h) plans for the creation of buffer zones around the Park and the participation of local communities in the management of the Park; i) plans for public participation in the activities of the Park; j) plans for promoting and assisting in ensuring environmentally sound and sustainable development in the areas surrounding the Park, other than the buffer zones, with a view to furthering the protection of those areas.

3. Sector issues to be addressed by the project and strategic choices:

The area of operation for watershed development can be defined at various physical scales: at one extreme watersheds cover whole regions or countries, at the other they occur within individual farms. It is impractical to prioritize natural resource management issues on a regional or national level because the priorities are inevitably location specific, and often, priorities need to be determined at the micro (or community) level that may encompass one or more villages. A program adopting a micro-watershed as the physical planning and management unit would be able to identify location specific priorities and address them in an integrated and participatory manner. The MEMP will therefore select micro-watershed areas on a combination of biophysical criteria (e.g. levels of erosion, groundwater potential, livestock numbers, biodiversity), social criteria (e.g. landholding size, land tenure arrangements, migration levels, literacy levels) and institutional criteria (e.g. functioning of self-help groups, history of collective action, presence of NGOs).

Institutional reforms will be directed toward three critical areas: (i) the establishment and effective enforcement of regulatory frameworks that protect the poor and promote environmentally and socially sustainable development; (ii) to establish capacity at state and local levels to facilitate communities to develop multi-sectoral micro-watershed plans; and (iii) to establish transparent, accountable and systemic mechanisms at the state level to directly finance priorities identified by communities. Severe constraints have limited the actual impact of public institutions with the responsibility for providing these services. Institutions, such as the newly established Federal Ministry for Environment, the State Environmental Agencies, State Productive and Social Departments, need to set priorities within realistic budget envelopes rather than scatter their limited resources too broadly and ineffectively. Clear divisions of responsibility will need to be defined among the institutions, with a clear delineation of horizontal as well as vertical linkages. Such a definition of responsibilities will support the establishment of common objectives formulated with the active participation of the local communities.

Recommendations of the Biodiversity Strategy. Implementation of recommendations proposed in the government's Biodiversity Strategy and National Parks Service Decree is constrained by several limitations. The escalating growth in populations is a key contributor to biodiversity loss since this growth implies increasing demands on food, fuelwood, and arable land for cultivation and water resources. The growing pressures to cultivate increasing extents of land for food production has led to deforestation, shortening of fallow periods, soil deterioration and increasing application of fertilizers, pesticides and herbicides for agriculture. Besides the clearing of vast areas for agricultural expansion, uncontrolled logging, mining, over-fishing and uncontrolled hunting contribute to loss of biodiversity and habitat degradation. While the protected areas enjoy some level of conservation of species diversity and habitats, lack of funding, manpower and technical support have led to the deterioration of these protected areas and a serious depletion of plant and animal diversity. Continued under-funding for environmental protection and conservation activities; lack of effective mechanisms of institutional coordination among public agencies from the national to the state and local levels of government; and the lack of capacity for monitoring and enforcement of regulations, all pose challenges to the implementation of the enabling policy and legislative directives.

Main threats facing protected areas: The main threats facing the protected areas therefore include: encroachment; unregulated exploitation of resources; conversion of natural habitat to other forms of land use including agriculture, infrastructure and industrial development. Indirect causes leading to degradation of biodiversity within the protected areas include: (a) increasing poverty in surrounding areas; (b) degradation of the natural resource base including grazing and other reserves; and consequent growing dependence on resources within the protected areas; (c) conflicting policies and programs; (d) inefficiency, lack of capacity and lack of coordination within and among different levels of government and

resultant rise in illegal resource exploitation; (e) undervaluation of forest and biodiversity resources; (f) lack of stakeholder participation in existing programs; and (g) lack of adequate tenure and access rights.

Getting the Incentives Right for Community Participation

The costs and benefits of a resource management activity, whether on private property, common property, or both, have implications for society as a whole and also for individual resource users. For example, soil erosion or deforestation may lead to siltation of reservoirs and rivers which represents a real cost to society. Individuals, however, will tend only to consider the costs and benefits that actually accrue to them from the decisions they make about how to use their resources. They would tend to value the costs and benefits without any attempt to adjust for external effects. Therefore, even though society may be interested in retarding the degradation of a resource, conservation measures will only be adopted by resource users if the *individual* net benefits are greater than the costs.

Getting the financial and other incentives right is critical to the success of this program. However incentives for natural resource management technologies (e.g. soil conservation) can vary considerably even within narrowly defined agro-ecological zones: farmers on different slopes experience different rates of erosion; they face different costs of conservation (the optimal spacing of terraces and diversion ditches being a function of slope); and, the net benefit accruing to an individual's action is a function of others adopting similar technologies (this is one of the rationales for promoting collective action). Similar asymmetries can be found in other NRM activities such as watershed management, social forestry, rangeland management, and so on. The distribution of asymmetric costs and benefits therefore affects the choice of financial instrument - i.e. credit or matching grants.

It is proposed to use matching grants (i.e. direct grants to communities matched by local contributions from communities based on a sliding scale) to induce individual resource users to adopt new technologies for the benefit of society as a whole. The participatory process with an emphasis on decentralizing planning, fiscal, and implementation authority directly to communities will provide additional incentives for community participation.

Summary of Major Sector Issues and Strategic Choices

Major Sector Issue	Strategic Choice
Causes and consequences of natural resource degradation are location specific and community priorities for addressing these consequences are likely to be multi-sectoral.	*Adopt a community-driven approach to program implementation that empowers communities to make informed judgments and determine their own priorities within a micro-watershed physical planning unit.*
Lack of capacity and awareness amongst federal and state line ministries about participatory approaches to watershed management and potential benefits of integrated use, regulation and development of land and water resources.	*i) Carry-out exposure visits of key champions at federal and state levels to countries where watershed management has been widely adopted;* *ii) at project start-up, provide intensive, hands-on, training in a country with considerable expertise and experience in participatory watershed management;* *iii) establish linkages between external training centers and Nigerian counter-parts to provide on-going technical assistance and training to project implementation staff.*
Federal level institutional and legislative environment is unclear with overlapping mandates both within the Federal Ministry of Environment and also with the Federal Ministries of Agriculture & Rural Development and Water Resources.	*i) encourage the FME to initiate an institutional assessment in collaboration with other federal ministries and make recommendations defining all stakeholder roles and responsibilities;* *ii) harmonize the existing environmental legal framework in line with the revised mandates resulting from the assessment process.*
In such a large country with a federal structure, effective environmental management can only be achieved if some responsibilities and authority for environmental assessment and enforcement are decentralized to states and local governments. However, EIA enforcement capacity is weak at all levels.	*i) ensure that federal policy and legislation allows for decentralization of EIA responsibility and authority to states and local governments;* *ii) ensure that state legislation is coherent with federal legislation;* *iii) develop procedures to ensure that EIAs are carried out on all eligible projects at state and local government levels;* *iv) build capacity at state and local governments to review and monitor compliance with recommendations of EIAs.*
Lack of awareness amongst the general population about natural resource degradation, watershed ecosystems and environmental legislation.	*establish a development communication strategy to raise awareness and promote free and timely flow of information and modify behavioral attitudes of all stakeholders.*
Public institutions lack sufficient accountability and corruption continues to be a major constraint to equitable growth.	*utilize the development communication strategy to promote transparency about project implementation mechanisms, especially concerning terms of participation, financing mechanism and requirements for community contributions.*
Lack of institutional coordination and capacity for protected area management and biodiversity conservation	*i) improve policy and institutional framework for biodiversity conservation;* *(ii) define management plans for each of the protected areas* *(iii) identify mechanisms to ensuring sustainability of*

Major Sector Issue	Strategic Choice
	management initiatives
Insufficient capacity for effective planning, management and monitoring of protected areas and the support zones	*improve access to technical assistance, training and equipment for key stakeholders and agencies*
Conflict between the aims and programs of protected area management and activities of surrounding populations	*(i) identify in participatory approaches, micro-projects that are acceptable to the community and lead to sustainable livelihoods for the communities in the respective support zones;* *(ii) identify mechanisms for sharing of benefits from protected area management*
Lack of awareness within the larger community of the value of preserving biodiversity and ecosystems	*Information communication and public awareness activities to promote understanding of essential linkages between biodiversity, environmental stability and sustainable livelihoods*
Unsustainable natural resource utilization and management of protected areas and within their support zones	*promote identification of participatory mechanisms to incorporate environmental externalities, including biodiversity, into collaborative planning and management systems of protected areas*
Declining tourist visitation in the National Parks and a decrease in benefits associated with tourism	*Technical Assistance to maintain tourism facilities and services within the protected areas and promote partnerships to develop responsible tourism that will yield significant benefits to local stakeholders*

C. Project Description Summary

1. Project components:

The components are as follows:

(i) Community-Driven Investments in Micro-Watershed Development. This is the largest component of the MEMP. More than 60 percent of the credit will fund direct investments at the micro-watershed level to promote sustainable management of natural resources by communities. A multi-disciplinary team comprising of all the relevant government agencies and NGOs would facilitate a participatory planning process with local communities. This process would map the status and extent of degradation of the various natural resources, including medicinal plant species, that comprise the micro-watershed. It would also identify priority basic infrastructure needs (e.g. rehabilitation of feeder roads, drinking water, post-harvest productive infrastructures, etc.) that are essential prerequisites for subsequent investments in NRM, or essential for maximizing returns on investments in NRM. Based upon this analysis, communities would prepare a micro-watershed development plan that prioritizes entry point investments within a pre-assigned budget envelope to address the most critical issues (e.g. a combination of gully erosion control, reforestation, a limited range of basic infrastructures, etc.). The participatory planning process would also identify and strengthen existing informal groups or establish local community-based Watershed Associations for implementation of works and future maintenance of investments. Entry-point activities would be co-financed by the program on a matching grant basis whereby communities contribute towards the cost of the intervention in cash, materials, or their own labor. The program will decentralize decision-making authority for prioritizing activities and also financial resources for implementation to Watershed Associations. This will increase their ownership of the investments, result in efficiency gains and also enable them to build management capacity as part of micro-project implementation.

(ii) Strengthening Environmental Institutional and Legislative Framework. Five main sub-components have been identified under this component. They are considered to be the most vital for improving the legal framework and enforcement capacity for environmental protection and natural resources management regime. The activities include: (i) institutional assessment and development; (ii) harmonizing current legislation and regulations to make them consistent with the establishment of the FME and redrafting those which need to be revised; (iii) design of community awareness programs to be implemented under the fifth component on *Development Communication*; (iv) formulating and implementing programs to strengthen institutional enforcement capacity, including training of civil servants, judges and lawyers involved in environmental protection and natural resources conservation (part of this sub-component will be implemented and funded under the third component on *Strengthening Environmental Management Support Services*); and, (v) review the existing policy and regulatory framework for protected area management and identify options for strengthening such framework for promoting more effective and participatory approaches for promoting conservation and sustainable use of biodiversity and critical ecosystems. To enable effective enforcement of environmental regulations, the federal legislation will need to designate some Environmental Impact Assessment (EIA) responsibility and/or authority to states and LGAs. Once this is done, there will be a need to review state level environmental regulations to ensure that these are consistent with the federal regulations and that there is sufficient authority to enable states to conduct EIAs.

(iii) Strengthening Environmental Management Support Services. This component would build upon the strengthening of the federal-level environmental institutions and legislation carried out under component (ii) above. There is a need to build capacity in states and LGAs to review EIAs and monitor compliance. In the first instance, state and LGA capacity building will be geared towards reviewing EIAs and monitoring compliance of community-based micro-projects implemented under component (i) above. However, it is

envisaged that, in the medium term, states and LGAs will apply their increased capacity to reviewing and monitoring environmental compliance of other projects implemented within their jurisdiction. Specifically, this component will: (i) establish an intersectoral committee at the state-level comprising of staff from sectoral agencies and one staff from the State Ministry of Environment mandated with the responsibility for EIA review and monitoring; (ii) enhance technical and managerial capacity at state and LGA levels to acquire, operate and maintain appropriate technology for EIA and environmental management; (iii) develop simplified guidelines, including checklists, for EIAs and monitoring requirements specific to the project; (iv) prepare a state EIA procedures manual to assist state level personnel in carrying out EIAs; and, (v) provide training to project staff, state officials, and local government officials, in environmental assessment and management.

(iv) Protected Area and Biodiversity Management Component. GEF will finance the incremental cost of activities which have global benefits. The goals of this component are consistent with the following goals of the National Biodiversity Strategy: (a) improve conservation through the national system of protected areas; (b) promote sustainable use of biological diversity through improved management; (c) mainstream both conservation and sustainable use through an integrated approach to land use planning at the local level. The activities under the component will aim specifically to: (a) strengthen management capacity of NPS; (b) promote partnerships and collaborative arrangements for protected area and biodiversity management; (c) identify and promote incentives for biodiversity conservation; (d) promote best practice in sustainable use of biodiversity. The interventions under this component will address critical issues including: (a) the protection of ecosystems with high value global biodiversity (See Annex 2 for the description of the targeted protected areas); (b) maintenance of conditions vital to the sustenance of protected areas and critical habitats; (c) enhance the efficiency of biodiversity resource use; (d) unsustainable natural resource utilization within protected areas and in support zones; (e) lack of awareness, ownership and incentives within the larger community of the importance of conservation of the nation's indigenous wild flora and fauna and habitats; (f) lack of baseline data on indigenous species and natural habitats; (g) lack of capacity for monitoring biological diversity within protected areas; (h) lack of capacity, participatory processes and community involvement in protected area management; and (i) inadequate incentives for promoting eco-tourism facilities and services. Activities under this sub-component will aim to strengthen institutional and organizational capacity of a number of agencies for effective participatory protected area management in seven selected protected areas and their support zones. This sub-component will also support development initiatives of communities living within the support zones of the selected protected areas and promote the involvement of local stakeholders more closely in protected area management. These initiatives will promote sustainable livelihoods while emphasizing the linkages between biodiversity conservation and benefits for communities neighboring the protected areas. Key stakeholder groups will be assisted to establish collaborative mechanisms to support conservation-linked development and reduce unsustainable use of shared resources. Under this sub-component, community-based incentives and management options will be identified, to promote medicinal plant species for human and livestock care needs. These latter initiatives will be carried out in consultation with National and state level health authorities in keeping with recommendations in the National Health Strategy.

(v) Development Communication. This component cuts across all the previous components and is also essential to the implementation of transparent and effective direct financing of communities. The development communication initiatives will seek to create and sustain a dynamic information network that will create and sustain strategic alliances between the various levels of stakeholders to achieve optimal project implementation. These initiatives will also seek to modify behavioral attitudes at the various stakeholder levels on issues relating to the watershed ecosystem, wildlife, bio-diversity and protected area

management. There will be a clear emphasis on raising awareness on the cause-and effect sequences relating to environmental and ecosystem degradation. The biodiversity conservation education programs will target local schools, support-zone communities and other stakeholder groups that are of particular significance to each conservation area. An emphasis on gender and issues relating to HIV/AIDS will be integral to the development communication component.

Component	Sector	Indicative Costs (US$M)	% of Total	Bank financing (US$M)	% Bank financing	GEF financing (US$M)	% GEF financing
(i) Community-Driven Investments in Micro-Watershed Development	Natural Resources Management	91.00	79.1	80.00	84.2	0.00	0.0
(ii) Strengthening Environmental Institutional and Legislative Framework	Institutional Development	1.00	0.9	1.00	1.1	0.00	0.0
(iii) Strengthening Environmental Management Support Services	Environmental Institutions	5.00	4.3	4.00	4.2	0.00	0.0
(iv) Protected Area and Biodiversity Management	Natural Resources Management	8.00	7	0.00	0.0	8.00	100.0
(v) Development Communication		10.00	8.7	10.00	10.5	0.00	0.0
Total Project Costs		115.00	100.0	95.00	100.0	8.00	100.0

2. Key policy and institutional reforms supported by the project:

The Federal Ministry of Environment (FME) was created in June 1999 by a Presidential Directive. In October 1999, a further Directive authorized that the departments of Forestry including Wildlife, Forestry Monitoring, Evaluation and Coordinating Unit (FORMECU) of the Ministry of Agriculture; the Environmental Health and Sanitation Unit of the Ministry of Health; the Oil and Gas Pollution Control Unit of the Department of Petroleum Resources (DRR) of the Ministry of Petroleum Resources; the Coastal Erosion Unit, the Environmental Assessment Division, the Sanitation Unit of the Ministry of Works and Housing; and the Soil Erosion and Flood Control Department of the Ministry of Water Resources to be released to the FME. The structure of the FME continues to evolve and IDA and UK Department for International Development (DFID) provided support to FME to delineate a Vision and long-term action agenda. The MEMP will build upon this initial technical assistance to enable the FME to implement the action plan and strengthen the capacity of the FME to carry out its mandate.

Under the MEMP a number of policy and institutional reforms will be sought:

The institutional assessment would: (a) assess the mandates, roles and responsibilities of key institutions involved in environmental protection and natural resources management; (b) clarify the mandates, roles and responsibilities of each agency involved and develop a sound and coordinated institutional framework for environmental protection and natural resources management at federal, state and local level including defining the rights, roles and responsibilities of the communities and provide rules for inter-relations between all stakeholders involved; (c) provide draft proposals defining the mandates, roles, responsibilities of each stakeholders, including those of states, LGAs and communities at micro-watershed level. Suggest any regulations, contracts, legal instruments that need to be prepared, signed or notified to ensure proper implementation of the proposed institutional arrangements; and, (d) review and strengthening of regulatory

framework for: (i) protected area management; and (ii) promoting conservation and sustainable use of biodiversity.

The harmonization process will include: (a) establishing a criteria for the harmonization process; (b) reviewing the conflicts, inconsistencies and gaps between all legislation dealing with environment and natural resource management in a coordinated manner (e.g. reconcile legislation/regulations with the new expanded mandate of the FME, ensure harmonization with traditional rules, norms and practices used at state, LGA and community level, etc); (c) reviewing the draft EIA procedures with a view to making them consistent with the harmonized legislation and delegating certain responsibilities and authority to states and local governments; (d) revising and redrafting the existing legislation and regulations to reduce conflicts, inconsistencies and gaps; (e) prepare a draft protected areas legislation consistent with all biological diversity-conventions to which Nigeria is party and ensuring support zone community participation in parks and protection areas protection and management; (f) finalize the draft forest legislation prepared by the forest department, including provisions for sustainable use and development of forest, decentralization of forest management, sound and transparent mechanisms for forestry rights allocation, and community forestry; (g) review any legislation that may raise issues or problems during implementation, including conflict with customary rights dealing natural resources management and prepare draft revised legislation accordingly; (h) translating the legal materials into local languages if needed.

3. Benefits and target population:

The Government have identified six macro-level watersheds have been identified for program intervention: (i) Sokoto/Rima Basin; (ii) Upper Benue Trough; (iii) Anambra/Imo Trough; (iv) Ogun/Osun Basin; (v) Niger Trough; and (vi) West/Chad Basin. The identified macro-watersheds cover approximately 32 out of 36 states in the country. Within these six macro-watersheds, six pilot states have been selected for the first two years of program implementation: Adamawa, Bauchi, Benue, Enugu, Imo and Niger. Within these states, GEF financed activities will promote effective and participatory management of seven protected areas: Yankari and Kainji National Parks and their support zones, the Lame-Burra game reserve and support zone, Maladumba Lake and Forest Reserve and Sebore, Girei and Begale Hill Forest Reserves. (See Annex 2: Protected Areas). Following this first phase, the program will be gradually scaled-up geographically (based upon performance) to cover a total of 18 states. Additional geographical areas will be identified for intervention during the third year of program implementation.

It is important to note that the project spans many states, each with different policies, physical differences, population pressures and environmental problems. While generalities can be made based on the problems articulated by communities and what the team observed during preparation, the specifics of program benefits will be tailored to the priorities of each community.

Depending on community priorities, direct program benefits would include decreased soil erosion (land degradation) on upland areas, reduction in downstream floods, increased production of fodder, fuelwood and grasses. Sustainable use of medicinal plant species will yield economic, social and health benefits. Sound management of catchment areas will yield increased agricultural productivity on arable lands. Direct and indirect employment will be created in the rural sector, including transportation and marketing. Benefits from rural infrastructure would be a reduction in the cost of transportation and improved access to the market and social amenities by the population. Investments in such assets would contribute to the improvement of income and general quality of life of the rural population. Increased potable water supplies would allow an intake of 70 liters per person per day with excess water for livestock and would reduce time spent in the collection of water from distant and unreliable sources. Drainage line treatments, contour farming using vegetative and/or earthen structures combined with improved land husbandry practices

would reduce silt loads of rainwater run-off, improve moisture infiltration and contribute to ground-water recharge. This would lead to reduction in soil loss, protection of vulnerable land and to increases in land reclaimed for future agricultural use. There will be a special emphasis under the project on women and vulnerable groups within the watersheds which would result in empowerment of these groups and in improving their economic and social conditions.

The benefits of the program, in line with the objective of conservation and sustainable use of significant biodiversity, are difficult to quantify in monetary terms, or to assign to specific populations. However, ecosystem services such as generation of biomass and nutrients, control of erosion and sedimentation, maintenance of genetic potential, along with the range of aesthetic, cultural and ethical values represented by the maintenance of biological capital are significant. Through GEF supported activities, communities living in the support zones adjacent to the target protected areas, a rough estimate of around a million people will derive direct benefits in the short to medium term. Some of these groups rely for their livelihood on the provision and maintenance of ecological services provided by the protected areas (e.g. wildlife and tree species for consumption purposes). They engage in a variety of productive activities including use of forest products, grazing, propagation of wild species for trade, hunting and fishing. GEF supported activities seek to: (a) support and extend productive uses, compatible with conservation of biodiversity within the protected areas and support zones; and (b) promote adoption of alternative development options compatible with conservation and sustainable use of biological diversity and maintenance of ecosystem services. Communities will benefit directly: (i) from the maintenance of ecological services and through enhanced conservation of biological capital in the protected areas; and (ii) through the alternative livelihood options promoted under the project to ease the stress on the resources within the protected areas. Global benefits from the project will be the improved conservation and protection of globally significant biodiversity in target locations.

4. Institutional and implementation arrangements:

In order to maintain flexibility and to adapt the institutional and implementation arrangements as experience evolves, the program will make the Program Implementation Manual the principal document guiding implementation. The Manual will specify roles, responsibilities, incentives, reporting and monitoring requirements of all actors. It will be reviewed and amended on an annual basis as part of supervision missions and IDA approval of revised Manuals will be required. The implementation arrangements specified below provide an indicative guide and general principles on what would be feasible based on discussions with representatives of federal, states, LGAs and communities.

Overall Program Implementation

The overall implementation of the MEMP comprises of four levels: federal, state, local government and community. The direct financing arrangements, however, will operate primarily at the state, local government and community levels. As envisioned, the financing arrangements are as follows: communities/villages will be expected to prepare micro-watershed plans (MWPs) with assistance from government (or NGO) multi-sectoral implementation teams (MITs) operating at the local government level. (These teams will be recruited through an open and transparent competitive process. NGOs will also be allowed to apply to become independent MITs and selection criteria (and performance indicators) will be established to enable their recruitment through an open and transparent competitive selection process). A micro-watershed plan will include several micro-projects identified by the community. The project will provide a budget envelope of US$50,000 for each micro-watershed of 1,000 to 1,500 ha (comprising of a population of about 1,000 to 3,000 people depending on population density). Communities will contribute an

aggregate of 10% for each micro-watershed plan. Contributions for individual micro-projects within the MWP will vary and will be designed to provide incentives for impure public goods.

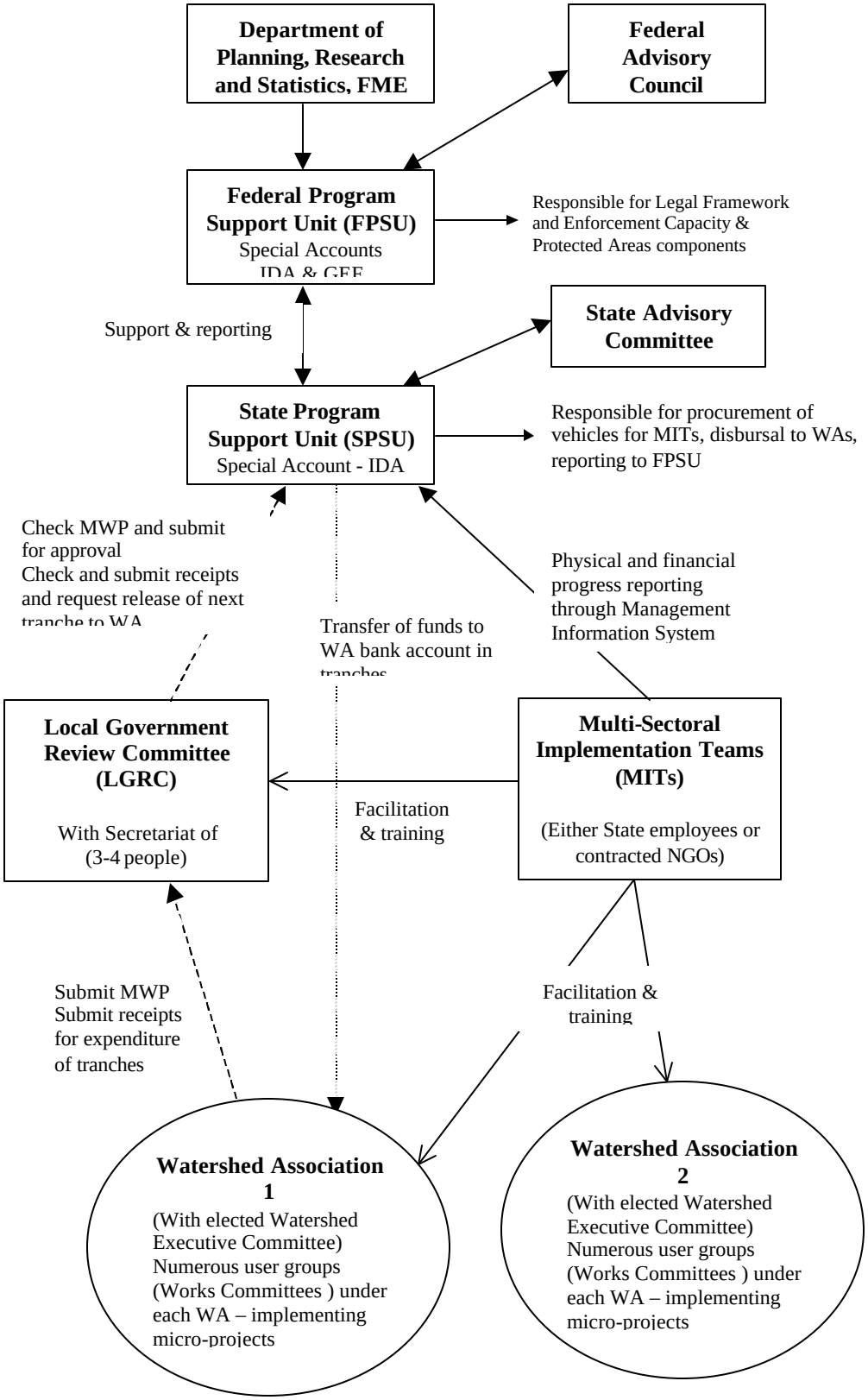
The plan, once endorsed by the MIT, will be forwarded to the LGA-level. The plan will be reviewed by the Local Government Review Committee (LGRC) supported by the LGRC Secretariat. The LGRC will comprise of representatives from the LGA departments, as well as representatives from Watershed Associations, ward councilors, religious groups and traditional leaders. The majority of voting members will be from broader civil society. If the MWP is approved, the LGRC will request financing for the micro-watershed plan from the State Program Support Unit (SPSU). Funds will be disbursed from the SPSU into community bank accounts in tranches. The release of each new tranche is dependent on a review of financial transactions and expenditure of the previous tranche. Complete documentation will be kept on all financial transactions, including original receipts, labor registers etc. Communities will be fully responsible for managing funds and implementing the micro-projects.

The Federal Advisory Council will comprise of agencies from the Federal Ministry of Environment (Dept. of Forestry, Dept. of Environmental Conservation and Dept. of Soil Erosion and Flood Control), Federal Ministry of Agriculture and Rural Development (Dept. of Rural Development, Dept. of Land Resources, and National Parks), and Federal Ministry of Water Resources (Dept. of Water Supply and Dept. of Dams and Reservoirs). At the state level, the State Advisory Committee will comprise of representatives from State Ministries with a mandate for promoting natural resource management, conservation of biodiversity and environmental enforcement. Broader civil society will also be represented through NGOs, academics and other respected individuals.

Initially, program financial resources will be channeled directly to Community Organizations from State Governments to enable communities to procure goods, services and technical assistance from local suppliers. However, through a phased approach based on demonstration of capacity, responsibility for allocating financial resources to communities will be transferred to LGAs.

As diagram 1 below on flow of funds indicates, all formal agreements will be between the SPSU represented by the MIT/LGRC or any other person/entity designated as such by the SPSU and the community represented by the Watershed Association (WA).

Diagram 1: Overall Implementation Arrangements and Funds Flow



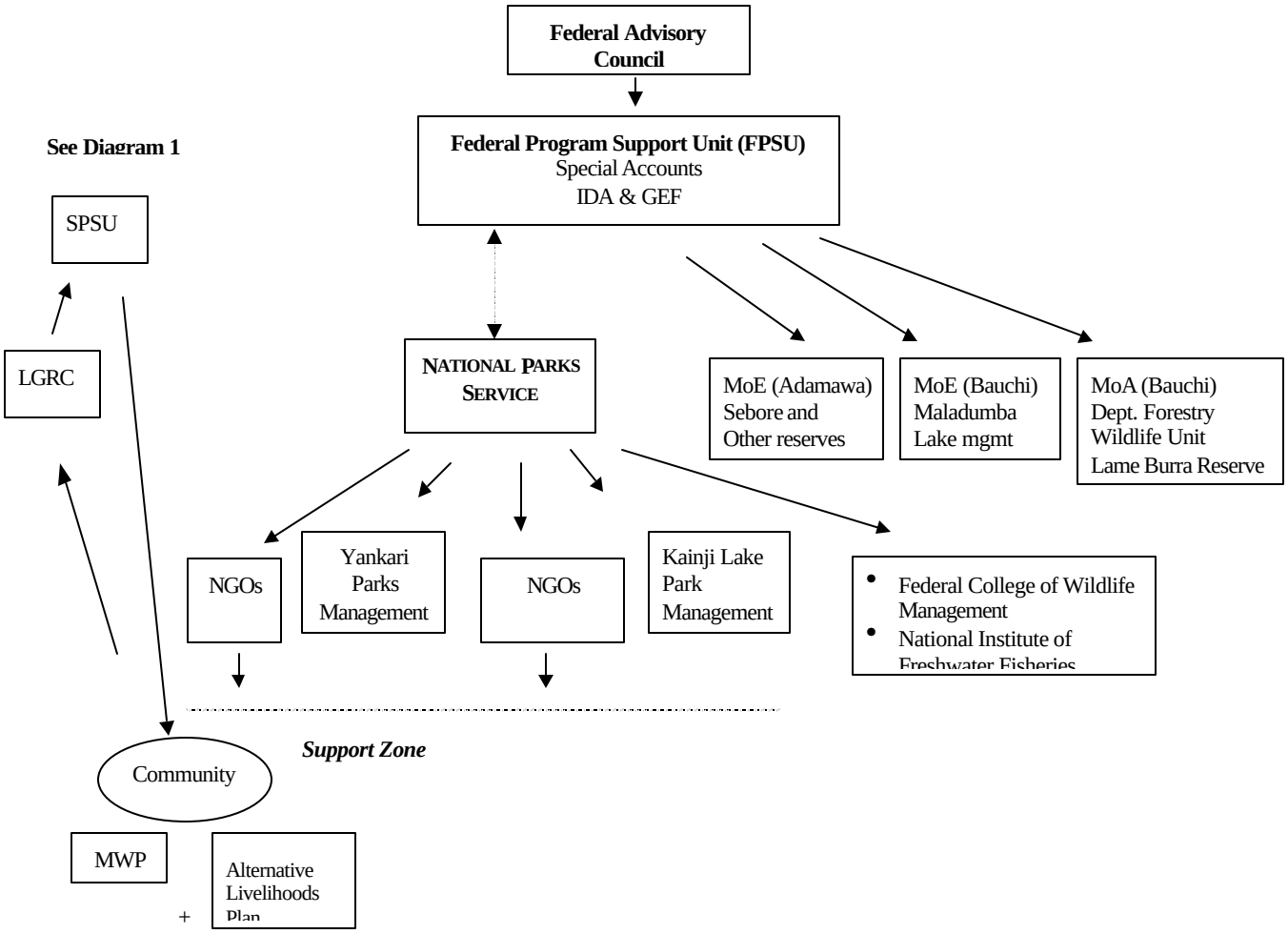
Implementation of the Protected Area and Biodiversity Management Component

The National Parks Service (NPS) will be the main implementing agent for activities supported by GEF. NPS will have responsibility for all capacity building and park management efforts relating to the Yankari and Kainji Lake National Parks. In addition, NPS will be responsible for the review and coordination of policy and regulatory review related to protected area and biodiversity management in general. NPS will also have responsibility for identifying and supporting sustainable livelihood initiatives to promote biodiversity conservation and ecologically viable developmental activities within the support zones. The NPS will implement their mandate in close collaboration with FME/FPSU as well as other sectoral agencies and with local and national NGOs, research and training institutions and the private sector as needed.

In Bauchi State, the Wildlife Unit, within the Department of Forestry, of the Ministry of Agriculture will be the implementing agency for activities within and around the Lame Burra Game Reserve and Maladumba Lake and Forest Reserve. The Ministry of Environment (MoE) in Bauchi State will be responsible for liaising with the Federal University, Bauchi campus, local NGOs and the private sector, to promote research and implementation of programs for sustainable utilization of natural resources. It is possible that responsibility for the Lame Burra Game Reserve and Maladumba Lake and Forest Reserve will also shift to MOE. In Adamawa State, the Ministry of Environment and the LGAs will coordinate activities pertaining to the Sebore, Girei and Bagale Hills Forest Reserves, with support as needed from FME/FPSU and NPS.

With regard to funds flow, NPS will operate a Special Account to fund the different activities for which they are the main implementing agency. With regard to GEF supported activities in Bauchi and Adamawa states, funds GEF supported activities will be drawn down from the Special Account maintained within FPSU. The implementation arrangements are represented by diagram 2 below:

Diagram 2: Implementation Arrangements for Protected Area and Biodiversity Management Component



Participatory processes are critical to sound watershed management. Within the decentralized framework, the project will ensure that investments at the community level are undertaken directly by the ultimate beneficiaries of the project, with the participation of state and local levels of government. Within the support zones, communities are eligible to derive support from IDA, based on the submission and approval of a micro-watershed plan and from GEF on the submission and approval of an alternative livelihoods plan. While in the case of the IDA, their support will come directly into community accounts, based on approval by the SPSU, in the case of the GEF support, the funds will come either via NPS or via a local or national NGO, who will have responsibility for ensuring that such projects/plan is consistent with the goals of the protected area and biodiversity management component.

Management Information System and Monitoring & Evaluation.

The MEMP Management Information System (MWMIS) will be a computer based information management system that will be used to track all activities during the start up of the National program and the implementation of community driven investments in micro watershed development (CDI-MWD) in six pilot states. The primary objective of the MWMIS would be to assist Federal and State Level management to supervise project components, process and track investments for micro-watershed

development plans, manage capacity building activities, investigate studies and consultancies and provide critical institutional support to the overall program. The MWMIS will be a crucial element within the MEMP support infrastructure that will help management monitor and evaluate CDI-MWD activities. It will help generate monthly, quarterly, annual and mid term reports as well as ad-hoc query reports on MEMP activities. The MWMIS will be used to administer and manage the Watershed management and other components in the program.

Capacity at federal and state level is weak or non-existent. The MEMP will seek to strengthen capacity for environmental impact monitoring and enforcement of compliance under component 3. Annex 1 outlines preliminary indicators for monitoring and evaluating the progress of the different components. These indicators will form the basis for the preparation of a detailed monitoring and evaluation plan. The FPSU will contract out responsibility for preparation of the detailed monitoring and evaluation plan and for carrying out regular impact monitoring of both micro-watershed and biodiversity conservation investments. A draft monitoring and evaluation plan is expected to be available by program effectiveness. This will be finalized during the first year of implementation. The rationale for this is that, assessment of effectiveness and impact are essential in order to move to a future phase of the program. Without adequate data on impact, it will not be possible to assess the viability of the approach and justify a future expansion. Because of the strong emphasis on participatory processes, it is also proposed to contract out responsibility for process monitoring to a third party. The Process Documentation Research (PDR), as it is known, is particularly crucial when a program is in a testing or pilot phase (e.g. micro-watershed and sustainable livelihood investments). Critical issues have to be brought to the attention of the planners during this phase and necessary improvements and experiments are done to over come the problematic areas prior to a scaling up of the program. PDRs in the Philippines and India has resulted in many mid-course corrections in the program design and process, besides feeding into many important policy and procedure improvements.

D. Project Rationale

1. Project alternatives considered and reasons for rejection:

Previous projects have sought to address natural resource degradation problems through a variety of agricultural, soil conservation or forestry line agencies. The common administrative approach has been to focus on the implementation of physical investments on public and private land, often with a predominant single technical solution, and on encouraging the adoption of conservation-orientated farming practices on private land. Previous projects have sought to classify different regions according to the primary natural resource constraint and then design projects with a limited set of technical solutions to address those problems through sectorally focused projects. For instance, it has been assumed that deforestation and accompanied desertification are priority concerns in the Northern States, gully erosion has been a priority concern in the Southeastern States and flooding has been a priority concern in the Southern Delta region. Sectorally focused programs have sought to adopt a participatory approach to working with communities but, because of their limited technical solutions, the approach has tended to be supply-driven rather than driven by the actual priority needs of communities. The end result has been that sustainability of project investments at the community-level has been a perennial problem and they have rarely managed to scale-up their geographical coverage despite considerable levels of subsidies.

When the priorities of communities are assessed at the micro-level (i.e. at the village level), it is evident that there is considerable variation in their perception of key problems, their analysis of the underlying causes, and also their proposed actions to address those problems. The priorities of natural resource intervention are therefore inevitably location specific, and often, priorities need to be determined at the micro (or community) level that may encompass one or more villages. It is now well understood that if local-level project investments are to be sustained through beneficiary participation they must address genuine priorities and have a strong sense of ownership by beneficiary communities. Furthermore, in order to scale-up project impacts in terms of geographic space, the projects must provide the right incentives for community-driven development. It is therefore necessary to address local natural resource degradation through an integrated and multi-disciplinary approach in order to respond to actual community priorities while also maximizing the synergistic benefits.

The complex of issues related to increasing soil and moisture loss, land degradation, sedimentation, deforestation, irregular stream flows and poverty can best be understood in the framework of micro-watersheds as physical planning units. The micro-watershed approach provides an opportunity to define and prioritize local level resource management priorities and entry point activities through the active participation of the resource users themselves (i.e. local communities). Furthermore, the approach would provide the opportunity to promote coordination between the various sectoral government agencies that have traditionally operated on sectorally focused projects. The approach is therefore the most appropriate means of operationalizing the goal of an integrated approach to natural resource management.

While Government commitment to biodiversity conservation is indicated by the existence of a large number of protected areas, few of these are managed effectively. While the National Parks Service Decree identifies the need for a more participatory approach and a greater role for the involvement of local communities in the management of the protected areas, park management has been slow to implement the provisions of the decree. Recent exposure to protected area management in Eastern Africa, has led to an attitudinal change in senior management and there are plans for a participatory intersectoral planning and management strategy of protected areas. However, insufficient public sector investment and lack of capacity has led to inadequate program in conservation and sustainable use and management of biodiversity. In the absence of the proposed support, Government and NGO groups

concerned with conservation would remain poorly equipped, their efforts largely uncoordinated and ineffective in addressing short and medium term threats to the serious degradation of biological capital.

Initially, the inclusion within the project of all protected areas designated National Parks was considered. This option was soon rejected for a range of reasons: (a) some of these National Parks such as the Gashaka Gumti National Park and Cross River National Park either had projects funded by other donors or were in the process of receiving support from other donors; and (b) management, monitoring and supervision, would be a significant challenge due to the geographical scope and location of the different parks and protected areas. Thereafter, the inclusion of all protected areas within those states targeted by the MEMP was considered. This option was also rejected due to the large number and diversity of protected areas within these six states. As the project design progressed, the team decided to include only 7 protected areas including the two national parks, Yankari and Kainji Lake, falling within three of the six states: Niger, Bauchi and Adamawa states during this first phase of the MEMP. The decision is based on a number of reasons including: (a) ownership and commitment of implementing agencies; (b) existence of high value global biodiversity; (c) existence of local NGOs to support co-management options; (d) existing experience with sustainable livelihood program delivery by NPS and by local NGOs such as Savannah Conservation and the ability to build on such experience; and (e) cost-effectiveness in program supervision by limiting the program to a particular geographical area. If the interventions are deemed to be successful during the first few years of implementation, lessons learned could be easily replicated within other protected areas and their support zones. Annex 2 provides a description of the targeted protected areas, their biological characteristics, the key threats faced and how the proposed project aims to address them.

Initially an APL lending instrument was considered given that the watershed management approach would require adopting a long-term approach to local development including the promotion of coordination and capacity building amongst different ministries at the Federal, State and local government levels. However, because there is no agreed CAS at present and also because the Federal Ministry of Environment (the lead ministry) has only recently been established, at the PCD Review Meeting, it was decided to adopt a SIL financing instrument. Nevertheless, it is envisaged that this project will be the first phase of a longer term program. It is envisaged that, at the end of this 5 year program, 18 States will be included in the program.

2. Major related projects financed by the Bank and/or other development agencies (completed, ongoing and planned).

Sector Issue	Project	Latest Supervision (PSR) Ratings (Bank-financed projects only)	
Bank-financed		Implementation Progress (IP)	Development Objective (DO)
Institutional and environmental capacity-building.	Environmental Management Project (completed March 1999)	S	
Afforestation, soil conservation and rehabilitation of plantations	Second Forestry Project (completed August 1997)	S	
Agricultural development	Third Multi-State Agricultural Development Program (completed June 1998)	S	
Agricultural extension, feeder roads	Kaduna/Katsina Agricultural Development Project (completed May 1996)	S	
Agricultural research and extension	Agricultural Services project (completed May 1999)	U	
Livestock development	Second Livestock Development project (completed December 1996)	S	
Road infrastructure construction	Multi-State Roads project (completed May 1999)	S	
Small-scale irrigation and agricultural development	FADAMA (completed March 1999)	S	
Urban water supply and sanitation	Small Towns Water project (effective May 18, 2000		
Other development agencies			
Agricultural development and NRM			
IFAD: Kaduna Agricultural Development project (closing June 2001)			
Agricultural development and NRM			
IFAD: Sokoto State Agricultural and Community Development (closing June 2001)			
NRM			
UNDP: Sustainable Agricultural, Environmental and Rural Development project			

IP/DO Ratings: HS (Highly Satisfactory), S (Satisfactory), U (Unsatisfactory), HU (Highly Unsatisfactory)

3. Lessons learned and reflected in the project design:

Sector & Themes KM

A number of important lessons can be learnt from watershed development and protected area and biodiversity management projects in Africa and South/Southeast Asia. A critical lesson to be drawn is that successful watershed development projects require widespread stakeholder involvement in the selection of micro-level investments, choice of location and implementation. The project approach must also be flexible in order to refine the incentives for community participation and adapting the strategy for scaling-up. The principle lessons of relevance to this program are as follows:

Participatory micro-watershed planning. It is essential to assign sufficient time and support at the initiation of micro-projects to ensure that an interactive planning process is established. These planning approaches should have as their objective to put planners, agency staff, and villagers on a common ground for identifying key problems, analyzing their causes, and devising realistic action plans that reflect local needs and also the availability of government and local resources. Successful approaches are those which include techniques for collecting and discussing information in an open-ended way, which draw strongly upon indigenous technical knowledge as well as professional expertise, and which are conducted in stages to allow villagers to participate in devising action plans, rather than simply reacting to plans drawn up by government extension agents or officials.

Community benefits. Successful watershed development is greatly dependent upon community commitment, participation, benefit and maintenance of assets created. Of especial importance in providing the right incentives for community participation and ownership is the need to ensure that micro-project interventions provide short, as well as more medium and long-term benefits to individual farmers and communities.

Comprehensive development approach. Watershed activities alone cannot lead to better development and increases in agricultural productivity. Land-based activities have important, but limited scope for improving the economies in rainfed areas. The micro-projects supported by the program should therefore also include investments in complementary infrastructure (e.g. drinking water, and rural roads), livestock activities, marketing and sustained institutional capacity.

Targeting the poor and vulnerable. Social organization must address the needs of each interest group (farmers, landless, women and other vulnerable groups) to give them an integral stake in the success of the micro-project and to avoid tendencies to free-ride on the collective action of other members of the community. Specific measures are needed to support the landless poor and other vulnerable groups. Recognition of their role in watershed development and sustainability should be linked to particular investments and proactively involve them in watershed development.

Decentralization of control and authority to communities. Local people should jointly decide with project management, not only on the selection of treatments, but also on the sequencing of watershed activities, revising plans to adjust to changing conditions. Authority and control over financial management should also be decentralized to community organizations, including allowing for local procurement and contracting for technical assistance for micro-project implementation. This will reduce the likelihood of misuse of funds while also building local organizational capacity that will be essential for on-going operation and management.

Sustainability and the role of local organizations and local government. Establishing community based organizations and making them responsible for identification, planning, implementation and post micro-project operation and maintenance is the only way to ensure sustainability. Local organizations should also be linked to Local Government Associations to ensure that a forum is established for resolving inter-village conflicts over resource use and also to ensure that complementary inter-village infrastructure is operated and maintained beyond program financing.

Systematic monitoring and evaluation. Systematic monitoring and evaluation are needed to assess performance and remove bottlenecks. This requires clear monitorable indicators of project performance and achievement of development objectives.
Conservation activities must be complemented with activities aimed at meeting socio-economic needs. To be effective, conservation oriented initiatives must also consider the socio-economic needs of communities. The project responds to this lesson through the inclusion of a component aimed at identifying and promoting alternative livelihood options aimed at improving the impoverished conditions of communities in support zones adjacent to protected areas while minimizing the stress on the protected area itself.
Flexible, long term approaches that build in adaptive management based on feedback from experience are needed to address the challenges of biodiverstity conservation. The project proposes an approach of co-management within selected protected areas that would be responsive to local needs and consider options for including local stakeholders in the management of the protected area.
Projects need to give attention to the broader political and socio-economic environment within which intended activities take place. The project would address this finding by supporting capacity building and strengthening of the policy, planning, regulatory and institutional framework based on intersectoral linkages and integrated nature of fragile ecosystems. This approach would ensure that protected area and biodiversity conservation are linked to the overall national planning process.

The project will also build on lessons learned in biodiversity conservation and protected area management by a number of national and local NGOs, such as the Nigerian Conservation Foundation (NCF), Savanna Conservation (SC) who are actively involved in promoting public awareness of the need for environmental protection, conservation of biodiversity and sustainable rural development. Existing experience indicates that unless target beneficiaries are able to earn a viable livelihood to ease the extreme conditions of poverty, the investments in promoting biodiversity conservation will not be continued and threats on the protected areas will not be minimized. GEF supported activities will build on positive collaboration between the government and non-governmental conservation organizations in designing initiatives that are acceptable to the wider community, and are financially as well as ecologically viable. The project would also assess possibilities of learning from and exchanging experiences with the Ghana: Northern Savannah Biodiversity Conservation Project which also targets interventions in similar ecosystems.

4. Indications of borrower and recipient commitment and ownership:

Federal Level Commitment

The Government of Nigeria requested the Bank's assistance in developing a Community-based NRM project. In April 1999, they sent a concept document for a proposed community-based natural resource management project. It was decided that, after a prolonged period without any active projects in the environment and natural resource management sectors, it was first necessary to conduct a desk review of the existing sector studies available on Nigeria in order to identify the key issues and options of relevance to the sector before entering into a dialogue with the Government. A draft "Community-Based NRM: Issues and Options for Program Intervention" paper was produced and discussed at a multi-stakeholder workshop held in Abuja on November 23, 1999 (Project no. P068357). At the workshop there was broad support for the concept of a micro-watershed and environmental management project.

The Federal Ministry of Environment expressed a desire to initiate preparation as soon as possible. FME has now obtained a Project Preparation Facility (PPF) which will expedite preparation activities. Furthermore, the FME has already requested technical assistance from the Bank to restructure the ministry and develop a vision statement and action plan for reform. This request was unsolicited by the Bank and reflects the borrower's willingness to promote institutional reform. A Government Core

Preparation Team comprising of representative from key federal level departments in the Ministries of Environment, Water Resources and Agriculture & Rural Development was established in December 1999. This helped to develop the concept, objectives and components of this program as part of a logframe workshop held in Abuja during May 2000.

Full and continued support to GEF activities within the MEMP, has been given by the Conservator General of the Nigerian National Parks Service, the Permanent Secretary of the Environment and the Federal Minister for Environment. The Federal Ministry of the Environment has the mandate to be the lead co-ordinating agency for the program preparation at the Federal level, although the program is being designed and prepared in full consultation and agreement with a multi-sectoral preparation team. The program encourages an integrated approach strengthened by close collaboration between and within relevant agencies including NGOs.

Many of the issues involved in natural resource degradation in Nigeria have been raised in policy documentation of GoN. Several proposals were prepared for accessing donor support, including GEF resources. However, these issues were not targeted appropriately and the options presented had limited impact upon the poor. A few proposals are currently being finalized for presentation to GEF with support from UNDP, such as the program for Gashaka-Gumti National Park. GoN has requested the World Bank to help address the issues in a comprehensive manner, including an analysis of the policies regarding biodiversity conservation and national parks management. A concerted effort will be made during program preparation, to coordinate with and complement activities within the different proposals being prepared by GoN for accessing GEF resources.

State Level Commitment

State level commitment to the MEMP is critical to its success. Therefore, after the Federal Government had selected the macro-watersheds, a World Bank and FGN team visited all states in those macro-watersheds to select the six states that would be targeted for the first phase. Objective criteria were used for the selection. These included: (a) states that would be willing to establish and fully fund salaries of at least 10 full-time Multi-sectoral Implementations Teams (MITs) each comprising of five experienced government employees drawn from relevant state line ministries (Water Resources, Environment, Agriculture and Rural Development); (b) willing to adopt an open, transparent, objective and competitive selection process for identifying members of the MITs; (c) states that are already be implementing (or currently implementing, or have previous experience of implementing) multi-sectoral projects involving cooperation across sectoral line ministries; (d) states that have already submitted proposals for multi-sectoral natural resource management projects should be given priority; (e) willing to adopt a community-driven approach to integrated natural resource management involving the decentralization of decision-making responsibility and control and authority over financial resources to beneficiary communities; (f) willing to actively involve and build capacity of LGAs; (g) prepared to decentralize authority to LGAs for approving micro-project proposals emerging from beneficiary communities; (h) states with established NGOs that have experience in facilitating community-based natural resource management should be given priority; and (i) willing to allow NGOs to act as independent MITs to complement the MITs comprising of government employees.

Based on the above criteria, a scoring system was developed and each of the states in the three macro-watersheds were assigned a score based on their performance against the above criteria. The states that were eventually selected all scored above 70% in the scoring. The states were: Adamawa, Bauchi, Benue, Enugu, Imo and Niger. All moved quickly to establish counter-part teams comprising of individuals with the required political support and technical skills. They have wholly financed the costs of these preparation

teams and also the costs of attending meetings in Abuja. There is clear commitment from these states and a strong desire and willingness to move quickly in preparation and finalization of the program design.

5. Value added of Bank and Global support in this project:

The value of Bank involvement in this program lies in several areas.

First, the Bank's experience in *institutional reform* projects in other parts of the world, especially with regards to environmental legislation and institutions, adds considerable value. This has already been recognized by the Federal Minister for Environment and he has requested Bank identified technical assistance in helping them to develop a long-term vision and action plan for the Federal Ministry of Environment.

Second, the *strategic focus of this project on poverty reduction* makes for a strong partnership with the Borrower particularly in the context of furthering the decentralized rural development process. The Bank's ability to work with both the federal and state levels would facilitate meaningful dialogue to enable effective decentralization.

Third, in comparison with other donors, the *size of assistance available from the Bank* is more in keeping with the scale of finance needed to have a significant impact on poverty and reduction of natural resource degradation in the selected macro-watersheds.

Fourth, the Bank *is the only lender with sufficient leverage and technical capacity to address the macro policy issues* in a comprehensive manner, drawing upon the experiences of other countries and also with relevant experience from other projects in the rural sector.

Finally, DFID have already mentioned that they are not going to support federal programs but instead concentrate their resources on one or two states. The EU are currently reviewing their portfolio and are likely to only support one or two sectors. This leaves the Bank as the *lender of last resort* which sufficient resources and leverage to support macro policy and institutional reform, while also developing a national program for natural resource management.

Biodiversity of Nigeria's 37 states is subject to a number of pressures from ineffectively planned and managed human activities both within and outside protected areas. These include significant conversion of forests and other pristine ecosystems to intensive livestock ranching and agriculture; oil exploration, development of dams with related negative impacts on wetlands and other valuable natural habitat. Despite gazetting a large number and variety of fragile valuable ecosystems as protected areas, conservation and management of biodiversity of high global values is weak or non-existent due to institutional weaknesses and lack of operational funds. The pressures on government to deliver basic services to the population in view of serious deterioration of infrastructure due to large scale neglect during protracted military regimes poses serious challenges to the pursuit of conservation goals.

Federal Government, through the National Parks Service, provides continued but severely under-funded support for National Park management. The NPS supports small scale development activities for stakeholders within the support zones of the protected areas with assistance of local and national NGOs. Responsibility for management of other categories of protected areas such as Game Reserves and Forest Reserves falls under the State, and to a lesser extent on Local Government Agencies. Government support for regulation and management of these protected areas is limited and seemingly ad hoc.

In the absence of GEF assistance severe negative environmental impacts caused by over-exploitation of natural resources will continue to place serious stresses on the ecosystem. Explicit biodiversity conservation efforts would be confined to limited areas, with little or no attention paid to the essential role of ecosystem services outside protected areas. There would be no guarantee for the protection of critical habitat, the maintenance and exchange of genetic flows or the mobility of migratory species.

Under this baseline scenario, it is expected that the government's existing program would help protect and conserve biodiversity and threatened species based on limited financial and human resource availability. However, guaranteeing the maintenance of natural systems and ecological processes, does not rest only on the establishment and management of protected areas. Measures must be taken within and beyond protected areas in the buffer and influence zones. The overall objective is to ensure that protected areas be conceived and managed not as "islands of protection", but rather as parts of an integral regional strategy of natural resources conservation and sustainable use. GEF support would assist the GoN in undertaking a more ambitious program that would generate both national and global benefits. The GEF alternative would comprise the baseline scenario described earlier, augmented with an expanded conservation and sustainable use program explicitly designed to address biodiversity conservation within the targeted protected areas, as well as promoting biodiversity conservation and maintenance of ecosystem services outside the protected areas, within the support zones.

E. Summary Project Analysis

1. Economic:

There is no project experience in Nigeria on integrated micro-watershed development upon which financial and economic analyses can be based. Furthermore, given that the investments at the community level will be demand driven, it is not possible to derive a finite assessment of the Economic Rates of Return of the project during preparation. Moreover, the aims of the project are to promote long-term productive benefits arising from planned environmental impact. It will be difficult to quantify the indirect benefits resulting from improved environmental management. Nevertheless, cost-benefit analyses of individual micro-project investments will be carried out during preparation based upon the information and data available from line ministries. This will enable the formulation of a model which can then be used to assess overall ERR ex-post based upon the numbers and types of investments actually financed during implementation.

Although detailed calculations will be made of various micro-watershed opportunities during appraisal, a general indication of project benefits can be gleaned at this stage. Excluding the GEF contributions and the domestic benefits generated by them, the baseline investment in the 'Community-driven Micro-watershed component' is approximately US$74.45 million and will generate annual benefits of approximately US$9.31 million in perpetuity if project targets are met (see Annex 1 Project Design Summary). These benefit levels correspond approximately to a real ERR of 12.5% and a NPV of US$19 million at a 10% real discount rate.

Cost-Effectiveness Analysis. While a detailed economic analysis was not possible at this stage because the precise activities for the micro-watersheds have not been selected, a limited cost-effectiveness analysis of the international transfers associated with the protected area component is feasible. In this instance, just the proposed GEF expenditures (US$6 million) are assessed in light of the area they are intended to protect. As a conservative estimate, it is assumed that these expenditures apply only to the targeted national park areas (Yankari and Kainji Lake) as these support the most significant global benefits, and only to the area specifically gazetted within these parks. Actual protection and impacts will

extend beyond these park boundaries, as well as to other reserves. For these two parks, however, it is estimated that the total intervention translates to an annualized cost of approximately US$400/km2/year of effective protection; this reflects the basic hypothesis that improved protective measures will ensure protection of a wider range of species and habitats; the 757,000 hectares of land area within these two parks would otherwise have experienced continuous degradation. Typical conservation expenditures around the world reflect international interventions corresponding to approximately US$25/km2/year to US$2,500/km2/year of protection. In the case of these areas, therefore, MEMP provides an opportunity to implement relatively efficient conservation expenditures.

Incremental Cost Analysis. The project financing plan proposes that, of the total financing requirement of US$115 million, US$8 million would be provided as a grant through the GEF to meet the global environmental objectives typically associated with biodiversity protection. Some of the developmental initiatives in the buffer areas of the parks and reserves have a direct positive impact on protecting the park areas themselves from poaching and other non-sustainable harvesting activity. The nature of some of these "out of park" investments will not, however, be determined until the project is underway; this conforms to the project concept that the specific activities need to be defined by local stakeholders to improve project sustainability. This makes the usual IC calculus problematic as there is little basis for estimating an adjustment for local benefits that may arise as a spin-off from GEF investments. An incremental cost (IC) analysis was, however, undertaken (Annex 3) that focuses on global benefits and accounts for a limited range of domestic benefits. The primary purpose of the analysis is to assess GEF contributions using conventions that respect GEF appraisal procedures (requiring acknowledgment of a baseline development scenario), while also acknowledging some of the analytical constraints inherent in conducting the analysis within a limited appraisal context. The results of the analysis are intended to inform the "reasonableness" of the proposed GEF expenditure of US$8 million, rather than explicitly arguing that this is, indeed, the optimal level of GEF contribution. The analysis suggests that, accounting for baseline considerations, the incremental expenditures over a five year period under the GEF Alternative are about US114.62 million, depending upon the allocation of out-of-park expenditures and the treatment of institutional, policy-related, and outreach expenditures that have multiple impacts. Incremental domestic benefits are estimated to be about US$16.74 million from associated conservation investments. In effect, international grant aid of approximately US$8 million (over a 5 year period) would be an economically appropriate and conservative intervention under GEF IC guidelines. The analysis also indicated that, based on available literature, the global economic benefits of these protected areas are estimated conservatively at US$4.5 million annually, and the levels may well be an order of magnitude higher. From this perspective, there would also be some economic justification for increasing the GEF amount to a level in excess of the proposed amount of US$8 million.

2. Financial:

The indicative financial and economic analyses as mentioned in point 1 above will also assist in defining the appropriate financial incentive structures of each type of micro-project. The key to the success of the project will be the development of appropriate matching grants for micro-investments which provide sufficient incentives for adoption while also improving the potential that the investments will be perceived as being owned by the beneficiaries. The level of matching grants is not only a function of the cost-benefit ratio. It will also be dependent upon a number of complex factors including: the relative wealth of populations, the willingness of beneficiaries to pay, and also the asymmetries in the costs and benefits of individual micro-projects. The indicative financial and economic analyses will provide only a partial assessment of the right financial incentives for adoption of new natural resource management

technologies. During the pilot phase, the incentives will be revised based upon observation of demand and also feedback from beneficiaries.

3. Technical:

The MEMP is seeking to finance multi-sectoral investments demanded by beneficiaries. It is therefore proposed to include water supply, rehabilitation of feeder roads and post-harvest productive infrastructures in the list of options available to communities as entry-point activities in addition to investments in natural resource management. It is proposed to use tried and tested designs and co-financing levels from previous or on-going projects for a limited set of technological interventions. For instance, the Bank-financed Small Towns Water Supply LIL has already developed designs, matching grant levels and levels of user fees to cover operation, maintenance and replacement. The technologies, although developed for small towns, are appropriate for rural areas. It is proposed to apply these designs directly to the MEMP. Furthermore, previous agricultural and rural development projects have developed standard designs and costs for productive post-harvest infrastructures and rehabilitation of feeder roads. It is proposed to update the costs of these technologies and apply them to the MEMP.

4. Institutional:

4.1 Executing agencies:

The project will be executed by Multi-sectoral Implementation Teams (MITs) at the state level drawn from government staff of state and LGA line ministries through an open and transparent competitive process. The project will work in six pilot states in the first two years. In each, it will establish 10-15 MITs comprising four to five individuals with skills in forestry, soil conservation, water supply, rural development, women's development and participatory processes. Each MIT will be responsible for facilitating the participatory micro-watershed planning process with communities in two or three LGAs (dependent upon the size of each LGA). Once a Micro-Watershed Plan (MWP) has been elaborated, the MITs will facilitate linkages with the relevant state-level line ministries to provide technical assistance to communities for the design and implementation of the MWP. In addition, NGOs will be encouraged to apply to become MITs. During preparation, the composition of MITs was discussed with NGO and state personnel and they preferred separate government and NGO MITs. It was felt that an integrated MIT would have difficulty operating as a team and that salary scale differences within the two organizations may cause some inter-agency problems. Training requirements for line ministries staff at the state and LGA levels were also assessed during the preparation mission and a program for building their capacity is being developed. Prior to effectiveness, training of a few MITs will be initiated in the six pilot states. The preparation mission identified some of the incentives and selection criteria that would be used to ensure the competitive selection of appropriate inter-ministerial committee members as well as MIT members. For example, in the case of MITs, incentives and selection criteria were geared to attract junior professionals in the state who not be averse to residing outside the urban center and who could effectively work with LGAs and the communities.

With regard to the GEF supported activities, NPS will be the main executing agency, with support as needed from the FPSU. NPS will carry out both the activities within the protected areas of Yankari and Kainji National parks as well as coordinate the sustainable livelihood initiatives in the support zones in close collaboration with local NGOs and community organizations. The sustainable livelihood initiatives will build on the experience of NPS and NGOs such as the Nigerian Conservation Foundation and Savannah Conservation in promoting ecologically and financially viable development activities that aim to reduce pressure on the protected areas while providing the local communities with a livelihood option.

4.2 Project management:

At the federal level, project management will be the responsibility of a Federal Program Support Unit (FPSU) which will have a full-time Program Management Team. At the state level, State Program Support Units (SPSUs) will be established. During preparation each state developed its own arrangements for ensuring institutional coordination across ministries and this will be reflected in the Implementation Manual. This will allow for experimentation and learning during the first two years. Service delivery targets will be established for the technical assistance to be provided to communities by each line ministry. These will be reflected in the Implementation Manual which will be reviewed on an annual basis. However, financial and procurement arrangements will be standardized for the whole program on national basis.

4.3 Procurement issues:

Apart from some procurement of vehicles and equipment at federal and state levels, the project will decentralize the majority of the financial resources (60%) directly to community associations. Community

associations will have authority and responsibility for the procurement of technical assistance, goods and services for the implementation of their MWPs A PRA was conducted on randomly selected communities in the project area to examine the community capacity for procurement. The PRA indicated some capacity for community level procurement. Nevertheless, the procurement risk rating is high and some additional training in book-keeping, basic financial management, administrative functions and accounting will be needed. MITs will provide this training to communities. All the community-contracting arrangements will be developed during implementation and will be standardized across states. Where procurement needs to be done at the national level, the Federal Ministry of Environment will be the focal agency. FME comprises several agencies that have procurement capacity such as the Forestry, Monitoring and Evaluation Coordination Unit (FORMECU).

4.4 Financial management issues:

Funds flow will be critical to the success of the community-contracting arrangements mentioned above. Funds will be disbursed from the SPSU into community bank accounts in tranches. The release of each new tranche is dependent on a review of financial transactions and expenditure of the previous tranche. Complete documentation will be kept on all financial transactions, including original receipts, labor registers, etc. A PRA confirmed that there was considerable absorptive capacity at the community level. Special attention will be given to procedural aspects of funds flow to ensure that effective institutional processes are put in place at the state and LGA level to facilitate the funds flows to communities. It is proposed to explore the potential for utilizing commercial clearing banks with widespread representation in rural areas and/or small towns to assist in transferring financial resources to community associations. A computerized Management Information System (MIS) system will be developed to ensure adequate tracking of financial resources.

5. Environmental: Environmental Category: B (Partial Assessment)

5.1 Summarize the steps undertaken for environmental assessment and EMP preparation (including consultation and disclosure) and the significant issues and their treatment emerging from this analysis.

The investments proposed to be carried out under this project are mainly to promote best practice in soil and water conservation; to address serious issues in gully erosion; and reforestation of degraded areas in the micro-watersheds. These investments are geared to promote natural resource conservation. For example, in the case of soil and water conservation, the FPSU will contract suitable research institutions to conduct a baseline study of the nature, extent and causes of soil fertility status using soil sampling and analysis. The baseline studies would also develop parameters to consider when preparing a skeleton inventory of a village's natural resource base. Subsequently, if communities are interested in soil and water conservation and management, land management technologies would be identified. There will be some investments in rehabilitating existing feeder roads and the provision of water and sanitation facilities, to be maintained by the communities. Additionally, the project will establish capacity at the state and local level to review and supervise environmental impact assessments and to monitor the control and implementation of environmental management plans. The project will provide support to the federal, state and local level agencies to review existing policy and institutional framework to strengthen environmental policy and regulations, particularly those relating to environmental safeguards. The project will also finance environmental awareness programs for target communities within the education information and communication component.

Since the investments to be carried out under the project are only to be determined during project implementation, the nature of the environmental impacts they will involve is not known at this stage and therefore, an EA will not be carried out during project preparation. Instead, the EA process will be built into the project design itself. The preparation mission assessed the capacity of the federal, state and local government levels to manage environmental assessment and monitor compliance and found that it was very weak. Most state environmental protection agencies had no training in EA. LGAs had weaker capacities. The project will support the establishment of EA capacity at the

state and local level and also within the NGO/CBO community within the target micro-watersheds to enable states and LGAs to draft EA terms of reference, review EAs and produce environmental management plans and monitor compliance. The support provided includes project specific EA, as well as sectoral and strategic EAs covering geographical areas and sector specific investments.

5.2 What are the main features of the EMP and are they adequate?

A separate EA will not be prepared since the investments to be carried out under the project are only to be determined during project implementation. EA process will be built into the project design itself to carry out project specific EA, as well as sectoral and strategic EAs covering geographical areas and sector specific investments.

5.3 For Category A and B projects, timeline and status of EA:

Date of receipt of final draft: Expected by early May 2001.

TOR has been prepared and the process for selection of consultants has been initiated.

5.4 How have stakeholders been consulted at the stage of (a) environmental screening and (b) draft EA report on the environmental impacts and proposed environment management plan? Describe mechanisms of consultation that were used and which groups were consulted?

Community based organizations will be responsible for carrying out the investments at the local level and capacity will be built within the communities, both at the local government level and within the NGO and community based organizations to carry out basic screening of environmental issues and how investments to be funded by the project will affect them.

5.5 What mechanisms have been established to monitor and evaluate the impact of the project on the environment? Do the indicators reflect the objectives and results of the EMP?

Capacity will be built at the state and local level to monitor and measure the environmental impacts of investments to be funded under the project.

States will be responsible for developing terms of reference for contracting out environmental assessment to the private sector, monitoring and auditing. The LGAs and MITs will also be responsible for developing environmental plans, monitoring and mitigation.

Communities will also be trained to carry out some basic monitoring. Simplified guidelines, including a checklist for SPSUs, LGAs and MITs will be produced for EA and monitoring requirements specific to the project. The checklist will enable the identification of projects where a) full EA is needed (category A), b) partial EA is required (category B) or no EA is necessary (category C). In most cases, category A micro-watershed projects will be handled at the Federal level, where capacity is higher than at the state or LGA levels. Category B projects will be handled at the state and LGA levels, with input from the Federal level, who will be tasked with reviewing the EA. With regard to category C projects, the states and LGAs would be responsible for granting environmental permits and ensuring that the environmental impact of the project remains unchanged. However, it is expected that the main investments to be funded by the project will be environmentally benign, promoting soil, water and biodiversity conservation in the micro-watersheds.

6. Social:

6.1 Summarize key social issues relevant to the project objectives, and specify the project's social development outcomes.

Social assessments were carried out by consultants for the MEMP program during project preparation. Consultation was held with a broad range of stakeholder groups. Informal interviews were also held with selected local stakeholders by the Bank and Federal preparatory teams during the project preparatory mission held in September 2000. The assessments indicated that the primary stakeholders targeted by the MEMP, the rural poor depend solely on natural resource utilization for livelihood. Important land use activities include agriculture, large and small livestock grazing, and fishing. Key rural development issues that impact on biodiversity conservation include unsustainable use of natural resources, lack of basic infrastructure and services, and access to markets and credit to support development of new income generating activities, expansion of agricultural activity into grazing and forest reserves. The program will support economic development within the support zones of the protected areas and will finance alternative livelihoods that are consistent with management objectives of the protected areas. The project will establish mechanisms for community management of common resources, such as pasture and grazing lands, water and forest products; support sustainable management of agricultural and water resources; promote the employment of local individuals, and engage local NGOs and the private sector in protected area management.

6.2 Participatory Approach: How are key stakeholders participating in the project?

At its base, the program will employ a participatory micro-watershed planning process to prepare a Micro-Watershed Development Plan and enable communities to prioritize micro-investments. LGAs will be involved in prioritizing and approving micro-project proposals emanating from communities and state level ministries will be involved in facilitating the process and delivering technical assistance to communities in order to enable them to design and implement micro-projects.

6.3 How does the project involve consultations or collaboration with NGOs or other civil society organizations?

Eligible NGOs will be allowed to apply to become a Mulit-sector Implementation Agency (MIT) which will facilitate the evolution of a Micro-Watershed Development Plan with communities. Furthermore, NGOs will also be represented on the LGA committees that will be responsible for prioritizing and approving micro-project proposals emanating from communities.

6.4 What institutional arrangements have been provided to ensure the project achieves its social development outcomes?

Beneficiaries will be required to form community associations as part of the participatory process of formulating Micro-Watershed Development Plans. Each association will have elected representatives, a constitution defining rules and regulations, and will also be required to open a Bank account to manage the financial resources that will be transferred to them.

6.5 How will the project monitor performance in terms of social development outcomes?

A process monitoring system will be developed as part of the monitoring and evaluation system. In addition, there will be a mid-term and end of Phase I sample beneficiary assessment (see Annex 1).

7. Safeguard Policies:

7.1 Do any of the following safeguard policies apply to the project?

Policy	Applicability

Environmental Assessment (OP 4.01, BP 4.01, GP 4.01)	Yes
Natural habitats (OP 4.04, BP 4.04, GP 4.04)	Yes
Forestry (OP 4.36, GP 4.36)	
Pest Management (OP 4.09)	
Cultural Property (OPN 11.03)	
Indigenous Peoples (OD 4.20)	
Involuntary Resettlement (OD 4.30)	
Safety of Dams (OP 4.37, BP 4.37)	
Projects in International Waters (OP 7.50, BP 7.50, GP 7.50)	Yes
Projects in Disputed Areas (OP 7.60, BP 7.60, GP 7.60)	

7.2 Describe provisions made by the project to ensure compliance with applicable safeguard policies.
An environmental analysis will be available prior to appraisal, scheduled for May 2001.

F. Sustainability and Risks

1. Sustainability:

Sustainability of program investments at the community level would be encouraged through promoting institutional, financial, social and technical sustainability at local and state levels. Beneficiaries will be required to establish community associations, adopt a basic set of rules and regulations governing the functioning of these associations, and open Bank accounts to receive and manage financial resources as part of the community-contracting arrangements. The program will not support recurrent costs of micro-project investments. Therefore, as part of the prioritization of micro-projects, beneficiaries will need to agree upon future operating, maintenance and replacement arrangements. This will include agreements to levy user fees where appropriate. Long-term sustainability will also be dependent upon strengthening the institutional capacity of Local Government Associations (LGAs) for planning, democratic decision-making and transparent financial management. Therefore, the program will involve LGAs in two ways: (i) technical staff of LGAs will be eligible to apply to become members of Multi-sector Implementation Teams (MITs) and receive training once selected; (ii) at the start, LGAs will be involved in prioritizing and approving micro-project proposals emanating from communities as part of the micro-watershed planning process. Criteria will be evolved to enable LGAs that have demonstrated their competence in open and democratic decision-making to graduate towards more direct involvement in financial management. Once LGAs have "graduated" they will be assigned a budget envelop and will be responsible for allocating financial resources to communities in their jurisdiction and ensuring that those resources are accounted for. It is envisaged that this gradual capacity building process will build long-term institutional sustainability and enable the program to use its resources to leverage financial resources directly transferred to LGAs by federal government.

At the state level, the institutional capacity of line ministries will be strengthened by allowing technical staff to be eligible to apply for membership of MITs. These MITs will be trained in participatory micro-watershed management planning. It is envisaged that these participatory service delivery skills will be transferred to line ministries and thereby improve the regular functioning of line ministries.

The National Parks department has undertaken certain activities in cooperation with local conservation NGOs to create opportunities for support-zone communities through direct assistance programs such as the provision of potable water, provision of subsidized medication, rehabilitated classrooms and provided short-term employment in park maintenance activities such as road maintenance. These activities will be broadened and formalized in a collaborative program through which conservation would emerge as a

contributor to human development rather than a competitor for scarce resources. The project will provide support to protected area management authorities to adopt co-management approaches to manage and utilize resources within the protected areas in a sustainable manner. The enforcement of Park regulations, the development of viable alternative livelihoods for communities in support zones, reforestation to develop natural barriers, are all measures that should promote sustainability of investments. Additionally, the move towards joint management with communities and targeted environmental education programs should all promote sustainability of investments in protected areas and biodiversity conservation.

Experience suggests that long-term protection and conservation of biodiversity, in a context of poverty and short-term exploitation remains a challenge. The project will be examining options for addressing sustainability issues in relation to natural resource management, identifying responsibilities of various participants, and the costs and benefits involved. Sustainability would be addressed by attempting to ensure financial viability for all "uses" (including non-use) of natural resources, particularly in the support zones of the protected areas. Directly involving local communities and the targeted environmental and ecological awareness education to be delivered under the project will assist in ensuring sustainability of interventions. The support and services to be delivered to the communities in the support zones will assist in testing options for co-management of resources within protected areas. Activities within the project aim to empower rural poor within the support zones of the protected areas to identify options for diversifying their livelihoods in a manner that is economically and socially viable as well as being consistent with the objectives of biodiversity conservation. The approach aims to arrest the decline in natural productivity, by supporting communities to develop alternative means of livelihood and to reduce their direct dependence on natural resources. Support will be provided for: i) co-management of natural resources within the protected areas and support zones; ii) artisan training; iii) development of cottage industries; iv) access to low-interest credit; v) establishment of co-operative societies through CBOs. In the subsequent phases of the program, which is to follow this first phase, successful experiences will be replicated and scaled up, thereby further ensuring sustainability.

The program will also build long-term sustainability for Environmental Assessment at state and federal levels. The policy intervention competent will also seek to address policy distortions restricting the long-term sustainability of environmental sustainable natural resource management.

2. Critical Risks (reflecting the failure of critical assumptions found in the fourth column of Annex 1):

Risk	Risk Rating	Risk Mitigation Measure
From Outputs to Objective		
1. The availability of capital constrains the implementation of integrated approaches to natural resource management.	M	It is proposed to limit the extent of counter-part contributions to items that always take priority during budget constraints e.g. salaries of state personnel that would be seconded to the MITs and SPSU. Furthermore, aggregate community contributions of 10% towards the MWPs would be counted as counter-part contributions.
2. Leadership in relevant federal institutions is unstable and momentum for reforms is not established or maintained.	H	Establish inter-ministerial committees to take the lead in institutional reform and use external consultants to help stimulate the process of reform by helping to set short-term action plans.
3. Private sector capacity to carry-out	M	Each state should establish and maintain a

Risk	Risk Rating	Risk Mitigation Measure
EIAs is unevenly distributed throughout Nigeria.		database of private sector firms and individuals with EIA capacity. This can be shared amongst the states in order to even out state-specific shortages of skilled personnel.
4. Incentives and subsidies for biodiversity conservation in National Parks and support zones is competitive with the adoption of integrated NRM practices.	M	The Implementation Manual should be clear about the distinction between incentives on offer by IDA for adoption of integrated NRM practices and those on offer through GEF for alternative income generating activities. This needs to reviewed on annual basis to ensure that incentives are not created for migration into the support zones to take advantage of two sources of funding.
5. The grants/incentives for alternative income generation aimed at reducing pressure on ecosystems are unattractive to communities engaged in unsustainable resource use practices.	M	The grants and incentives will be specified in the Implementation Manual. This will be reviewed on an annual basis and the incentives will be modified (based on an assessment of performance) to ensure that they are sufficient to encourage communities to adopt income generating activities.
6. The interests of non-target populations are not sufficiently addressed by the program to motivate them to support sustainable natural resource and environmental management practices.	H	The Development Communication component will begin the process of sensitizing non-target (as well as target) populations about the importance of sustainable natural resource and environmental management practices.
7. Viable alternative activities to those currently threatening ecosystems and species cannot be identified and implemented.	M	The program will promote study tours and exchanges of project staff to other countries in Africa to generate additional ideas for alternative activities.
8. Communities do not perceive and do not receive tangible benefits from behavioral changes and adoption of sustainable approaches to the use of biological resources.	M	The options for alternative income generating activities will need to provide tangible benefits to communities in the short-term. The Development Communications component will further reinforce the potential medium and long-term benefits of sustainable approaches to biological resources
9. Management of schools do not acknowledge the value of environmental, NRM and biodiversity conservation	M	The Development Communications component will need to develop specific messages for school management and also show the relationship of school outings to eco-centers with existing school curricula.
From Components to Outputs		
1. Natural disasters in the program areas negatively affect the adoption and viability of long-term investments.	H	In the event of a natural disaster, the implementation mechanisms and incentives should be amended to allow short-term responses to natural disasters.

Risk	Risk Rating	Risk Mitigation Measure
2. There is insufficient long-term political will and commitment to formulate and implement enabling policies and enforce regulations	M	Implementation of enabling policies and legislation should be a covenant of the legal agreement. The program should seek to build a constituency for reform within the relevant federal ministries.
3. Adequate and continuous funding is not made available to states and LGAs for environmental enforcement.	S	The program needs to reinforce the importance of environmental enforcement to stakeholders involved in making budget allocations to states and LGAs.
4. There is no base capacity in line ministries, NGOs and amongst other actors which can be strengthened by the program.	M	The program should place a high emphasis on training and capacity building of staff of line ministries and NGOs. If base capacity in some disciplines is lacking in line ministries (e.g. MIS), personnel should be recruited from the private sector.
5. The interests of non-resident populations in the National Parks and support zones cannot be addressed by collaborative management approaches.	M	The program should make linkages with other programs currently under development by Government and donors that are seeking to find ways of working with migrant populations (e.g. Fulani) and involving them in collaborative management approaches. Lessons learned should be incorporated into the MEMP.
6. Stakeholders are not able to conceptualize and internalize the global impacts of their local actions.	M	The Development Communications component should tackle this head-on and find means of transmitting messages that bring about this type of perceptive change in attitudes.
7. Awareness of environmental impacts of people's actions is not sufficient to change behavior.	M	The process of behavioral change is likely to be long. identifying key stakeholders and change agents and changing their perceptions and behavior will be key to the long-term success.

Risk Rating - H (High Risk), S (Substantial Risk), M (Modest Risk), N(Negligible or Low Risk)

Annex 1: Project Design Summary

NIGERIA: Micro-Watershed and Environmental Management Program

Hierarchy of Objectives	Key Performance Indicators	Monitoring & Evaluation	Critical Assumptions (from Goal to Bank Mission)
Sector-related CAS Goal: 1. Enhanced standard of living through sustainable management of natural resources	Sector Indicators: 1.1 By Yr. 5, household incomes increased by 20% over baseline 1.2 By Yr. 5, 50% of target communities are implementing Micro-Watershed Plans (MWPs) and operating and maintaining investments	Sector/ country reports: 1.1 Beneficiary assessments (based on sampling) during social assessment (baseline) and after 5 years 1.2 Sample beneficiary assessments and Management Information System (MIS) of program.	1.1 Macro-economic and policy environment is conducive for economic returns to NR investments
GEF Goal (OP1): 2. Promoting conservation and sustainable use of biological resources in target areas	2.1 By Yr. 5, 60% of the communities in the target area have adopted sustainable methods of biological resource use	2.1 Assessment of resource use patterns and trends in the target areas	2.1 enforcement of existing and revised regulations relating to biodiversity conservation and sustainable use 2.2 strengthened capacity within protected areas to ensure compliance of policy and regulations

Project Development Objective:	Outcome / Impact Indicators:	Project reports:	(from Objective to Goal)
1. Populations in the target macro-watershed areas including those within support zones around targeted protected areas, will have adopted integrated, environmentally sustainable, approaches to management of natural resources within a strengthened institutional framework at local, state and federal levels.	1.1 By Yr 5 50% of beneficiary communities express satisfaction with processes in place for delivery of services	1.1 Sample beneficiary assessment after 5 years	1.1 Incentives of donor and government programs do not compete with the incentives on offer by this program.
	1.2 By Yr 5 50% of independent actors (states/NGOs) express satisfaction with processes set in place at the Federal level	1.2 Stakeholder and beneficiary assessments after 5 years.	
	1.3 By year 5, environmentally sustainable practices are incorporated into national developmental programs implemented by the Federal Ministry of Environment.	1.3 Independent examination of policies and regulations in place.	
	1.4 By year 5, 50% beneficiary community groups will have the capacity to identify, implement and manage development projects.	1.4 Stakeholder and beneficiary assessments after 5 years.	
	1.5 By year 5, participatory co-management plans involving communities and the National Parks Service (NPS) are in use within the two National Parks.	1.5 Independent examination of policies and regulations in place.	
	1.6 By year 5, biodiversity assessments within the protected areas targeted under the project, indicate an increase of up to 25% of specific species identified as being threatened.	1.6 biodiversity/species assessments in protected areas targeted under the project	

Output from each Component:	Output Indicators:	Project reports:	(from Outputs to Objective)
1. Participatory MWPs incorporating integrated NRM are formulated and implemented	1.1 By Yr 5 50% of beneficiary communities have elaborated and are implementing MWPs	1.1 Management Information System of program	1. The available capital to states and beneficiaries does not constrain the implementation of integrated approaches
2. Enabling policy and regulatory environment is established to provide incentives for adoption of sustainable NR, biodiversity conservation and environmental management.	2.1 Legal mandates of various institutions (federal, state and LGA) are clarified. 2.2 Environmental safeguard legislation is adopted and enforced by Government. 2.3 By Yr. 5, a strengthened regulatory and management framework is in place for conservation and sustainable use of biological resources.	2.1 Independent review of policies and regulations and MIS of program 2.2 Independent review of policies and regulations and MIS of program 2.3 Independent review of policies and regulations and MIS of program	2. There is consistent and stable leadership in relevant federal institutions to establish and maintain momentum of reforms.
3. States and LGAs capacity to contract out EIAs and directly monitor compliance is strengthened.	3.1 By Yr 5, an increase of 25% in the number of EIAs carried out at state and LGA levels. 3.2 By Yr 5, management plans formulated for new eligible micro-projects financed by MEMP and compliance assured.	3.1 Independent review of policies and regulations and MIS of program 3.2 Sample beneficiary assessments after 5 years.	3. Private sector capacity to carry-out EIAs is evenly available throughout Nigeria.
4. Collaborative approaches are adopted for sustainable biodiversity management.	4.1 By Yr. 5, in the two National Parks with a management plan, poaching is reduced by 80%. 4.3 By Yr. 5, in the two National Parks with a management plan, the no. of unauthorized fires deliberately started for hunting or agriculture will be reduced by 80%. 4.4 By Yr. 5, in the two National Parks with a management plan total population and biomass of flora & fauna is increased by 25%. 4.5 By Yr 5, the encroachment into the protected areas and illegal activities within the two National Parks with a management plan is decreased by 50%. 4.6 By Yr 5, 50% of those who received benefits from the micro-projects continue to engage in projects that promote conservation or sustainable use of biological resources	4.1 Sample beneficiary assessment and MIS of National Parks 4.2 ditto 4.3 ditto 4.4 biodiversity assessment and MIS 4.5 Assessment of acreage cleared for illegal farming; assessment of number of incidents of arrests of poachers, availability of bush meat in markets adjacent to protected areas, species assessments, MIS 4.6 Assessment of number of beneficiaries/households or groups participating in programs for conservation and/or sustainable use of biological resources	4.1. Biodiversity conservation is not competitive with the adoption of integrated NRM practices. 4.2 Grants/incentives for alternative income generation aimed at reducing pressure on ecosystems, attractive to communities engaged in unsustainable resource use practices

Output from each Component:	Output Indicators:	Project reports:	(from Outputs to Objective)
5. Populations are sensitized and motivated to support sustainable NR, environmental management and biodiversity conservation/sustainable use.	5.1 By Yr. 5, the number of communities organizing themselves and accessing program services increased (50% over baseline).	5.1 MIS of program	5.1 The interests of non-target populations are sufficiently addressed.
	5.2 By Yr. 5, there is an increase in proportion of national population with an improved understanding of NR and Env. issues.	5.2 Opinion surveys of statistical sample of national population	5.2 ditto
	5.3 By Yr 5, there is an increase in proportion of population in the support zones of the targeted protected areas with an improved understanding of the value of conserving biodiversity and ecosystems.	5.3 Annual progress reports from each Eco-Center (Yr 4 and Yr 5)	5.3 Viable alternative activities to those currently threatening ecosystems and species can be identified and implemented
	5.4. By Yr 5, four Eco-Centers are established with well-functioning programs underway	5.4 ditto	5.5 Communities perceive and receive tangible benefits from behavioral changes and adoption of sustainable approaches to the use of biological resources
	5.4 By Yr 5, Eco-Centers attract 60% of overall visitors to the protected area	5.5 Survey among school children in target areas on their participation in activities promoted through the Eco Center; and understanding of biodiversity and ecosystem values	5.5 Management of Schools acknowledge the value of environmental, NRM and biodiversity conservation
	5.5 By Yr 5, over 60% of school children in the target area have visited the Centers and participate in the outreach programs		

Project Components / Sub-components:	Inputs: (budget for each component)	Project reports:	(from Components to Outputs)
1. Community-driven Investments in Micro-watershed Development: (a) Multi-Sectoral Implementation teams are established and trained; (b) participatory preparation of MWP and raising awareness of HIV/AIDS; (c) communities establish or strengthen community based organizations for watershed development; (d) communities prioritize investments within a budget envelope; (e) LGA reviews project proposals; (f) communities co-finance investments; (g) technical assistance for design and implementation; (h) communities procure materials and execute the micro-projects; (i) communities operate and maintain investments.	US$ 91 million	Project Implementation Plans, annual work plans and quarterly progress reports.	1.1 There are no natural disasters in the program area affecting the viability of long-term investments.
2. Strengthening environmental institutional and legislative framework: (a) assess mandates of key institutions involved in environmental protection and NRM; (b) propose a conducive institutional framework at all levels (federal, state and LGA); (c) review existing laws; (d) report on gaps and overlaps; (e) ensure consistency of the legal framework with the national environmental policy; (f) draft final National Environmental Management Action (NEMA); (g) develop draft implementing regulations for NEMA.	US$ 1 million	ditto	2.1 There is a long-term political will and commitment at all levels to formulate and implement enabling policies and enforce regulations.
3. Strengthening environmental management support services: (a) training of staff at federal, state and LGA levels (and other agencies) involved in environmental protection and NRM; (b) workshops with stakeholders at large including	US$ 5 million	ditto	3.1 Adequate and continuous funding is made available to states and LGAs for environmental enforcement. 3.2 There is a base capacity in line ministries, NGOs and other actors which can be strengthened.

Project Components / Sub-components:	Inputs: (budget for each component)	Project reports:	(from Components to Outputs)
communities; (c) providing equipment needed for enforcement purpose; (d) preparation of a state EIA procedures manual; (e) production of simplified guidelines (including checklist) for SPSUs, LGAs and MITs for EIAs and monitoring specific to the project; (f) review and development of a design for an improved environmental information system.			
4. Protected Area & biodiversity management: (a) review of strategies National Parks regarding conservation of biodiversity; (b) review and revise collaborative management plans and strategies for key National Parks including support zones; (c) technical assistance for National Parks to develop baseline data; (d) technical assistance for biological monitoring; (e) research and development of on-farm biodiversity conservation programs; (f) research for identifying mechanisms for improving genetic diversity in indigenous species.	US$ 8 million	ditto	4.1 The interests of non-resident populations can be addressed by collaborative management approaches. 4.2 Stakeholders are able to conceptualize and internalize the global impacts of local actions.
5. Development communication: (a) provide training to Environmental Education & Awareness Unit (EEAPU) of FME; (b) identify and recruit Development Communications Specialist for SPSU; (c) identify and recruit media consultant and/or NGOs to develop and place messages; (d) develop communications strategy; (e) formulate development communication handbook for SPSUs; (f) develop messages and materials using radio, folk drama, video, TV, posters, flyers, newsletters, newspaper	US$ 10 million	ditto	5.1 Awareness leads to change in behavior.

Project Components / Sub-components:	Inputs: (budget for each component)	Project reports:	(from Components to Outputs)
supplements, information kits, etc.; (g) implementation of communication strategy and placing of messages.			

Annex 2: Protected Areas Targeted under the Project: Biological Features, Threats and Activities to address the Threats

Name	Area	Biological Features	Local Economy	Threats	Proposed Project Activities to Address Threats

Name	Area	Biological Features	Local Economy	Threats	Proposed Project Activities to Address Threats
Kainji Lake National Park Represents a merger of two former Game Reserves, Borgu, in Niger and Kwara States and Zugurma in Niger State. Established in 1991	Situated in Niger and Kwara States within the Alkaleri Local Both sectors together cover an area of about 5830km2	Occupies the interspace between the Sudan and Northern Guinea Savanna and comprises at least 7 discernable vegetation strata. KLNP has a rich and diverse wildlife population and a variety of ethno-historical and cultural sites, some of which include the Kubli and Kali Hills, Manyara River, and the lion caves of Zugurma. The Park is bodered on the East side by the Kainji Lake and Hydroelectric complex and on the West side with the Republic of Benin.	Agriculture, fishing and livestock grazing form the main livelihood of surrounding communities including pastoral Fulani groups.	Pressures from human encroachment and livestock grazing and agricultural production within the Park: i) The Park is used as a thoroughfare for nomadic Fulani and their cattle herds; ii) Agricultural production is increasing on the rich fertile banks of Kainji Lake within the Park boundaries; Pressure on the Park is increasing from encroachment of farmers utilizing this fertile land; iii) Approximately eight currently unmanaged, and degraded grazing reserves fall within the support zone of the park; iv) Illegal resource exploitation within the park area including hunting, fishing, agricultural production and habitat destruction. Illegal hunting is undertaken on both an ad hoc basis for subsistence by local inhabitants and on a large, organized scale by outside poachers; v) Park officials interact with support zone communities largely from a policing perspective and the institutional capacity for co-management is lacking; vi) Park boundaries are poorly demarcated; vii) Lack of maintenance of park infrastructure and services for tourism; viii) Disturbance to wildlife from nearby air force training base.	i) Strengthening of institutional capacity at the Federal, state and local level towards conflict management and participatory management of protected area resources with support zone communities ii) Development & implementation of a park management plan and support zone development program including species inventory, boundary survey and demarcation, and activities towards participatory management iii) Improved training infrastructure and facilities for participatory management and monitoring through support to the Federal College for Wildlife Management iv) Provision of technical assistance and equipment for Monitoring & evaluation of protected area resources v) Upgrading of selected park infrastructure and facilities towards improving revenue through tourism. Technical assistance for developing a strategy for the privatization of tourism activities within the National Parks vi) Strengthening of local natural resource management in support zones such as community based fisheries management with assistance to National Institute for Freshwater Fisheries Research for developing microprojects vii) Support for identifying and developing alternative livelihoods for support zone communities through micro-projects to reduce pressures on the park viii) Provision of facilities and resources for environmental education and conservation outreach through development of an eco-centre in the support zone area

Name	Area	Biological Features	Local Economy	Threats	Proposed Project Activities to Address Threats
Yankari National Park Established in 1962 as Nigeria's first functional Game Reserve. Upgraded to a National Park in 1991.	Situated in Bauchi State within the Alkaleri Local Government Area with a projected population of about 208 202 people. Yankari covers an area of 2 240km2. Maina Madji is the closest large settlement and the site of the proposed new park headquarters.	Lies in the southern part of the Sudan Savanna Woodland belt. Vegetation comprised of swampy forest, gallery forest, and riverine woodland savanna. The Park has a high ground water level and numerous springs and seepages. Over 52 large mammal species have been recorded including *Anubis baboon, Patas monkey, Tantalus monkey, Elephant, Hippopotamus, Buffalo, Roan Antelope, Bubal hartebeest, Grimms duiker, Oribi, Red-flanked duiker*. Over 350 bird species are recorded, 50 of which are paleartic migrants. Approximately 147 fish species, 7 amphibian species and 17 reptile species are recorded.	Agriculture. Common crop species include maize, groundnuts, millet, beans, and sorghum. Common economic trees exploited include *Parkia bilobosa and Shea-butter*	i) Pressures from human encroachment and livestock grazing within the Park due to the lack of clear Park boundary demarcation; ii) Conflicting objectives of the park and support zone communities. Farmers in the support zone communities increasingly experience invasions and loss of livelihood from crop destruction by wild animals due to the lack of Park fencing; iii) Many of the large mammal species are reportedly locally extinct due to illegal hunting and habitat destruction; iv) Illegal natural resource exploitation in the form of Logging e.g. (boracious) Azara, harvesting of non-timber forest products for food, fuelwood consumption, and illegal bush burning.	i) Strengthening of institutional capacity towards co-management of protected area resources with support zone communities ii) Development & implementation of a park management plan and support zone development program including species inventory and boundary survey and demarcation iii) Improved training and skills for park officials and support zone communities towards participatory management and monitoring iv) Provision of technical assistance and equipment for Monitoring & evaluation of protected area resources v) Upgrading of selected park infrastructure and facilities towards improving revenue through tourism vii) Support for strengthening local natural resource management by identifying and developing alternative livelihoods for support zone communities through micro-projects i.e. agroforestry, apiculture etc. viii) Provision of facilities and resources for environmental education and conservation outreach through development of an eco-centre in the support zone area vi) Evaluation of feasibility of incorporating the neighbouring Pai River Reserve into the Yankari National Park

Name	Area	Biological Features	Local Economy	Threats	Proposed Project Activities to Address Threats
Lame-Burra Game Reserve Upgraded from the Lame and Burra Forest Reserves in 1971. Is comprised of two main sectors, the Lame Sector and Burra Sector, linked by the Corridor Sector	Bauchi State. Situated in the Local Government Areas of Ganjuwa, Ningi and Toro. Covers an area of 2020km2	Northern Guinea Savanna. Common plant species recorded include: *Anogeissus leiocapus, Afzelia africana; Balanites aegyptiaca; Boswellia dalziellii; Acacia sp.;and Combretum sp.* Mammal species recorded include *Lion, elephant, buffalo, roan antelope, western hartebeast, Klipspringer, Oribi, Red Patas monkey, Tautalus monkey, Leopard, Spotted Hyeana*	Agriculture. Common crop species include maize, groundnuts, millet, beans, sorghum. Livestock grazing Charcoal production and timber sales	i) Overwhelming pressures from human settlement and activities. It is expected that the larger mammal species such as elephant, giraffe and klipspringer are now locally extinct due to unregulated hunting and/or migration; ii) Resources of the neighboring forest reserve are being severely depleted through deforestation for charcoal production, grazing and over utilization of natural resources for subsistence; iii) Lack of institutional capacity and financial assistance to authorities to manage and maintain the reserve and facilities has resulted in complete deterioration of existing infrastructure.	i) Feasibility study for upgrading the Lame-Burra Game Reserve into a National Park ii) Technical assistance for the development & implementation of a management plan and support zone development program including boundary survey and demarcation and species inventory iii) Support for improving skills for participatory management and monitoring iv) Provision of monitoring equipment v) Assessment for improving management of and/or incorporating the neighboring Forest Reserve into the Game Reserve vi) Support for strengthening local natural resource management by identifying and developing alternative livelihoods for support zone communities through micro-projects viii) Provision of facilities and resources for environmental education and conservation outreach through development of an eco-centre in the support zone community.

Name	Area	Biological Features	Local Economy	Threats	Proposed Project Activities to Address Threats
Maladumba Lake and Forest Reserve Neighbors Shenlog Forest Reserve	Bauchi State. Situated in the Misau Local Government Area. Maladumba Lake situated approximately 15km South West of Misau town with a population of about 70 000 inhabitants. 500m wide, 5km long and about 5m deep	Wetland Ecosystem which includes freshwater lake and forested area. Derives its water source from the Dingaiya River which merges with the Kari river and empties into the lake. River Kuka is the main outlet of Maladumba Lake. Proposal for Ramsar Site status Reportedly provides important sanctuary for migratory palearctic birds during dry season. Species recorded at the site thus far include: 10 mammal species (including baboon, tantalus monkey, spotted and striped hyaena, water buck, bush buck); 125 bird species; 8 fish species; 10 reptile species Vegetation ranges between Guinea and Sudan Savannah.	Agriculture, livestock grazing and fishing. Common economic tree crop species include *Gum Arabic* and *Parkia bilobosa*	i) Pressure from unregulated and inappropriate agricultural activities in close proximity of the lake as well as in upstream areas resulting in siltation of the lake; ii) Pressure on water resources from diversion of water for dry season irrigation activities; iii) Unregulated fishing practices and over-exploitation forest resources have resulted in the expected local extinction of animal species; iv) Inadequate management compounded by conflicting political views over management responsibilities and future development of the Lake and surrounds; v) Various development proposals for the Lake include dredging, draining, water impoundment, development of tourism facilities.	Assistance for: i) Clarifying institutional responsibilities and regulations for management of the Lake and neighbouring Shenlog Forest Reserve; ii) Developing a protected area management plan including a species inventory and boundary survey and demarcation; iii) Assessing proposed development and irrigation proposals with a view to retaining sufficient in-stream-flow requirements to maintain the lakes' essential ecological processes; iv) Training and skills for participatory management and monitoring; v) Upgrading monitoring equipment and ranger posts.

Name	Area	Biological Features	Local Economy	Threats	Proposed Project Activities to Address Threats
Girei Forest Reserve Gazetted as a Forest Reserve in 1972	42.88 2 km	Common plant species include: *Parkia olappertoniana; Adansonia digitata; Tamarindus indica; Butyrospermum paradoxum; Diospyros mespiliformis; Ximenia Americana; Annona senegalensis; Hibiscus sp.; Vitex doniana; Khaya senegalensis; Lannea sp.;Ceiba pentandra; Prosopis africana; Bombax costatum; Grewia mollis; Sterculia setigera*	Original land use rights gazetted include the right to take for domestic requirements from uncultivated vegetation: fruits, leaves, bark and root products, cotton, honey and beeswax.	i) Encroachment of human settlement, livestock grazing and agriculture; ii) unregulated over-exploitation of forest resources; iii) Unclear institutional management responsibilities.	Assistance for: i) Clarifying institutional responsibilities and regulations for management of the Girei Forest Reserve; ii) Developing a protected area management plan including a species inventory and boundary survey and demarcation; iii) Training and skills for participatory management and monitoring; iv) Upgrading monitoring equipment.

Name	Area	Biological Features	Local Economy	Threats	Proposed Project Activities to Address Threats
Bagale Hills Forest Reserve Gazetted as a Forest Reserve in 1954	177.662 km	Common plant species include: *Parkia oliveri; Adansonia digitata; Tamarindus indica; Butyrospermum parkii; Diospyros mespiliformis; Ximenia Americana; Vitex sp.; Sclerocarya birrea; Annona senegalensis; Detarium senegalensa; Ficus sp.; Lannea sp.; Ziziphus mauritiana; Borassus aethiopum; Prosopis africana*	Original land use rights gazetted include the right to take for domestic requirements from uncultivated vegetation: grass for thatching, fruits, leaves, bark and root products, wild honey and bees-wax, and hunting.	i) Encroachment of human settlement, livestock grazing and agriculture; ii) unregulated over-exploitation of forest resources; iii) Unclear institutional management responsibilities.	Assistance for: i) Clarifying institutional responsibilities and regulations for management of the Bagale Hills Forest Reserve; ii) Developing a protected area management plan including a species inventory and boundary survey and demarcation; iii) Training and skills for participatory management and monitoring ; iv) Upgrading monitoring equipment.

Name	Area	Biological Features	Local Economy	Threats	Proposed Project Activities to Address Threats
Sebore Forest Reserve Gazetted as a Forest Reserves in 1964 Contains an enclave settlement of the Yokasala village.	37.0472 km	Common plant species include: *Parkia clappertoniana; Adansonia digitata; Tamarindus indica; Butyrospermum parkii;Balantes aegyptiaca; Diospyros mespiliformis; Ximenia Americana; Cordia abyssinica; Afzelia africana;Piliostigma thonningii; Hyphaene thebaica; Gardenia erubescens; Grewia mollis; Annona senegalensis; Detarium microcarpum; Bombax costatum.; Terminalia avicennioides; Ziziphus jujuba; Borassus aethiopum.*	Original land use rights gazetted include the right to take for domestic requirements, grass for thatching, dead wood for fuel, fruits, leaves, bark and root products, wild honey and bees-wax and flintstone. Other rights given to certain communities include: drawing of water; fishing; hunting with bows and guns	i) Encroachment of human settlement, livestock grazing and agriculture; ii) unregulated over-exploitation of forest resources; iii) Unclear institutional management responsibilities.	Assistance for: i) Clarifying institutional responsibilities and regulations for management of the Sebore Forest Reserve; ii) Developing a protected area management plan including a species inventory and boundary survey and demarcation; iii) Training and skills for participatory management and monitoring; iv) Upgrading monitoring equipment; v) Provision of facilities and resources for environmental education and conservation outreach through development of an eco-centre in the support zone community.

Annex 3: Incremental Costs and Global Environmental Benefits

Context and Broad Development Goals

Context. The protected area management component of the Micro-watershed and Environmental Management Program (MEMP) aims to identify and support the protection of globally significant biodiversity and genetic resources. Focusing primarily on Biodiversity Conservation and Management, the GEF supported activities seek to promote community involvement in the management of biodiversity and wildlife. Selected protected areas and their support zones in three of the six States will be supported under this component. This component has been developed through extensive consultation with relevant stakeholders and draws from the following existing policy and regulatory documents.

The National Biodiversity Strategy and Action Plan (1997) approximates the value of biodiversity use and ecosystem functioning to be in the region of US$2.92 billion. Priorities for action identified in the National Biodiversity Strategy and Action Plan include: (a) the protection of ecosystems, especially watersheds, fresh water systems and tropical high forests; (b) improving yields of both indigenous and exotic species facing high economic demand to sustain their supply as well as protect their substitutes; (c) managing the fragile soils to provide conditions conducive to the perpetuation of species of economic, medicinal and genetic conservation value; (d) regulating and purifying water flow and protecting valley forests and wetlands; (e) maintaining conditions vital to the sustenance of protected areas and critical habitats that threaten species used for breeding and feeding; (f) enhancing the efficiency of biodiversity resource use to reduce their exploitation rate.

The Nigerian National Parks Service Decree No. 46 of 1999 provides a basis for improved National Park Management and clearly outlines a number of principles and activities. The Decree requires that each of Nigeria's National Parks prepare a comprehensive management plan. The plan should include: a) a map of the Park and proposed facilities; b) an inventory of resources in the Park; c) assessment of wildlife population trends in the Park; d) assessment of wildlife interference and plans for controlling it; e) a description of proposed research activities, infrastructural development and wildlife resource management in the Park; f) plans for administration of the Park; g) plans for the development of national and international tourism; h) plans for the creation of buffer zones around the Park and the participation of local communities in the management of the Park; i) plans for public participation in the activities of the Park; j) plans for promoting and assisting in ensuring environmentally sound and sustainable development in the areas surrounding the Park, other than the buffer zones, with a view to furthering the protection of those areas.

Based on the above policy and regulatory directives, the GEF component of the MEMP will support activities within selected protected areas and support zone communities which have national as well as global benefits. The goals of this component are: (a) to promote sound partnerships for effective protected area management; (b) identify and promote incentives for wildlife and biodiversity conservation within the protected areas and within the support zones; (c) provide technical assistance and capacity building for biodiversity and protected area management in key public agencies and within the NGO community; (d) improve protected area infrastructure and facilities, and (e) promote awareness of the benefits of conserving biodiversity and habitats.

Expected outcomes from the GEF supported activities are: (i) improved policy and institutional framework for biodiversity conservation in the country; (ii) adoption of collaborative approaches for biodiversity management; (iii) mainstreaming of biodiversity conservation into development activities in the target areas; (iv) improved management of biological resources within protected areas and within support zones; (v) improved awareness within the larger community of the value and benefits of biodiversity and habitat

conservation; and (vi) improved knowledge on the scientific, social and economic dimensions of biodiversity and habitat conservation.

Development Objectives. The overall program objective of the Micro-watershed and Environmental Management Program is "Enhanced standard of living of populations within the target areas through sustainable management of natural resources". Programmatic goals specific to the GEF supported activities include: (a) effective management of natural resources towards poverty reduction and sustainable development; (b) generation of sustainable livelihood opportunities, empowerment and enhancement of food security in support zone communities; (c) improvement of environmental quality; and (d) improving the productive potential and sustainable management of selected protected areas and their support zones; and e) strengthening the supporting policy and institutional framework at federal, state and local levels.

Baseline Scenario

General Scope. In the absence of GEF assistance, it is expected that the government would nonetheless pursue a relatively aggressive program of support zone development. Moreover, the government has demonstrated a commitment to protected areas management and is likely to continue some minimal level of financial and related support to protect some of the local benefits that are recognized. To ensure that a complete range of potential impacts and benefits has been captured, the Baseline has been defined to include a broad range of activities that are either directly or indirectly intended to support the protected areas system. Conceptually, the Baseline can be considered as three separate components, each with somewhat different rationales for their inclusion in the Baseline. The first component (sub-component I in Table IC-1) involves *specific support zone investments* that meet a broad development objective. Second, a series of *institutional, policy and educational initiatives* (sub-components II, III and V) are intended to give broad support to the support zone initiatives and to specific park and reserve initiatives. Third, a *targeted biodiversity component* that is intended to give support to high priority parks and biodiversity hot-spots (sub-component IV).

Costs. The total expenditures associated with the Baseline Scenario are estimated to be about US$110.62 million. As detailed in Table IC-1, one of the most substantial components of the Baseline involves the baseline investments associated with microwatershed development (US$80.0 million). Financing for this will rely mainly on IDA support. Detailed descriptions of the different components are provided in general project documents. It is noted that substantial support is expected to the institutional, policy, and education initiatives even within the baseline, given the government's demonstrated interest and commitment to this sector. One ongoing uncertainty, however, is the potential range of baseline investment within the given priority park areas. It is expected that the government would put in place a 'minimalist' management plan that would be adequate to control some poaching and provide some level of regular patrol and demarcation; experience elsewhere in the region suggests that this would cost of the order of US$1-2/ha/yr on an ongoing basis, although precise costs are not available because of the current lack of management plans for the park estate. A baseline cost range is therefore attributed to this component consistent with these estimates. For the major parks being considered by the proposal (Yankari and Kainji) this corresponds to a five year baseline cost of about US$3.80 million.

Benefits. It is anticipated that the baseline MEMP project will generate significant benefits, primarily in terms of direct poverty reduction.[1] For example, the overall project area covers a target population of

[1] The level of expenditures under the baseline may also provide some minimal protection for ecological functions, although the values associated with these for the given ecosystem types (partially wooded savannah) are relatively small.

approximately 60,000 inhabitants. The performance targets for this project anticipate an 80% uptake of sub-project initiatives, with a resultant mean income improvement of 20% in the project area. While baseline income estimates are not available, applying a standardized national income estimate (US$970/capita) yields expected baseline benefits from the micro-watershed investments of US$9.31 million a year. This would be a direct consequence of the approximately US$75 million invested in such projects, and it corresponds to a 12.5% annual real rate of return.

Domestic Opportunity Costs and Potential Offsets. Considerable debate exists over the level of opportunity costs incurred by placing land into protected areas. It is generally acknowledged that protected areas do impose some losses on a country, although there is substantial uncertainty and disagreement among analysts regarding the level of these costs. First, farmers near protected area boundaries can suffer crop and stock losses that can be attributed to wildlife in the protected areas. Second, the opportunity costs of land may be a significant long run consideration. While not all arable land in Nigeria has yet been taken up for agriculture and grazing, local land constraints in some regions may intensify as population increases. Third, offsetting these concerns, however, there are potential local benefits associated with tourism, improved functioning of watersheds for water supply, and maintenance of other ecological functions. Analytically, all of these opportunity costs (and benefits) accrue to the Baseline Scenario. No assignation of monetary benefits to these costs and benefits has been conducted for this exercise; all benefits associated with the GEF Alternative are, however, more readily identified and are implicitly taken to be incremental to these baseline levels.

Global Environmental Objective

The global environmental objective of the GEF program is to preserve globally significant biodiversity and unique ecosystems within selected protected areas and their support zones through improved management, partnerships and the promotion of alternative livelihood options for neighbouring communities.

Global benefits associated with this objective are substantial. Based on benefit transfer literature[2] the minimum level estimate for the park areas within this project would show global biodiversity benefits of the order of US$4.5 million annually. Government of Nigeria estimates of this same benefit do not explicitly separate local from global benefits but using typical breakdowns the figures reported within Nigeria's Biodiversity Strategy would suggest that the global benefits could be up to an order of magnitude higher than this. For the five year period of this project, therefore, the global benefit is *at least* US$22.5 million and potentially well in excess of US$100 million.

GEF Alternative

Scope. With GEF assistance for addressing the global biodiversity objectives outlined above, the government of Nigeria would be able to undertake a more effective program that would generate both national and global benefits. The major thrust of the incremental activities would be to address a number of targeted initiatives that improve the decentralized management of the various park sites and also contribute

[2] Generally, the benefit transfer figures used in this document rely on those compiled by Costanza et. al. (1997) and are escalated to the year 2001. Adjustments between countries use a purchasing power parity basis, and all benefits are based on areas protected in hectares as recorded by the World Conservation Monitoring Centre for Nigeria. Nigeria's total protected area estate is just over 3 million ha, with almost 2.3 million heactres under IUCN Category II (Park) or 1a (Strict reserve) protected status. The analyses in this Annex focus on the two parks that are of greatest global significance within this project – Yankari and Kainji – with a total area of 757,000 hectares. For benefit transfer purposes, these parks are treated as mainly savannah areas with some woodland and aquatic areas.

to support zone activities to further reduce negative impacts on the biodiversity hot spots. Under the GEF Alternative, more resources can be provided to support zone activities, in particular to those habitats that may be of high priority from a global perspective and yield only minor domestic benefits. As has been demonstrated in protected area systems around the world, decentralized activities often contribute substantially to the overall sustainable management of the protected areas and to an overall improved level of effective protection. Also, the GEF investments would support incremental institutional, policy and educational initiatives to provide additional management support and to permit Nigeria to meet explicit international obligations.

Costs. The total expenditures associated with the GEF Alternative are estimated to be about US$114.62 million. Under the GEF Alternative, the program would still comprise the following Baseline components described above. Additional expenditures would be required in the following areas (detailed descriptions are shown in the project summary sheets):

Community Driven Investments.(US$3.55 million) This primarily reflects incremental contributions for Project Grants, with priority given to sub-projects that will enhance global values.

Institutional Capacity Strengthening. (US$290,000) This focuses on the provision of specialist services to assist in training related to global services in park management planning.

Policy Formulation. (US$580,000) This focuses on specialist services related to regulatory reviews and park system planning within the legislative framework.

Protected Area Management. (US$8 million) This activity provides the major support for biodiversity conservation and management within the selected protected areas and their support zones.

Outreach. (US$2.2 million) Contributions will permit funding of an enhanced outreach center that better highlights global benefits as well as specific training related to such benefits and objectives.

Benefits. The GEF Alternative incorporates the substantial benefits (and implicit opportunity costs) of the Baseline Scenario, and will enable further beneficial outcomes beyond those already specified. In addition to the Baseline benefits, incremental benefits to the global community include the ability to promote a more comprehensive protected area system that is capable of conserving and sustaining globally significant and representative biodiversity, despite competing economic pressures on the land base. GEF assistance will enable Nigeria to protect and to utilize sustainably the country's biodiversity beyond a nationally justified and affordable level. GEF investment in conservation education will lead to long-term willingness to pay for conservation benefits due to improved public awareness. Global benefits will include enhanced monitoring and information exchange through improved record-keeping, and effective capacity to preserve endangered species through the ability to fulfill international biodiversity conservation treaty obligations under CITES. Continued protection of many additional ecological functions, and of option and existence values, is an unquantified but potentially large benefit to the global community.

Some incremental domestic benefits will be realized in the GEF Alternative. These benefits include incremental local sustainable direct uses, distributional benefits, incremental protection of ecological functions, and preservation of domestically significant option values. At this stage, there is only a limited basis for estimating these benefits; most would be associated with a reduction in externalities from improvements in support zone incomes. At this stage, it is not realistically expected that the project will have a discernible impact on the local ecological functions of the large park areas; most of the benefits are likely to be associated with sustainable direct uses associated with areas. Estimates for such local benefits vary greatly in the literature, but an upper estimate is taken as a benefit transfer from the environmental economics literature; this places an upper bound on such benefits at a level of approximately $4.42/ha/yr. As a lower range benefit, it is assumed that about 10% of support zone incomes are associated with the protected area; this level is consistent with findings in typical West African areas, although it must be recognized that local site conditions can vary substantially. As no specific economic studies have been done relating to such incomes in the project area, and as the anticipated investments have not yet been designed at the micro-watershed level, there is no additional basis for making more precise site-specific

estimates. The '10% income' assumption, however, yields a benefit level of $1.23/ha/yr, which is of the same order of magnitude as the benefit transfer estimate. As a result, these estimating bases place domestic benefits at a level of about US$16.74 million.

Incremental Costs

Incremental Expenditures. The total expenditure under the Baseline Scenario is estimated to be US$102.0 million while the total expenditure under the GEF Alternative is estimated to be US$114.62 million.

Incremental Costs. These incremental expenditures are partially offset by an incremental domestic benefit of about US$16.74 million. This benefit would not have been realized in the Baseline Scenario, and is primarily associated with sustainable direct uses. The net result is that the incremental cost of the GEF Alternative lies in an amount of US$12.62 million. Accordingly, GEF assistance of US$8 million is requested, while IDA is expected to support the balance.

Cost-effectiveness. While a detailed economic analysis was not possible at this stage because the precise activities for the micro-watersheds have not been selected, a limited cost-effectiveness analysis of the international transfers associated with the protected area component is feasible. In this instance, just the proposed GEF expenditures (US$8 million) are assessed in light of the area they are intended to protect. As a conservative estimate, it is assumed that these expenditures apply mainly to the targeted national park areas (Yankari and Kainji Lake) as these support the most significant global benefits, and only to the area specifically gazetted within these parks. Actual protection and impacts will extend beyond these park boundaries, as well as to other reserves. For these two parks, however, it is estimated that the total intervention translates to an annualized cost of about US$400/km^2/year of effective protection; this reflects the basic hypothesis that improved protective measures will ensure protection of a wider range of species and habitats; the 757,000 hectares of land area within these two parks would otherwise have experienced continuous degradation. Typical conservation expenditures around the world reflect international interventions corresponding to approximately US$25/km^2/year to US$2,500/km^2/year of protection. In the case of these areas, therefore, MEMP provides an opportunity to implement relatively efficient conservation expenditures.

Table IC-1 – NIGERIA MEMP Incremental Cost Determination
(US $ million)

Component	Category	Expenditure	Domestic Benefit	Global Benefit
I. Community Driven Investments in Micro-watershed Development	Baseline	US$80.0	Poverty reduction in support zones, decreased pressure on local protected areas.	
	With GEF Alternative	US$83.55	Improved maintenance of ecosystem function, decreased soil degradation and off-site impacts, decreased pressure on local protected areas.	Improved biodiversity protection in key high priority protected areas.
	Incremental	US$3.55	(values included under item IV.)	(values included under item IV.)
II. Strengthening Environmental Institutional and Legislative Framework	Baseline	US$1.0	Improved capacity for management, research & policy development, planning & monitoring of PA system; improved facilities and infrastructure.	Provision of capacity for effective conservation of globally significant biodiversity and environmental assets.
	With GEF Alternative	US$1.29	As above.	As above.
	Incremental	US$0.29	(values included under item IV.)	(values included under item IV.)
III. Strengthening Environmental Management Support Services	Baseline	US$5.0	Strengthened technical support and institutional capacity.	
	With GEF Alternative	US$5.58	As above.	Capacity to carry out biodiversity conservation policy, planning & monitoring; fulfill CITES obligations.
	Incremental	US$0.58	(values included under item IV.)	(values included under item IV.)
IV. Protected Area and Biodiversity Management	Baseline	US$1.8	Conservation and protection of nationally important biodiversity and environmental assets.	Support of better management and minimal protection of biodiversity.
	With GEF Alternative	US$9.8	Improved sustainable direct use of local products, enhanced maintenance of water quality and local rainfall for agriculture and fisheries, option value from conservation of genetic stocks of domestically significant species.	Contribution to establishment and maintenance of a comprehensive and representative protected area system within Nigeria, capable of sustainably conserving globally significant biodiversity despite competing economic

Component	Category	Expenditure	Domestic Benefit	Global Benefit
				pressures.
	Incremental	US$8.0	US$16.74	US$22.5
V. Development Communication	Baseline	US$10.0	Fulfilment of domestic conservation education needs.	Improved biodiversity conservation through education based on initiatives elsewhere in the world.
	With GEF Alternative	US$12.2	As above.	Higher levels of conservation; enhanced monitoring and information exchange through improved record-keeping.
	Incremental	US$2.20	(values included under item IV.)	(values included under item IV.)
Totals	Baseline	US$102.0		
	With GEF Alternative	US$114.62		
	Incremental	US$12.62	US$16.74	US$22.5
Summary Calculation for GEF Eligibility (range)	Incremental Expenditure		US$12.62	–
	Incremental Domestic Benefit		(US$16.74)	–
	Incremental Cost to GEF		US$8.0	–

* Note: Range of baseline expenditure corresponds to documented range of potential “minimum costs” for protected area management of $1-2/ha/yr. Range of domestic benefit corresponds to minimum and maximum range of quantifiable food and material harvests for typical protected areas in Nigeria.

Annex 4a: STAP Review of Project Proposal

Nigeria:Microwatershed and Environmental Management Project

The "overarching objective of this PCD is to assist the Nigerian authorities in their efforts to rapidly reduce poverty. One of the key elements of the interim strategy is to prepare a set of priority projects aimed directly at poverty reduction through sustainable NRM."The effort to bridge poverty reduction, biodiversity, and improved environmental management in an integrated activity is laudable and the project, if successful, could be a model for similar actions in other parts of West Africa and, indeed, in other parts of the developing world.

The PCD does not, however, elaborate persuasively how either the environmental or the social benefits of the project are to be achieved. Regarding the social dimensions the PCD lists seven "key performance indicators," of which only the last refers to poverty: "Increased community income accruing to local communities in the support zones from sustainable livelihoods."

Thus, the local community is identified as the beneficiary. It is not clear, however, what a "community" is. It would perhaps help to have some elaboration of the concept in the context of the project area. Is "increased community income: here equated with "poverty reduction?" It is clear that at the national level, increased per capita GNP does not
automatically translate into poverty reduction. That is, the poor may in fact be worse off if the increased income is captured, as it so often is, by the nationally already affluent. Similarly, the local "community" (village, cluster of villages, band) is in no sense an internally undifferentiated, homogeneous entity, and such benefits as the project may
generate might be captured by local as well as national elites. The project will have to show that both analytically and substantively the notion of the "community" is disaggregated into its significant components. In West Africa, a village may well contain people who are "ethnic strangers," "descendants of servile peoples," "descendants of captives" and the like who are overwhelmingly in the "poorest of the poor" stratum. How
they will profit from the proposed project activities is not specified. Rather, the "community" is treated as an undifferentiated whole in which if anyone benefits, everyone benefits. At best, this is unlikely. Local elites are just as capable as national elites of appropriating the benefits of development interventions.

On the environmental side, a problematic concept is "desertification," as in "Protection and conservation of biodiversity in these areas is particularly important since the degradation of habitat and ecosystems and the disappearance of indigenous species increases the potential for desertification of these areas" as well as "reducing [the] options of [marginalized communities] to earn a livelihood..." What is the evidence
that local farming and stock raising practices are the principal cause of desertification, and what is the evidence that secular desertification – that is, a progressive decrease in the capacity of the environment to support useful plants without major new inputs – is occurring. When the term began to be used during the Sahelian drought of the late 1960s and early 1970s, it was generally assumed that the productive practices of local peoples, particularly herders of ruminant livestock, were the principal cause of the disaster, informed by a claimed "tragedy of the commons," the disjunction between "private" ownership of herds and "communal" ownership of lands.

Objective scientific analysis demonstrated, to the contrary, that "traditional" herding practices were well adapted to fluctuations in rainfall on annual pastures. (Palaeobotanical studies not shown that at some earlier time there had been a larger proportion of perennials, despite the repeated claim that livestock grazing adversely affects the reproduction of "palatable perennials" and favors the reproduction of "less
palatable annuals." Where secular declines in land productivity could be demonstrated, they were more likely to be caused by the expansion of rainfed and irrigated agriculture into pastoral areas than by pastoral exploitation itself. The principal threat to the environment was sedentarization of production. Further, in Nigeria the construction and
management of the Kainji Dam resulted in major declines in food production downstream; the dam terminated beneficial annual flooding, which had maintained the productivity of the lateral floodplains (fadama) for flood-recession farming, fishing, and herding. (The PCD sees only the adverse consequences of flooding: "floods destroy fields and homes, leaving many communities poorer with each passing year." These destructive floods

have intensified as consequences of deforestation in watershed hillsides. The hundreds of thousands of hectares of fadama production lost as a
consequence of the termination of flooding is not considered in the document. I am not sufficiently familiar with the hydrology of Kainji to suggest that, as at the Manantali Dam in Mali, a controlled release to replicate the predam flood should be explored.)

The PCD indicts "illegal grazing...and [exploitation of] grasses for feed stock" as "major problems in most of the protected areas" along with hunting and poaching. What is the evidence that domesticated ungulates and wild animals are environmentally incompatible? Of course, foreign tourists are will be less attracted to game reserves if these are simultaneously used for herding. But evidence from East Africa clearly shows that there is no inherent incompatibility between domestic stock and wildlife. The
PCD notes that "Kainji Lake National Park has an added complication of the migrant Fulani passing through the park with their cattle, maintaining traditional migrant routes (emphasis added), and that "more productive and sustainable form of land use" will not be imposed without "consideration of the fragility of the ecosystem and acceptance of the community." Why would a "community" that traditionally followed certain transhumant routes agree to give them up?

According to the PCD, activities that threaten the protected areas will be replaced by "microprojects that will reduce the stress on the protected areas and promote sustainable use and management of biodiversity" along with "outreach programs for raising awareness of conservation of critical habitats and biodiversity." What these microprojects might be is not clearly spelled out, so I cannot assess them.

The notion of using the microwatershed as the unit for planning and management is a worthwhile innovation, one that follows nicely from the World Bank's December 2000 workshop on the topic. Further, the PCD properly insists that protection of the poor and promotion of environmentally and socially sustainable development is a "critical area"
in which institutional reform must be directed. It does not, however, persuasively indicate how the poor will be protected, nor how "equitable public services" will be delivered.

The central theme of the PCD is the recurrent notion that there be "active participation of the local communities." What is doesn't tell us is what a community is. Is it a village, a group of villages, a segment of a village, a band? If it is any of these, it becomes problematic how direction of benefits to the poor will be assured. A rural Nigerian village is a highly complex structure, internally segmented by wealth, ownership and control of resources, and access to information and officials; it is not at all a homogeneous grouping. Intensive field research with high linguistic competence at the village
level is mandatory if the relevant segmentations of power, authority, wealth, and influence are to be determined, as they must be to achieve any genuine improvement in the well-being of the poor. This cannot be accomplished by brief visits tot he village chief and notables (what Robert Chambers well characterized as "rural development tourism"). Dolores Koenig, who worked extensively with the Institute for Development
Anthropology in Mali, notes that "Existing theoretical approaches have oversimplified our understandings of rural development and change in Africa... [They] underestimated the heterogeneity of the backgrounds and income-earning strategies of rural populations. In research directly germane to the PCD, she seeks to understand "the ways in which rural heterogeneity has led to different economic choices, which in turn affect relations with states and markets.: Beyond the relevance of "variation in wealth, ethnic identity and gender" in terms of access to resources, Koenig stresses the importance of "individual experiences that bear upon choices about economic activities. These experiences provide access not only to tangible resources but also to new technical and socio-economic knowledge. Particularly important were the ways in which people learned new knowledge." The PCD does acknowledge that even within the same village different households have quite different opportunity situations: "farmers on different slopes experience different rates of erosion; they face different costs of conservation..." It notes that these "asymmetries" are widely found in natural resource management activities.

In northern Nigeria there is a fair degree of vernacular literacy in Hause and FulfulDe. (I do not know if there is literacy in Kanuri, although many Kanuric-speakers are also fluent in Hausa.) Thus, in the effort to achieve "community involvement" in the project, relevant documents, such as the PCD, might be translated and distributed to the people in their own languages. (The Institute for Development Anthropology translated its

report and recommendations on the Senegal River Basin Monitoring Activity in Pulaar and distributed 5,000 copies throughout Halpulaaren areas of the valley. To the best of my knowledge, that was the first time that an "official" development document was made available to a West African rural population in its own language among whom it generated very favorable responses.)

Brief comments on the "Project Description Summary":

(i) Community-driven investments in micro-watershed development. The identification of the microwatershed as the object of investment is an interesting innovation in rural development. It remains to be determined, however, whether the microwatershed, an environmental construct, corresponds to local thinking about social space (the space within which people come to agreements over its management). If various components of a village exploit different microwatersheds, how does the project anticipate
achieving consensus on which of alternative MWSs to place the focus of investment? And how is it anticipated that the "participatory planning process would...strengthen existing informal groups or establish local community associations for implementation of works and future maintenance of investments" without having the process captured by (or reflecting) the interests of the locally powerfully? Is it likely, given the current
dominance of an austere Islamic movement in northern Nigeria, that women's concerns will be effectively represented?

(ii) Strengthening institutional and human resource capacity of all relevant actors. It is difficult for me to comment on this component of the project without seeing the PRA that was "conducted to determine the level of community capacity. The assessment showed that communities were generally well organized and have formed and managed their own community projects in the past."

(iii) Policy formulation and intervention. In this section, the PCD correctly acknowledges the "potential for conflict among the stakeholders" and the need to reduce it. This potential for conflict must be anticipated both between and within stakeholder categories. There is the potential for conflict in attempting to achieve the two major project objectives: (1) biodiversity and (2) poverty reduction (of the poor). Project monitoring may well indicate that in the attempt to achieve the former, the latter is being compromised or neglected or even worsened. Who will adjudicate between the Ministries of Environment and Social Affairs where these are supporting different, and potentially conflict, project objectives? For example, "land tenure rights" are listed as a specific focus. But earlier, the PCD noted that the "traditional" transhumant routes of herders that became incorporated into reserves were declared off-limits to livestock.

(iv) Protected areas and biodiversity management component. What are some
of the micro projects that are to "promote the involvement of local stakeholders more closely in protected area management?" Perhaps these should be spelled out in the PCD along with some clarification of what constitutes a "key local stakeholder group" (given my earlier comments about community complexity).

(v) Outreach, awareness raising, and communication. Who are the "target beneficiaries and other stakeholders" and how will beneficiaries "demand program services"? Does the PCD envision the same group as benefitting from improved biologically diverse reserves and parks and from poverty reduction? Are there instances in which these two objectives might be in opposition. Where achieving one goal adversely affects the other, which takes priority? Is the Ministry of the Environment the appropriate agency
to moderate environmental actions where they do not benefit the poor?

My remaining comments indicate other areas of the PCD in which the kinds of questions raised above seem to be germane. For example, in the section on Key Policy and Institutional Reforms Supported by the Project, it is stated that policy review will focus, inter alia, on "incentives and opportunities for income and employment generation at the local level" and on "processes in place for addressing the needs of women and vulnerable groups" and "land tenure rights," without indicating how these objectives will be achieved. (Further on the same page it notes that "women's development will be
achieved through increased availability of drinking water, fodder and fuelwood." These are excellent objectives, but are they commensurate with the costs of exclusion of gathering activities from the protected areas?

Other concepts used in the PCD that need greater precision or spelling out include:

"vulnerable groups"
"esthetic, cultural and ethical values"
"alternative livelihood options"
"community priorities".

Could the PCD spell out in some detail what is meant by the "social assessment conducted prior to implementation [that] will provide further evidence of community capacity" (p. 15)?

Given the proclivity of local elites to capture the benefits of development interventions, how will the project "ensure that investments at the community level are undertaken directly by the ultimate beneficiaries of the project" (p. 16) (assuming of course that the ultimate beneficiaries are not the already affluent and powerful)? The PCD does not see this as a potential problem. On p. 17 it notes that "the priorities of natural resource intervention are...inevitably locally specific," but it doesn't persuasively indicate how the project will assure the widest possible number of beneficiaries. (Does the PCD really mean that the poor and vulnerable are likely to "free-ride on the collective action of other members of the community" (p. 19)?

In the section on key social issues, pp. 27 ff., communities are seen to be "empowered to identify their development priorities and take charge of the develop[ment] process by directly implementing, operating and maintaining their investments." How is this empowerment to be achieved? And how will the poor majority benefit from such empowerment?

How has Nigerian National Parks Service Decree No. 46 of 1999 about park management affected social relations and economic conditions of persons in the area?

Finally, on p. 38, it is again anticipated that "the baseline MEMP project will generate significant benefits, primarily in terms of direct poverty reduction" (emphasis added), without persuasively spelling out how that poverty reduction will be achieved.

MEMP is an interesting undertaking. I hope my reading of the PCD is useful to you and your colleagues.

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Annex 4b: Response to STAP Reviewer's Comments

Nigeria: Microwatershed and Environmental Management Project

Issue	Comments	How addressed
Achieving social benefits	What is a community? Is 'increased community income equated with 'poverty reduction'?	The structure and social organization of "communities" differs from geographical area to geographical area in Nigeria, depending on population densities, which vary greatly from North to the South, and along different social, religious and ethnic lines. IDA resources (US$100,000 plus) are being used to fund detailed social assessments in each of the states being targeted under the project. These are expected to yield considerable information on the dimensions and characteristics of the 'communities' that are being targeted for support under the project. The terms of reference for the social assessments are attached for reference. No, it is mentioned as one indicator of reduced poverty. While collective action is promoted, the goals are still to increase household income. The project will provide a package of services which aim to: (a) improve incomes through improved natural resource management; (b) improve the quality and availability of water; and (c) within the 'support zones' outside the protected areas, provide livelihood opportunities that are environmentally and socially sustainable.
Achieving environmental benefits	'desertification' and contributory factors - which causes more impact: local farming and stock raising practices, or the expansion of rainfed and irrigated agriculture into pastoral areas? Flooding – Explore positive as well as negative consequences?	The PCD does not argue one way or another, that local farming and stock raising practices or the expansion of rainfed and irrigated agriculture into pastoral areas contributes more to the problem of desertification of land degradation in general. We maintain that protection and conservation of biodiversity and ecosystems is critical to address the serious problem of land degradation. Towards this goal, the project aims to rehabilitate grazing and pasture lands, particularly adjacent to protected areas, to reduce conflicts between pastoralists and farmers as well as to reduce the pressure on the protected areas. The project will also look at supporting the research and application of improved alternatives to traditional sources of energy and livestock feed. The PCD is responsive to the issues raised by a range of stakeholders, all of whom described the yearly flooding of the Kainji as an economic and ecological disaster. Whole villages have to be relocated each year but most of the village returns to the floodplains after the floods recede, to make use of the nutrient rich land for cultivation purposes. The Ministry of Water Resources and the Kainji Dam authorities are carrying out detailed studies on the flooding and environmental and social impacts. The design of micro-projects in the watersheds under this project will benefit from the findings of these studies. The maintenance of grazing route through the protected area becomes an issue and a threat on the protected area mainly due

Issue	Comments	How addressed
	Maintaining traditional pastoral routes through protected areas; why would a community that traditionally followed certain transhumant routes agree to give them up?	to the collapse of grazing reserves outside of the protected area. The project aims to rehabilitate some of these grazing reserves outside of the protected area in consultation with stakeholders. There is no suggestion in the project to get the pastoralists to give up traditional routes. Rather, the social assessments being carried out are expected to shed more light into the conflict between the farmers who have encroached into the pastureland, the migrant Fulanis and park management. Additionally, the project will support the formulation of a management plan for the Kainji National Park, which will focus on developing participatory mechanisms and community involvement in park management.
	Micro-projects that will reduce stress on protected areas and promote sustainable use and management of biodoiversity	Examples of micro-projects that will be supported are: afforestation projects that will yield fuelwood, poles for construction of houses, canoes, honey making, traditional medicines (growing and packaging), fruit trees (includes drying and packaging), homestead fisheries and handicrafts (will include pottery, mat and basket weaving). Some of these pilot projects will be started during project preparation to assess acceptability and replication potential. Additionally, communities within the support zones of protected areas will be engaged in rehabilitation of roads, infrastructure, bore hole development and tourism infrastructure rehabilitation projects within the protected areas themselves. Such micro-projects are aimed at improving harmony between park management and the local communities and are expected to lead to a greater role and involvement of the community in protected area management.
	How has Nigerian National Parks Service Decree No. 46 of 1999 affected social relations and economic conditions of persons in the area?	The Decree itself has not had impacts on social relations or on economic conditions of persons in the area. Many of the protected areas were established long before the decree and the management style of exclusivity has had impacts and led to conflicts between communities in the area and between park management. The majority of directives within the decree, such as the development and implementation of management plans for the parks, and greater public participation in park management, are yet to be implemented. The project proposes policy review and an attitudinal shift in getting park management to address the need for a more participatory approach where a greater role is given to the local communities in the management of the protected areas. Technical assistance, capacity building, study tours and pilot projects aimed at bringing harmony between park management and the communities living in support zones are all initiatives proposed within the project to address this issue.
Community-driven investments in micro-watershed development	Within the micro-watershed planning and management process: how will the 'poor' be 'protected'? how will 'equitable public	The Multi-Sectoral Implementation teams (MITs) will comprise of state technical officials and NGOs. The Multi-sectoral Implementation Teams would include a social specialist/adviser who would ensure that vulnerable groups are not excluded from the planning process. Additionally, the project would proactively promote projects that are planned and managed by women's associations. The MITs will receive hands-on training

Issue	Comments	How addressed
	services' be delivered? How will communities be empowered to identify their development priorities? How will the poor majority benefit from such empowerment? How will poverty be reduced through MEMP investments?	in participatory planning processes. They will be attuned to the fact that the key to the success of micro-watershed investments will be to ensure that all resource users participate in the Watershed Association and that free-riders are minimized. The participatory process will include vulnerable groups by ensuring that the process includes focus group discussions with women, herders, landless and other vulnerable groups as identified by the social assessment. MEMP activities will comprise of drinking water, rehabilitation of feeder roads, post-harvest infrastructure, soil erosion control (vegetative and structural), reduced run-off, improve moisture retention, etc. The on-farm investments will result in increased yields as result of reduced erosion and greater moisture retention, off-farm public goods (e.g. roads) will result in increased access to markets, better prices and or value –added to agricultural produce.
	If various components of a village exploit different micro-watersheds, how does the project anticipate achieving consensus on which of alternative MWSs to place the focus of investment?	The area of operation for watershed development can be defined at various physical scales: at one extreme watersheds cover whole regions or countries, at the other they occur within individual farms. The MEMP will select micro-watershed areas on a combination of biophysical criteria (e.g. levels of erosion, groundwater potential, livestock numbers, biodiversity), social criteria (e.g. landholding size, land tenure arrangements, migration levels, literacy levels) and institutional criteria (e.g. functioning of self-help groups, history of collective action, presence of NGOs).
	How to avoid capture of the participatory process by the local elites? E.g. how to ensure that women's concerns will be effectively represented in the Northern states?	The MITs will be trained to specifically avoid capture by local elites (e.g. by using focus groups to evolve micro-watershed plans). Furthermore, the Management Information System (MIS) will include indicators of women and vulnerable group participation and these will be verified on a random basis by the State Program Support Unit (SPSU) to whom the MITs will report.
	How will the project assure the widest possible number of beneficiaries?	Using the micro-watershed as the physical planning unit will itself assure the widest possible number of beneficiaries; the whole Micro-watershed would need to be treated to enable the full benefits of integrated natural resource management to be realized.
Policy formulation and intervention	Conflicts between major project objectives: biodiversity conservation; and	The project is a pilot, and takes on the challenge of promoting the sustainable use and conservation of biodiversity and ecosystems in its efforts to reduce poverty. Rural people depend for their livelihoods on natural resources and the maintenance of ecosystem services. Sound use of natural

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	poverty reduction (of the poor) Incentives and opportunities for income and employment generation at the local level, land tenure rights, addressing the needs of women and vulnerable groups, and exclusion of gathering activities from the protected areas	resources will undoubtedly result in reduced poverty. Thus, the potential for conflict between the two major goals will be minimized. A concerted effort will be made to promote the conservation and rational use of biodiversity in areas demarcated as having high value biodiversity and in ecosystems that are fragile or threatened. With regard to exclusion of certain users from areas which are demarcated as protected, the policies on protected area management will be reviewed to identify incentives, mechanisms and attitudinal change for promoting a more participatory and greater community involvement in protected area management. Additionally, study tours will be organized during project preparation for protected area management teams including members of support zone communities to visit and learn from experience with protected area management in other countries such as Tanzania, Zimbabwe and the new co-management and social ecology programs in South Africa.
Outreach, awareness raising and communica-tion	Who are 'target beneficiaries and other stakeholders'? How will beneficiaries 'demand program services'?	The outreach activities will cut across all components of the project and is in particular, directed at all the target groups within the micro-watersheds. The activities are also aimed at creating and sustaining strategic alliances between the various levels of stakeholders to achieve optimal project implementation. The awareness raising programs are geared at raising awareness of the beneficiaries of the MEMP, which will in turn generate demand for program services. The awareness raising activities will also seek to modify behavioral attitudes at the various stakeholder levels on issues relating to the watershed ecosystem, wildlife, bio-diversity and greater community involvement in protected area management.
Achieving greater 'community involvement' in the project	Translation of project documents into local languages	The project could assess the possibility of translating the Implementation Manual into the predominant local languages used in the targeted areas. However, more useful is probably the "Community Handbook" that is envisaged. This would be a separate document to provide guidance on a range of issues such as how to participate in the program to simple drawing of technical interventions for soil erosion control, design of bee-hives, etc.