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The World Bank

GEF PROJECT BRIEF

ON A

PROPOSED GRANT FROM THE
GLOBAL ENVIRONMENT FACILITY TRUST FUND

IN THE AMOUNT OF USD 5.0 MILLION

TO THE

GOVERNMENT OF SIERRA LEONE

FOR A

SIERRA LEONE WILDLIFE PROTECTION AND BIODIVERSITY CONSERVATION
PROJECT

May 16, 2006

CURRENCY EQUIVALENTS

(Exchange Rate Effective {Date})

Currency Unit =
= US\$1
US\$ = SDR 1

FISCAL YEAR

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ABBREVIATIONS AND ACRONYMS

AAA	Analytical and Advisory Activities
CAS	Country Assistance Strategy
CIF	Community Investment Fund
CSSL	Conservation Society of Sierra Leone
DACO	Development Assistance Coordination Office
DDR	Disarmament, Demobilization and Reintegration
EFA	Environmental Foundation for Africa
ENFORAC	Environmental Forum for Africa
ESMP	Environmental and Social Management Plan
ESW	Economic and Sector Work
FD	Forestry Department
GDP	Gross Domestic Product
GFCCI	Gola Forest Conservation Concession Initiative
GoSL	Government of Sierra Leone
IBA	Important Bird Areas
ICRBP	Institutional Reform and Capacity Building Project
IDP	Internally Displaced Person
KfW	Kreditanstalt fuer Wierderaufbau
MAFFS	Ministry of Agriculture, Forestry and Food Security
MAFS	Ministry of Agriculture and Food Security
MDG	Millennium Development Goals
MLCP	Ministry of Lands and Country Planning
MLCPE	Ministry of Lands, Country Planning and Environment
MMRF	Ministry of Marine Resources and Fisheries
MOU	Memorandum of Understanding
NaCEF	National Commission on Environment and Forestry
NaCSA	National Commission for Social Action
NBSAP	National Biodiversity Strategy and Action Plan
NEP	National Environmental Policy
NEPA	National Environmental Protection Act
NEPAD	New Partnership for Africa's Development
NFAP	National Forestry Action Plan
NRM	Natural Resource Management
NSAP	National Social Action Project
NTFPs	Non-Timber Forest Products
PMU	Project Management Unit Project
PSC	Project Steering Committee
RPF	Resettlement Policy Framework
RSPB	Royal Society for the Protection of Birds

SL	Sierra Leone
SL-PRSP	Sierra Leone Poverty Reduction Strategy Paper
SL-WPBCP	Sierra Leone Wildlife Protection and Biodiversity Conservation
TSS	Transitional Support Strategy
WAFR	Western Area Forest Reserve
WAPF	Western Area Peninsula Forest
WCB	Wildlife Conservation Branch of the Forestry Department

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SIERRA LEONE

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A. STRATEGIC CONTEXT AND RATIONALE

1. COUNTRY AND SECTOR ISSUES

A. Country and Site Profile

Sierra Leone encompasses 72,278 km² on the coast of West Africa, bordered by Guinea to the north and northeast, Liberia to the southeast, and the Atlantic Ocean to the south and west. Its population is estimated at 4.98 million with an average density of 63 persons/ km². Population density varies considerably across the country from over 1000/ km² in the Western Area Peninsula, where the capital Freetown is located, to \leq 40 persons/ km² in sparsely populated areas in the northern and eastern sectors of the country.

B. Political and Economic Context

Sierra Leone gained independence in 1961 with high hopes for rapid socio-economic growth and development that was expected to be driven by sustained exploitation of the country's natural resources, which were in abundance at the time. However, less than a decade later the country began to suffer from dramatic economic decline, social inequalities and political instability that broke down completely during the 1990s as a result of a brutal armed conflict that lasted from 1991 to early 2002. Factors attributed to Sierra Leone's political instability include extreme poor governance, widespread corruption, social injustice and the marginalization and disempowerment of a large proportion of the population, particularly those of the rural communities. The inability of the central government machinery to deliver public services to the population in an efficient and equitable manner undoubtedly exacerbated this breakdown of political stability.

Such political instability and poor national management (misguided economic policies and economic mismanagement, etc) have precipitated a decline in annual economic growth from an average 4 percent and 3.5 percent in the 1960s and 1970s respectively to an average of 1.5 percent in the 1980s. In the late 1980s, the GoSL, in consultation with its development partners, introduced a series of macroeconomic and structural reforms, aimed at stabilizing the economy and restoring growth (reduction of the budget deficit, liberalization of the exchange rate, abolition of price controls and exchange restrictions). But before any significant and sustained turnaround could be made, the civil war ensued in the 1990s and derailed the social and economic reconstruction program, resulting in a further deterioration of the economy, which fell to an average growth rate of negative 4.5 percent per annum between 1990 and 2000.

During the era of civil conflict and the post-conflict transition, much of Sierra Leone's economic and physical infrastructure were destroyed, and resource "mining" intensified, particularly in rebel-held strongholds. This was reflected in abysmal social indicators: under-five child mortality of is 28.4 %; life expectancy of 37 years; adult literacy rate of is 36%. The GDP per capita in Sierra Leone is US\$520. 70% of the population is living below the national poverty line of US\$0.75 per day; there is widespread lack of access to food and shelter; and coping mechanisms seem non-existent. Information in the Sierra Leone PRSP (2005-2007) published in

2005 suggests that about 26% of the population is food-poor. Indeed, the decade-long conflict exacerbated the poverty situation in Sierra Leone and caused the population to exert enormous pressure on the land and its resources for subsistence, livelihood support and income.

Figures contained in the SL-PRSP suggest that the economy has transitioned well (4.3% GDP growth in 2002, 9.3% in 2003, and 7.4% in 2004) after completion of the Government's disarmament, demobilization, and reintegration (DDR) program for ex-combatants. In the immediate post-war period (2000-03), agriculture, forestry and fisheries sectors grew at an average 4.6 percent per annum, and this was attributed largely to the high demand for basic food and timber for the housing sector. Sierra Leone's post-conflict economic performance has been largely due to recovery in agriculture and mining. Evidently, this overdependence of the economy on agriculture, forestry, mining, fisheries and production of bush meat has led to over-exploitation of natural resources with disastrous consequences to the environment.

Another great challenge facing Sierra Leone is its population growth rate, currently estimated at 2 percent per annum. Coupled with post-war demographic dynamics (particularly the rural-urban drift) the growing population is putting unsustainable pressure on existing social infrastructure (including services) and the country's natural and wildlife resources to the point that the status and potential of biodiversity is diminishing rapidly, and the capacities of ecological systems to function properly are severely reduced. Sierra Leone forms the western-most extent of the Upper Guinean rainforests, a complex of forests including evergreen, semi-deciduous and montane forests. Recent surveys of the distribution and composition of forest fragments indicate that approximately 70% of the country was once covered by rainforest and woodland savannah to the north. Due primarily to the negative political and economic issues discussed above, however, this area of forest has declined precipitously during the last century, and today just below 5% of the original forests remain. Unfortunately, this deforestation is pervasive and continues unabated at approximately 2 percent per annum due to persistent anthropogenic pressures. The most extensive area of primary forest remaining in Sierra Leone is the Gola Forest Reserves in the southeast, close to the boarder with Liberia, where mineral mining and timber harvesting have been the predominant land use forms, apart from farming. Approximately 300 km in the west, in the southwestern corner of the country, lies the Western Area Forest Reserve (WAFR), another significant fragment of rainforest, which is precariously located adjacent to the densely populated capital city of Freetown and under increasingly severe danger due to uncontrolled urban expansion.

The decline of forests in Sierra Leone has been blamed largely on slash-and-burn agriculture, although in some areas deforestation followed in the wake of commercial logging, which dates back to the British colonial period and became a major industry when slavery was outlawed. By 1840, logging activities had shifted to the interior of the country, as the supply of valuable timber along the coast became exhausted. Although many species were felled, the most preferred species were *Heritiera utilis*, *Didelotia idae*, *Berlinia confusa*, *Terminalia ivoriensis*, *Canarium schweinfurthii*, *Oldfieldia Africana*, *Ceiban pentandra* and *Azelia Africana*. At that time, forest management was non-existent. Subsistent farmers moved directly into the recently logged areas to burn remaining vegetation and clear the land for agricultural activities, and the forest was never allowed to naturally regenerate.

Post-independence attempts at ensuring effective natural resource management, sustainable protected area system development and conservation of biological diversity have been hampered because of the following barriers:

(a) Systemic Weakness in Conservation Legislation, Prescriptions, and Guidelines, and Inadequate Capacity for Their Implementation and Enforcement.

Many pieces of legislation and policy instruments have been enacted for different sectors for environmental management in SL; for example, forestry, agro-biodiversity, marine biodiversity, wildlife management, fisheries management, extractive industry and minerals extraction. General environmental management is covered by the National Environmental Policy (NEP) of 1994 and the National Environmental Protection Act (NEPA) of 2000. In fulfilling SL's obligation under the Convention on Biological Diversity, the GoSL has prepared the National Biodiversity Strategy and Action Plan (NBSAP), which outlines biodiversity conservation strategies in two broad categories: sectoral strategies (which cover wildlife, forests, biological diversity, agricultural biological diversity, inland water biological diversity and marine and coastal biological diversity), and cross-sectoral strategies (policy, legislation, capacity building, public participation, planning, monitoring, sustainable use principles, incentive opportunities, research and training, public education, impact assessment, access to technology, information exchange, benefit distribution, indigenous knowledge and financial resources). The Wildlife Conservation Act of 1972 was enacted to help regulate the utilization and protection of wildlife resources, but it deserves urgent review and updating. Although most of these frameworks are relatively comprehensive, they lack strength because they are out of tune with current best practices and approaches to resource management and conservation. Prescriptions, guidelines and management practices are flouted with impunity and plagued by weak governance and accountability structures that permeate particularly the state management structures.

Until recently the key public institutions ultimately responsible for forestry and wildlife, biodiversity conservation and environmental protection and management were the Forestry and Environment Departments of the Ministries of Agriculture, Forestry and Food Security (MAFFS), Lands, Country Planning and Environment (MLCPE) and Marine Resources and Fisheries (MMRF). However, in 2005 the Government of Sierra Leone per an executive directive established a National Commission on Environment and Forestry (NaCEF) which now takes over the natural and environmental resource management responsibilities hitherto overseen by the three Ministries mentioned above. NaCEF is executive in nature and mandated to provide policy advice and be involved in project implementation, environmental monitoring and priority setting, but is currently with no known organizational structures and office accommodation. It is woefully under-equipped, under-staffed and operating with insufficient budget, with no allocations for development purposes. Lack of resources (human, technical and financial resources) is incapacitating old and newly created public sector agencies, making them incapable of delivering quality services in the management of the country's natural endowments. In almost all these organizations there is limited capacities to design, plan and implement good policies and programs, provide policy direction and monitor the sector, enforce compliance and ensure due diligence. Therefore capacity deficiency is recognized as one of the key barriers for effective protected area management, wildlife protection and biodiversity conservation in Sierra Leone.

The private sector also does not have the equivalent capacities for effective management of natural resources. These limitations within the private sector do not offer opportunities for either a wholesale outsourcing of management responsibilities or a public-private-partnering. Till recently no conscious efforts had been made by Government to include the private sector in natural resource management except in licensed exploitations.

Research and academia seem to have an acceptable level of human and technical resources to assist in the development and implementation of effective programmes for sustainable natural resource management in the country. The two main universities Fourah Bay and Njala offer curricula in agriculture, forestry, wildlife and fisheries management and environmental studies, conduct research in various disciplines of natural resource management, and offer considerable expertise in contemporary best practices in biodiversity conservation and protected area management. Lack of financial resources has always been the limitation in how far they can engage and help, however.

In recent times, international and local non-governmental organizations (NGOs) have committed resources to natural resources management in SL and have been actively involved in decision-making and policy formulation and implementation of programs towards wildlife protection and biodiversity conservation. Generally, capacity among local NGOs may be low as compared to their international counterparts, most of which work through local organizations. Prominent NGOs in the environment and natural resource sector include the Environmental Foundation for Africa, Friends of the Earth Sierra Leone, the Conservation Society of Sierra Leone (a Birdlife International partner in Sierra Leone), BirdLife International, Conservation International and the Royal Society for the Protection of Birds (a Birdlife International partner in the UK). There is a dearth of information on the existence and capacity of community-based organizations in rural SL.

(b) Lack of Effective Partnerships for Conservation to Create the Desired Impact

In the past, the public sector organizations assumed full, unchallenged responsibility for the management of wildlife resources and biodiversity conservation within protected area systems in SL and thereby alienated all other actors, severing partnerships and jeopardizing full-scale and active public participation by adopting command-and-control approaches. The off-reserve areas became a free-for-all, open access heritage that was overused and abused. The on-reserve, policing-type management practice and the open access management style have proven to be counterproductive. A shift in paradigm to shared management responsibility with other partners is emerging, albeit at a slow pace. There are barriers that need to be removed quickly and these are associated with public sector reluctance and the mistrust among the partners. Lack of effective collaboration may be influencing the levels at which the wealth of experience and knowledge residing with individual stakeholder groups can be harnessed for enhancing decision-making, planning, implementation, and monitoring of state policies, programs, and plans toward poverty alleviation, sustainable resource management, and biodiversity conservation. It is believed that institutionalized collaboration and partnership arrangements could be key to improving management effectiveness by pooling scarce resources and assigning management responsibilities and roles based on capabilities.

(c) Insufficient and Unsustainable Sources of Funding for PA Protection

Current state budgets for both government and non-governmental institutions working in the field of wildlife protection and biodiversity conservation are insufficient and their reliability may be insecure. While the treasury allocates funds for staff emoluments and other recurrent expenditures, there are hardly any funds earmarked for development. It is unlikely that this situation will change in the near future as the state's sources of funds are not likely to drastically expand, not because the government attaches less importance to the sector, but rather because it has to deal with a myriad of other challenges with resources that are scarce. Current financial flows into the sector have been of short-term duration and channeled through support to projects. Thus, to be able to sustain appreciable levels of financing in the sector, an ensemble of new and innovative ways of financing would have to be developed in the future in support of priority actions at both the national and sub-regional levels. These could be in the form of environmental trust funds, debt-for-nature swaps, debt relief mechanisms, forestry-based carbon off-set projects, user fees, charges and taxes, private sector activities.

(d) Insufficient Public Awareness about Sustainable Management and Low Perceptions of Value of Management and Conservation of Natural Resources and Biodiversity

There is generally a low level of education/awareness and a lack of appreciation for the role of wildlife and biodiversity in human life in SL. There is little understanding generally for the environment-poverty nexus, and a broad-based programme of public education is needed to get people adequately informed about the potential benefits of wildlife protection and biodiversity conservation and hence motivate them to change their attitudes and adopt rational resource utilization and management practices within the key biodiversity sites.

A challenge to valuing biodiversity is making stakeholders aware of alternative uses of conserved areas that may have a higher consumptive or non-consumptive value than those they know. Advances in technology, ecotourism, and general changes in attitudes towards natural systems are significantly changing the way biodiversity systems are valued and appreciated. Spreading this awareness may require curriculum reviews and development at all levels of the country's formal and non-formal educational system (primary-tertiary). In addition, this will have to be supplemented with public education campaigns and outreach programs using multimedia and indigenous cultural education systems, and targeting all actors.

(e) Issues Related to Lack of Employment and Livelihood-Improvement Opportunities

The 2003 UN Human Development Index report classified Sierra Leone as the poorest nation, mainly because of the high population of poor people, especially in the rural areas. The poor who survive on less than US\$0.75 a day depend heavily on the productivity of these ecological sites and the associated biological resources; their survival is intrinsically linked with these environments for food, shelter, health, and sanitation needs, and their income sources are largely derived from here. Population pressures, lack of access to improved technologies, declining soil fertility, and lack of employment and survival choices increasingly stress these systems and resources and perpetuate this vicious poverty-degradation cycle.

The Sierra Leone Household Survey of 2003/2004 has shown that, while indeed the Sierra Leonean economy is agriculture- and natural resource-based and is providing employment for over 75% of the population, the incidence of poverty is highest in social groups in the agricultural sector, where the predominant farming technology is the destructive slash-and-burn shifting cultivation associated with short fallows periods. Sierra Leone's natural assets are under serious threat from human-induced activities, and the recent internal conflicts have contributed to the degradation of environmental and land resources of Sierra Leone. Coping mechanisms and measures for reversing resource degradation have been mostly ineffective. While the Government of Sierra Leone tackles the issue of environmental degradation by reviewing and reforming policy and institutional frameworks, it must simultaneously find ways to quickly provide choices for the people to participate in economic development, to expand opportunities for economic growth, to create jobs, to reduce their levels of poverty, and to improve their livelihoods.

(f) Lack of Effective Data Collection and Information Management System

Data and information on SL's ecological systems, wildlife resources, and biodiversity is scanty, unreliable, and obsolete, and their collection, storage, and dissemination seem to have been uncoordinated. When they are available, they are stored in formats that make retrieval and sharing painstakingly difficult. Other barriers may include a lack of institutional framework, weak governance, poor enforcement regimes and inadequate management capacity at all levels for managing data and information. An expected output of the SLWPBCP will be the development of an information management system that will provide the platform for gathering, storing and analyzing geo-referenced data and disseminating syntheses of information on SL's ecological sites, resource protection and biodiversity conservation in various formats (Management reports, PA brochures, web site, etc.).

2. RATIONALE FOR BANK INVOLVEMENT

The Bank is well positioned to avail to the Government of Sierra Leone its vast best practice experience and lessons learnt in implementing similar projects on behalf of GEF. Rationale for World Bank involvement in diverse sectors of the Sierra Leone economy after the decade long civil war has been to respond to the post-war government in leading a smooth resettlement, reintegration, recovery, reconstruction process and to seek broader participatory approaches to governance and resource management.

The World Bank Transitional Support Strategy (2002-2004) which was aligned with the Interim PRSP was set out to (a) mitigate the risk of renewed conflict; (b) resettle, rehabilitate and reintegrate war-affected persons and ex-combatant; (c) improve governance targeting institutional capacity building; (d) accelerate economic growth; (e) combat HIV/AIDS; and (f) increase access of the poor to basic services, targeting the rural population, women and children. On the whole and under the TSS, IDA committed US\$230 million to the social and economic renewal process. Beneficiary public sector agencies included (a) the National Commission for Social Action (NaCSA) that piloted methodologies of participatory project formulation and

implementation at the community level; and (b) the Ministries of Health and Education that empowered front-line service providers and communities.

Under the TSS, the World Bank has provided a credit facility to the GoSL (the Ministry of Local Government and Community Development) under the Institutional Reform and Capacity Building Project (IRCBP) to design and implement a country-wide program on the advancement of the government's decentralization policy including its sustainable fiscal decentralization strategy. IRCBP objectives will be achieved by strengthening the policy advisory and strategic management role of the Decentralization Secretariat and the Local Government Finance Department; providing some modest start-up investment to local councils; helping newly elected local governments acquire the management skills necessary to plan and translate resources into service delivery improvements on the ground; and assisting to establish a culture of transparency and accountability in local governments.

In 2005, the Bank finalized its four-year Country Assistance Strategy (2005-2009) to replace the 2002 TSS. The CAS is well aligned with the programs of other development partners, the SL Vision 2025 and the main pillars and cross-cutting issues in the SL-PRSP that focus on (a) governance, decentralization and public financial management; (b) sustainable growth, food security and jobs creation; and (c) human development. Within the framework of the current CAS, IDA investment support will go to the ongoing IRCBP, the proposed US\$28 million Rural and Private Sector Development Project, US\$5 million Mining Sector Technical Assistance Project, US\$33 million Health and Education Project, US\$ 43 million Transport Development Project and the US\$20 million Infrastructure Development Project. These will be underpinned with focused analytical work, for example strategic environmental assessment of the extractive industry. Bank support in the agriculture sector will be built on the 2004 Agricultural Sector Review. The proposed SL-WPBCP will be more aligned with the Strategic Priorities I (Decentralization, Capacity Building and Governance) and II (Growth, Food Security and Jobs Creation). The design of the proposed SL-WPBCP is primed on a strategic decision of building capacities of front-line service providers, district councils and communities in the management of protected area systems. Thus the CAS outcomes fall in line with the proposed SL-WPBCP objectives. SL-WPBCP will build on lessons learnt from and complement the abovementioned Bank-financed initiatives by providing resources to support incremental cost.

3. HIGHER LEVEL OBJECTIVES TO WHICH THE PROJECT CONTRIBUTES

A. Poverty Reduction

The Government's response to the many challenges facing the country is the formulation of its short-term growth and development agenda - the Sierra Leone Poverty Reduction Strategy Paper (SL-PRSP) - that focuses on reforming sectoral policies and institutional frameworks for attaining economic growth of 6 percent per annum, eliminating food insecurity, reducing unemployment, providing basic social services in education and health, and creating an effective social safety net. The SL-PRSP also links to the attainment of the MDG targets and Vision 2025. The proposed project would contribute to the attainment of the 7th MDG (Ensuring Environmental Sustainability) while SL strives to exploit its natural endowments to enhance growth, reduce poverty, and provide social services. SL's Vision 2025 summarizes the

development principles, which must guide the country's development efforts for the foreseeable future, and also describes the strategic areas of focus that form the basis for plans and policies for SL. These strategic focal areas include (i) attainment of competitive private sector-led economic development with effective local participation, (ii) creation of a high quality of life for all Sierra Leoneans, (iii) building a well-educated and enlightened society, (iv) creation of a tolerant, stable, secure and well-managed society based on democratic values, (v) guaranteeing a sustainable path to the exploitation and utilization of the country's natural resources while maintaining a healthy environment, and (vi) building a science- and technology-driven nation.

B. Decentralization

An attempt at good governance and decentralization was started in the mid-1990s through the National Good Governance and Public Service Reform Program launched with strong support from DFID. However, this was short-lived when the rebels took over the reigns of government affairs. Lessons taken from this project have been useful for Government embarking on a multi-pronged decentralization process that seeks first and foremost to totally quash political instability by opening up political space and improving inclusiveness. To this end, democratic elections of local councils were conducted in 2004 to elect representatives for local level political administration. The passing of the 2004 Local Government Act introduced new ways of inter-governmental relations, participatory governance systems, transparency and accountability mechanisms to body politic and operations at the local level. It provides local authorities substantial autonomy in financial and human resource management and communities with platform to actively participate in decision-making at the local level. The Government's decentralization agenda is currently being financed under a World Bank-led Institutional Reform and Capacity Building Project (IRCBP) whose objective is to help establish a functioning local government system and improve inclusiveness, transparency, and accountability of public financial management at all levels of government. At the same time the project will seek to address risks and challenges that may confront decentralized institutions and thereby impede effectiveness and efficiency. These include capacity deficiencies in revenue and expenditure management, capture by local elites and tendency to act as public employment agencies rather than service delivery entities.

Already under the IRCBP, GoSL has established an Inter-ministerial Committee on Decentralization and Local Government. A Decentralization Secretariat has also been established as a Directorate of the Ministry of Local Government and Community Development to spearhead the implementation of the decentralization agenda. The proposed SL-WPBCP will benefit from public financial management reforms anticipated under IRCBP and it is in the spirit of expanding the gains from this and other preceding initiatives that the Government of President Kabbah is seeking GEF support to capacitate decentralized institutions to take more responsibilities in the management and development of the country's natural resources including protected areas, wildlife and biodiversity resources.

C. National Policy and Institutional Frameworks for Natural Resources Management

The Government has formulated a range of sectoral policies, regulatory and institutional frameworks that deal with natural resource (forestry, wildlife, minerals, fisheries, etc)

management, protected area system management and biodiversity conservation. Two key pieces of instruments, namely the National Environment Policy (NEP) and the National Environmental Protection Act (NEPA), were enacted in 1994 and 2000, respectively, to cover environmental management in the country. In 2003 the Government of Sierra Leone produced and adopted the National Biodiversity Strategy and Action Plan (NBSAP), a report that highlighted the status of the nation's various ecosystems and biological resources, outlined the threats to the existence and performance of these systems, and provided actions (including the means) for addressing these looming dangers. These actions are short-, medium-, and long-term in nature and are poised to help save the biodiversity (as well as other environmental and ecological goods and services) of Sierra Leone from total collapse, and to maintain the integrity of critical ecological systems in perpetuity.

Aside the thematic strategies that have been outlined by the NBSAP, it also identifies cross-sectoral strategic issues covering policy planning and legislation, capacity building, public participation, participatory monitoring and evaluation, incentive measures, research and training, public education and awareness, access to technology and information, benefit sharing, indigenous knowledge, financial resources, etc. The NBSAP proposes the adoption of participatory approaches to natural resource management, while at the same time seeking to impress on all stakeholders the need for conservation, sustainable use and equitable sharing of "accruing" benefits of biodiversity. Noting the high illiteracy rate, mass poverty and overly dependence of a large section of the population on biodiversity resources, the report stresses on public education and awareness raising at community level. It also recognizes the need to finance biodiversity conservation activities on a more sustainable and long-term basis and therefore recommends the establishment of a predictable long-term funding mechanism for the sustainable management of protected areas by setting up a trust fund. The NBSAP further identified eight (8) priority ecological sites of important biodiversity and suggested that urgent actions were needed to restore the integrity and ecological functionality of these systems (see Annex 20 for more detailed descriptions of the sites). These ecological sites are spread over four major types of ecosystems comprising the Arid and Semi-arid; Coastal, Marine and Freshwater; Forest; and Mountain zones.

The planned project responds to most of the proposals outlined in the NBSAP and the Natural Resource Management Policy of Sierra Leone, which overall seeks to provide a solid framework for the rationale and sustainable use of natural resources (including biodiversity) and the rehabilitation of those areas of the country affected by severe land degradation. SL-WPBCP is also taking its strength from SL's National Environmental Policy (NEP) and the three key objectives outlined under the United Nation Convention on Biodiversity (CBD), namely, the conservation of biodiversity, the sustainable use of biological resources, and fair and equitable sharing of benefits arising from the utilization of genetic resources.

The present state of peace in Sierra Leone provides an enabling environment within which the objectives of this planned project can be achieved; that is, to save Sierra Leone's biodiversity by improving management effectiveness of representative ecosystems described in the NBSAP.

D. GEF Operational Area

The proposed project will make a valuable contribution to increasing the number, size and integrity of a variety of global ecosystems by delineating representative samples of ecological areas and declaring them as legally protected. This will remove them partially or entirely from production and any other form of land use that may have an adverse impact on the objectives for which they are set aside. The NBSAP identified a total of eight (8) priority ecological sites of important biodiversity and suggested that urgent actions were needed to restore the integrity and ecological functionality of these systems. These ecological sites are spread over four major types of ecosystems comprising the Arid and Semi-arid; Coastal, Marine and Freshwater; Forest; and Mountain zones. The government is seeking support for all of them.

The initial consideration is that the proposed project will focus on support to four (4) Protected Areas with a total area of 249,588ha, representing 3 main ecosystem types which have been identified as priority sites in the NBSAP. These will be confirmed and revisited at appraisal and include: (i) *The Western Area Peninsula Forest* (17,688ha of remnant moist closed forest, representing the westernmost in the Upper Guinea Forest Block, established as forest reserve in 1916 and re-gazetted in 1973 as a National Park); (ii) *The Gola Blocks of Forests* (76,100ha tract of closed canopy, lowland rain forests; tropical wet evergreen to moist-semideciduous closed forest vegetation type, established as forest reserve in 1926 and 1930) and *Tiwai Island Forest* (1,200ha rainforest, established in 1987 as Game Sanctuary); (iii) *the Outamba-Kilimi* (110,900ha savanna vegetation type, gazetted in 1995 as National Park) and; (iv) *the forest complex of the Loma Mountains* (33,201ha montane ecosystem type, gazetted as National Park in 1973) and *Tingi Hills* (10,519ha montane ecosystem type, gazetted in 1973 as Game Reserve). Annex 20 elaborates on the selection, prioritization and biodiversity value of the targeted project sites. Further, based on availability of additional cofinancing the additional four sites identified under the NBSAP (Lake Mabesi (7,500ha), Lake Mape (7,500ha), Mamunta-Mayoso (1,000ha) and the Yawri Bay (33,605ha), included in Annex 20) will be considered for support.

The project is fully consistent with GEF Operational Programs OP-1 (Arid-Semi-and Zone), OP-3 (Forest ecosystems) and OP-4 (Mountain Ecosystems). Additional sites if included will be eligible to be considered under OP-2 (Coastal, Marine and Freshwater). Although the project's main focus will be the establishment of a system of critical ecological sites (protected areas) and the protection and conservation of wildlife and biological diversity within them, project outcomes will also be in line with OP-12 (Integrated Approach to Ecosystem Management), OP-13 (Conservation and Sustainable Use of Biological Diversity Important to Agriculture). The proposed project aligns perfectly with GEF strategic priority SP-1 (Catalyzing Sustainability of Protected Areas). SL-WPBCP will re-gazette 77,300 ha of rainforest, comprising the Gola Block of Forests (Gola North, East and West) and Tiwal Island into a Strict Nature Reserve and establish more protected areas. It will network priority PAs where possible, and secure their integrity and maintain sustainable flow of global and local biodiversity benefits. It will define and secure PA boundaries by surveying and pillaring them, assess their biological and socio-economic features and develop in a participatory manner management plans to cover them. GEF Grant funds will also finance capacity building of forest managers, civil society organizations, sub-national governments, rural communities in PA management and biodiversity conservation. The project will document local knowledge and skills in natural resource management and employ them in the management and protection of selected project sites. In reviewing and

reforming institutional and legal frameworks relating to natural resources management, project funds will be used to define practicable arrangements for establishing public-private partnerships such as co-management and co-administration for effective and efficient PA management. Activities under Component 2 will directly contribute to meeting the objectives of SP-2 (Mainstreaming Biodiversity in Production Landscapes and Sectors). The project will support biodiversity conservation in buffer zones adjoining selected PAs by introducing community management of biodiversity resources on community lands or individual lands outside PAs. Lessons will be taken from the Ghana Protected Area Development Project that assisted communities to create wildlife management areas outside PAs, assist communities in developing participatory zoning and land use plans. The project will also support the introduction of conservation agriculture through the practice of mulching, cover cropping, rotation, green manuring, low tillage, contouring, agroforestry; etc. GEF funds will be available to bolster assistance through development of rural enterprises and market mechanisms, and provide support to community members toward income-generating activities compatible with appropriate natural resources management systems, etc.). Thus, this project will provide opportunities to managers of PAs and communities to add value to protected areas and increase the contribution of goods and services provided by their sustainable management to poverty alleviation at the national and local levels.

B. PROJECT DESCRIPTION

1. LENDING INSTRUMENT

SL-WPBCP is a partially blended full-size GEF project with a lifespan of 6 years. The total project cost is estimated at **US\$16.6 million** and would be partially financed with a GEF grant of **US\$5.0 million** and an additional estimated **US\$11.6 million** co-financing to be leveraged from the World Bank, UNDP and other bi-lateral resources. IDA co-financing is expected in the amount **US\$3.0 million** from the ongoing US\$35m SL-IRCBP and US\$35m NSAP, as well as the planned US\$28m Rural and Private Sector Development Project. The Royal Society for the Protection of Birds (RSPB) will co-finance the project with an amount of **US\$3.6 million**, ring-fenced for the ongoing Gola Forest Concession Conservation Initiative. GoSL and community contributions will total **US\$2.0 million**. An additional co-financing of **US\$3.0 m** is under negotiation and to come from leveraged resources provided by the UNDP and bilateral donors such as the EU, DFID and AfDB. The Government of Sierra Leone is continuing discussions with donors to raise more leveraged resources in support of the project.

Donor	Amount	Status
GEF	US\$ 5.0 m	Still being processed
GoSL	US\$ 2.0 m	Assured
IDA	US\$ 3.0 m	Assured
UNDP and bilateral donors	US\$ 3.0 m	Still being discussed
RSPB	US\$ 3.6 m	Assured
Total Project Cost	US\$ 16.6 million	

2. PROJECT DEVELOPMENT OBJECTIVE AND KEY INDICATORS

The Project Development Objective (PDO) is ‘improvement of sustainable protected area management and biodiversity conservation within SL contributing to socio-economic development of beneficiary communities’. Progress would be measured against the following key outcome indicators:

- i. 300,000 hectares of selected protected areas with improved effective management (from 20% to 70% by EOP using the GEF SP1 Tracking Tool) compared with baseline conditions
- ii. 40% of communities experiencing improved livelihoods or accruing benefits from improved PA management
- iii. 60% increase in level of resources committed from district councils to PA and biodiversity management in the district development plans by EOP.

The Global Environmental Objective (GEO) of the project will be ‘to enhance the ecological integrity of selected ecosystems and protected areas’.

More specifically, the proposed project will aim to: (i) improve the integrity of four (4) selected critical protected areas and ecological functions through strengthening management of protected areas (PAs) and elimination of risks from uncontrolled, non-conforming activities such as logging and mining; (ii) enhance biodiversity protection within PAs and adjacent landscapes; (iii) ensure the conservation of genetic diversity within four (4) and outside PAs that rural people traditionally use for medicinal and consumptive purposes (medicinal plants, wood fuel, bush meat); and (iv) enhance the sustainable use of biological resources.

Key Performance Indicators

- i. Over 2,000 hectares of the buffer zones to the selected PAs with improved management effectiveness
- ii. One (1) Forest Reserve (the 77,300 ha Gola Forest Reserve and Tiwai Island Forest) upgraded to Strict Nature Reserve status by EOP.
- iii. Rate of deforestation at the Gola Forest Reserve reduced to half (1%) of the baseline rate (2%)

3. PROJECT COMPONENTS

(See Annex 4: Detailed Project Description).

As a response to request from GoSL to increase the number of selected PAs from four (4) to eight (8), the World Bank Task Team has committed to assist the GOSL Project Team to collect greater information on: (a) securing additional co-financing and donor support, and (b) the feasibility of establishing predictable and long-term financing mechanisms (including

endowment) for PA management and biodiversity conservation in Sierra Leone. GEF PDFB Grant funds will be used to conduct feasibility studies on long-term financing options before Appraisal and outcomes of this study will be crucial in determining: (a) whether to increase PA numbers, and (b) earmarking GEF Grant fund, together with RSPB Grant funds upfront, for setting up mechanisms for sustainable and long-term financing of the network of PAs. The individual component financing envelopes indicated throughout the draft PAD/Project Brief may be taken as indicative costs that are likely to be changed, based on the outcome of the studies proposed above.

Component 1: Strengthening Policy, Legislation and Institutional Framework for Ecosystem and Protected Area Management and Conservation of Wildlife and Biodiversity (Total US\$2.4m; GEF US\$0.7 m)

The overall objective of this component is to review and reform institutional frameworks and policies and legislation that govern natural resource management in SL. The specific objectives of the component will include: (i) definition of the institutional (governmental) framework (organization) for PA management, wildlife and environmental protection, and biodiversity conservation and the specific responsibilities/mandates of each entity within the organization, (ii) provision of a legal foundation for development and implementation of protected area management plans and for action against violations of environmental policies and laws, (iii) building capacity for mainstreaming of PA protection, wildlife management and biodiversity conservation into development planning and economic activities at the district and national levels, (iv) broadening of participation by civil society organizations, NGOs, and the private and public sectors in decision-making and implementation of programs, and (v) creating effective mechanisms for fair and equitable distribution of benefits from protected area management, wildlife protection, and biodiversity conservation.

Activities under this component provide support for developing capacities and strengthening the enabling environment for state agencies, private sector, civil society and local people to collectively plan, pass, monitor and enforce strong environmental policies and laws and test innovative approaches. Collaborative frameworks will be established, where necessary, and existing frameworks strengthened and energized to ensure synergies and operational efficiencies within and between public and private agencies that are responsible for environmental protection, biodiversity conservation, and management of protected areas. Some key outcomes from these interventions will be the establishment of an effective legal protection status for selected ecological (biodiversity) sites and sets of rules for exploiting ecological systems and biological resources within and around these protected areas. It is expected that at the end of the project's lifespan a robust framework for sharing and distributing benefits will be formulated and implemented in four (4) selected PAs and that this will be reflected by high management effectiveness of the protected area system.

Under this component project activities will be complemented with the support provided under the IDA financed IRCBP, which is providing support to GoSL for the implementation of the government's decentralization program including the establishment and strengthening of the policy advisory and strategic management role of the Decentralization Secretariat and establishing credibility and capacity within local councils in development planning and execution. The SL-WPBCP will focus on two key areas (i) building capacities for management

of PAs and sustainable use and conservation of biological resources, and (ii) building capacities to mainstream natural resource management issues, specifically protected area management, wildlife protection and biodiversity conservation into development planning and economic activities at the national, regional and sub-regional levels of administration. In this regard, state, private and civil society agencies at local, district and national levels will be trained in protected area management, wildlife protection, conservation and sustainable use of biodiversity, monitoring and evaluation, geographic information systems and mapping, and knowledge management systems. In addition, training and skills building will include (i) strengthening the scientific and technical knowledge base through on-site (field) training courses, technical workshops, and formal education, (ii) applying simple and effective monitoring techniques and tools for collecting, managing, analyzing and retrieving geo-referenced data and generating reports and other forms of information for distribution, (iii) developing regional and global information networks for exchange of information with government and non-governmental organizations similarly active in protected area management, wildlife protection and biodiversity conservation.

Component 2: Improving Management of Selected PAs (Total US\$12.0m; GEF US\$3.7 m)

The SL-WPBCP has decided to focus GEF Grant funds to support four (4) target PAs, based on considerations that have been alluded to below (representativeness and significance) and in detail in Annex 4 of the draft PAD/Project Brief. The Western Area Peninsula Forest is a National Park of 17,688 ha, which was declared a reserve in 1916 and upgraded to a National Park in 1973. It is the only place in West Africa where a mountain range occurs near the coast and the only remnant of moist closed forest remaining in Western Sierra Leone (and probably the westernmost in the Upper Guinea forest block). The reserve supports 2 major water reservoirs which supply water to Freetown and other communities surrounding the peninsula. It's increasing attracting a lot of domestic and international tourists. Threats include increased land clearance for farming and human settlements, mining and logging. The 76,100ha Gola Blocks of Forests (North, East and West) are of the rainforest ecosystem type, which were gazetted as forest reserves in 1926 and 1930. These are the largest tracts of closed canopy, lowland rain forest in SL, with a tropical wet evergreen to moist-semideciduous closed forests and inland swamp vegetation types. They are rich in biodiversity with 56 mammal species (6 threatened primate species) and 274 species of birds (7 threatened) and threatened with commercial logging, gold and diamond mining. The Outamba-Kilimi is a gazetted National Park, with a size of 110,900 ha. It is a savanna vegetation type. It contains 9 species of primates (4 threatened) and 220 avian species and is vulnerable to high hunting and fishing pressures. The 33, 201ha Loma Mountain Complex was gazetted a national Park in 1973). It is of montane character and faces rotational bush fallow cultivation and hunting pressures as the main form of threats.

Sub-component 2.1: Site Management Planning and Research (Total US\$8.2m: GEF US\$2.5 m)

This sub-component aims at providing the necessary strategic and operational tools and experiences to improve management effectiveness of selected high-biodiversity areas. The component will use lessons learned from other countries and initiatives in the region and sub-region to adapt them to the country and site-specific context. As an initial step under this component, GEF funds will be used to conduct a participatory evaluation of the status of

conservation activities at the proposed PAs and the current obstacles and threats to wildlife and biodiversity at each, hence, to identify the immediate needs for management at each site. Concurrently investigation of the management and conservation histories at each site will be undertaken, in particular research and review of any management initiatives (plans) that may have been proposed or implemented at the sites in the past. This information will cumulatively be used to develop draft management (work) plans for each of the selected key biodiversity conservation sites and their buffer environments and launch programmes to gather site-specific data and information on social, economic and biophysical parameters of the selected areas necessary to formulate more definitive management plans. For those selected PAs with no legal conservation status this project will also seek to obtain some sort of protected area status for these sites.

The second step under this component will involve the actual implementation of the revised and updated management plans through targeted investments that will have direct conservation links. Potential direct biodiversity conservation activities to be financed under the Grant will include systematic geo-referenced monitoring of human activity, wildlife populations and other biological resources in the PAs, law enforcement, PA boundary demarcation, management of GIS databases, mapping, zoning and gazettement, site-specific conservation measures such as soil erosion control, rehabilitation and restoration of the selected PAs and their buffer zone areas. Monitoring activities will focus on the identification of biological resources that may be developed to add-value to the protected areas for tourism, e.g., sites where wildlife populations congregate and may be viewed, scenic trekking (hiking & canoeing) routes, sport fishing, traditional cultural ceremonies, etc.).

Sub-component 2.2: Awareness Creation (Total US\$1.0m; GEF US\$0.4 m)

The sub-component objective is to raise awareness and increase know-how of key stakeholders and beneficiaries at all levels and to improve their capacities to participate at the appropriate level in the planning and management of protected areas and non-protected peripheries collectively maximizing management efficiency and biodiversity conservation, while enhancing local socio-economic conditions and providing alternative, productive forms of livelihood. GEF funds will be used in environmental management advocacy and direct site conservation actions. Activities proposed under the ‘Cross-sectoral Action Plan’ in the NBSAP will be reviewed and implemented where appropriate. At the local level, the project will broaden and strengthen local constituencies for ecosystem management and conservation of biodiversity e.g. through the formation, development and strengthening of interest groups and site support groups (SSGs).¹ Strategies will be designed and implemented to empower local communities to participate in the management and monitoring of high biodiversity sites (PAs and non-PAs). This sub-component focuses on promoting and enhancing greater involvement of civil society at project sites through effective engagement strategies.

¹ ‘Site Support Groups’ consist of people based in or around sites who are concerned about biodiversity loss and who draw on the experience and achievements of the wider BirdLife International Partnership to create local solutions. The BirdLife Partner NGOs work with these local communities to build a stronger local voice on environmental issues.

Sub-component 2.3: Creation of Alternative Sources of Livelihood - The Community Investment Fund (Total US\$2.8 m; GEF US\$0.8 m)

The objective of the component is to reduce dependencies of communities living in the fringes of the selected PA systems on natural resource exploitation. Dependencies will be reduced by providing communities with resources for developing alternative sources of income and livelihood support systems. GEF Grant funds will finance the provision of alternative and viable choices for the people to participate in economic development, expand opportunities for economic growth, create jobs, reduce their levels of poverty, and improve their livelihood. In this regard, the project will explore ways of increasing (alternative) sources of livelihood for people, particularly for those living in rural project communities adjoining or in the PAs.

GEF Grant funds will support rural livelihood schemes that could include apiculture, promotion of ecotourism and local handicrafts, captive breeding, environmentally-sound agri-business and product processing (e.g. palm oil, soap making, etc), development of natural resources including non-timber forest products for alternative products in response to emerging eco-markets, investing in restoration and maintenance of environmental assets (e.g. reforestation, agroforestry, soil conservation, establishment of herbal gardens). Under the Sub-component, funds will be available to support the preparation of a detailed feasibility and market accessibility analyses, which will lead to the formulation of a positive and negative list, indicating which sub-projects can be funded and which not. One criterium for categorizing sub-projects into any one of the lists will be their environmental soundness (less or no adverse impact). GEF Grant funds will support the development of a manual for screening sub-projects against their potential environmental impacts during the design stages. This manual will be used as a guide by approving authorities when evaluating proposals and contain sections that will provide guidance to applicants on preventive and mitigation measures that can be taken to address possible adverse social and environmental impacts of sub-projects on people and the local environment.

Investments in small-scale infrastructure (on demand-driven basis) will be financed from sources provided by IDA supported investment projects and other donors. The Sub-component will support acquisition of equipment necessary for basic law enforcement, monitoring, administration, maintenance, community development at each PA.

GEF PDFB Grant funds will be available to support detailed feasibility and market accessibility analyses during the project design stage. The proposed Community Investment Fund (CIF) will be administered by NaCEF at the center and will provide matching grants on demand-driven basis to eligible community associations in support of sub-project investments for improved natural resource and environmental management in 4 selected PAs and their peripheral areas.

Component 3: Project Management and Monitoring and Evaluation (Total US\$2.2m; GEF US\$0.6 m)

The objectives of this component are classified into 3 main categories: (i) to ensure an effective facilitation, coordination and management of the project inputs and actions (both internal and external) needed for execution of the project; (ii) to coordinate periodic tracking and monitoring of implementation progress and evaluation of project results and impacts; and (iii) to disseminate

and share project results and lessons learned with key stakeholders and project beneficiaries. The component fosters information exchange and synergies with other donors and projects, and among the various parties involved in the implementation of the project. This will help to minimize overlaps, draw lessons and experience and ensure efficient use of scarce resources for optimum results. The component also ensures that the use of project inputs and implementation of SL-WPBCP activities comply with the World Bank Financial Management Guidelines and the Procurement Guidelines (and Country Systems if they are in place). Facilitation, coordination, management, monitoring, information dissemination and sharing will occur at all levels (national, sub-regional, community) of project implementation.

4. LESSONS LEARNED AND REFLECTED IN THE PROJECT DESIGN

This project derives lessons learned from numerous past and ongoing World Bank and non-Bank financed protected area management and biodiversity projects primarily from outside Sierra Leone. With the exception of an UNDP support for the preparation of the NBSAP in 2002, there has been no large scale donor support to the forestry and wildlife sector for many years. However, since SL falls within the same bio-geographical and bio-cultural zone (of which the Upper Guinea Forest Ecosystem continuum is part) as many countries within the West and Central Africa sub-regions, (notably Cameroon, Gabon, Nigeria, Benin, Togo, Burkina Faso, Ghana, Cote d'Ivoire, Liberia, Guinea and possibly Mali and Senegal), experience in the implementation of similar projects could be adapted easily and reflected in the design of the SL-WPBCP. During implementation the project will establish linkages with similar initiatives in those countries and draw extensively on reports, evaluation, and lessons learned in numerous large-scale EU-funded programmes in biodiversity conservation, protected area management, and community development in central and West Africa, such as ECOFAC (Conservation and sustainable utilization of resources in Central Africa), PSVAP (Sectoral Program for the Valorisation of Protected Areas) in Gabon, and PADP (Protected Area Development Project) in Ghana. Project design drew lessons from the SL-National Social Action Project (NSAP) whose key objective is to assist communities in restoring infrastructure and building local capacity for collective action, using a community-driven development approach. SL-WPBCP will work closely with the Bank-led SL-IRCBP, SL-Bumbuna Hydroelectric Project (BHP), NSAP, the proposed SL-Rural and Private Sector Development Project (RPSDP) and many other donor-financed projects not yet on stream. Lessons will also be drawn from a number of ESWs and AAAs that have been planned.

- (i) **Weak enabling policy and institutional frameworks**
Sierra Leone is faced with a huge challenge of dismantling weaknesses in the design, implementation, compliance monitoring and enforcement of policies and legislation related to protected area management and conservation of wildlife resources and biodiversity. In trying to help remove this barrier to sustainable natural resources management lessons will be taken from experiences gathered under numerous projects, for instance the closed Ghana Environmental Resource Management Project, Ghana Natural Resource Management Project, the ongoing Ghana High Forest Biodiversity Project, Brazil National Biodiversity Mainstreaming and Institutional Consolidation Project, Gabon Strengthening Capacity for Managing National Parks and Biodiversity Project. The recently completed ESW on “Natural Resource

Management for Growth Sustainability in Ghana” provides a valuable source of data and information for designing appropriate responses to issues related to weak institutional frameworks in SL.

(ii) Capacity weakness and lack of involvement

The focus of this project is institution building and capacity enhancement particularly at the sub-regional and local levels because the poor state of these elements in SL poses enormous challenge to effective planning, design, implementation and monitoring of programs and initiatives in natural resource management and environmental conservation. A recent study financed under the PDF Block B of this project revealed that capacities (logistical support, skills and competencies) dwindle as one moved from the national to the sub-regional, district and community level. Capacity becomes leaner and leaner as one scans the various actor groups; it is highest within the public sector and lowest amongst the traditional chieftaincy institutions in whose chiefdoms these selected protected areas are located. The study recommended training and skill development for beneficiaries of the project. It also suggested a re-engineering and revitalization of the cultures, indigenous knowledge base, structures and systems associated with the chieftaincy institution by providing this stakeholder group opportunities for capacity building. The project places emphasis on building the capacity of the marginalized groups including women, aliens and settlers, displaced people and the unemployed youth in skills that will help to manage the selected protected areas and improve their potentials to generate income and raise their levels of livelihood.

There is evidence of a need to decentralize government and to transfer its authority associated with the body polity, financial management and planning to the sub-regional administrative structures (e.g., district councils, chiefdoms, etc) in order to engender local level empowerment and improve involvement and participation at that level in decision-making, planning, implementation and monitoring of programs and initiatives. The SL-IRCBP is seeking to help Government achieve these. Implementation of the GoSL’s decentralization process however has been slow. The GEF supported WPBCP will build synergies with the SL-IRCBP and draw lessons from the ongoing focus group discussions under the Bank-financed Youth and Employment Study.

(iii) Lack of appreciation for conservation

In a country where income generating opportunities to generate income are found predominantly in the agriculture and natural resource sectors the need for protecting unique ecological sites, managing wildlife and conserving species and numbers of other biological resources is hardly heard. As population grows, farm productivity declines, poverty engulfs a large proportion of the population, survival choices become limited, and people increasingly target commonly held resources for income and survival. In SL more and more people are transforming forests and woodlands, savannas, river banks, wetlands and marshes into other forms of land use in order to provide for subsistence and economic gains. This project proposes a three-prong approach toward solving the issue of non-consideration of environmental concerns.

Firstly, project funds will develop and implement vigorously an environmental awareness and education program (underpinned with an appropriate communications strategy), which will target major stakeholders and project beneficiaries. Secondly, the project will help establish credible mechanisms for stakeholder consultations and participation by ensuring inclusiveness, empowerment in sub-project design, planning, implementation and monitoring. The third approach will involve creating alternative income-generating and livelihood improvement opportunities within the project that will reduce community dependency and pressures on the natural resource base and put a halt to overexploitation and encroachment of natural biodiversity.

The SL-WPBCP drew lessons and experiences within and outside SL.

(iv) Poor financing of natural resource management

The NBSAP project reported that forestry contributes over 9 percent to the GDP of Sierra Leone and could be a major source of growth and employment for the country. The state's obligation of providing financial resources through budgetary allocations towards protected area management, protection of wildlife and conservation of biodiversity has only been met partially. Recent statistics reveal that state appropriations (i.e., budgetary allocations) to wildlife protection, biodiversity conservation, and protected area management are adequate to cover only personnel emoluments and recurrent expenditures with little or no monies earmarked for operational and development purposes. For fiscal year 2006 GoSL budgetary allocation to the newly created NaCEF totaled Le 1082.7 million (c. US\$361,000) spread over the expenditure categories emoluments and recurrent at Le 198 million (c. US\$66,000) and Le 884.7 million (c. US\$295,000), respectively. Operational expenditures related to natural resources seem to be covered with donor funds and how much comes in on annual basis is yet to be established. The NBSAP reported a 95 percent dependency of the forestry sector on donor support. For instance, donors' contribution in the 1995/96 budgetary estimates for 1995/96 for the Forestry Division was 95 percent of the total budget. Principal donors at the time for forest management were the UNDP (for NBSAP and NFAP preparation), DFID (for the suspended Wildlife National Parks Development at Kenema), RSPB (for Gola Rainforest Conservation), EU (for chimpanzee rehabilitation). If it fails to secure sustainable long-term financing for natural resources management and development SL risks losing its remaining forest types, important ecosystems and biodiversity. The design of the SL-WPBCP has considered this and a study into developing mechanisms for sustainable long-term financing will be commissioned soon under the GEF PDF Block B Grant. The establishment of a future long-term financing mechanism will be informed by the results coming from such a study and experiences and lessons from similar Bank-financed projects in Tanzania, Madagascar, South Africa and many parts in Latin America.

5. ALTERNATIVES CONSIDERED AND REASONS FOR REJECTION

The SL-NBSAP has proposed 19 individual priority projects, which are categorized into thematic and cross-sectoral projects and estimated to cost about US\$95 million. The initial

implementation phase of NBSAP was expected to last seven years (2004-2010), during which time the needed resources would be mobilized, institutional arrangements established, baseline studies conducted and policy reviews undertaken. It was also during this period that the priority activities identified in the action plan would be undertaken and a review of the NBSAP itself would be done in 2010. The 19 priority projects were to be designed as distinct individual projects which were to be implemented by lead public sector agencies. This approach was rejected because it would have involved huge costs unlikely to be financed by GoSL or donors, and it created administrative and coordination problems since implementation of individual projects was to be led by an ensemble of implementers each coordinating a particular priority project. Striking synergies among the individual stand alone projects would have put excessive stress on a government that lacked capacity in human and technical resources. Given that the areas identified as distinct projects overlap in substance, the project teams from both GoSL and World Bank felt it would make economic, administrative and technical sense to approach the issue of protected area management and conservation of wildlife and biodiversity from a more holistic scenario. Implementation and transaction costs are likely to be lower. The teams believe that in this way it may be much easier and effective for Ministry of Finance and NaCEF to effectively track implementation progress and evaluate project impacts. More importantly, mobilization of stakeholder support and participation during project design, implementation, monitoring and evaluation and in decision-making, particularly among communities located at the fringes of the PAs is likely to be higher and sustainable.

The team recognized that ensuring and securing the integrity of PA system in Sierra Leone will be highly dependent on having a predictable scheme of financing on a longer-term basis. Currently in SL, there are urgent financial needs to ensure that appropriate infrastructures and management systems are in place and secondly to cover recurrent costs in managing the PAs and tackling threats to biodiversity conservation and its sustainable use. GoSL is keen in setting up a sustainable long-term financing mechanism for managing PAs. This alternative is on hold and awaiting completion of studies into the feasibility of establishing such a mechanism in SL. The reason for the hold-up till Appraisal time has been on the grounds that SL currently seems (i) to have limited or no experience at all with trust funds, (ii) may lack technical and institutional capacities to design and install any long-term financing scheme, (iii) may have no statutory framework for creating long-term financing mechanisms such as conservation trust funds in the strict sense of the concept, and (iv) may lack strong traditions of public-private initiatives where mixed management is the preferred option and where the government does not hold the majority position. The World Bank Task Team took also into consideration the divergent views expressed by colleagues within and outside the Bank and therefore decided not to ringfence (or earmark) at this time any part of the GEF Grant fund to set up a long-term financing scheme till such time that results from the study have emerged, between now and Appraisal.

C. IMPLEMENTATION

1. PARTNERSHIP ARRANGEMENTS

Implementation of the proposed project would involve a wide range of stakeholders and actors at the community, district, regional, national and international levels. There are clear messages of intent from a few international organizations (EU, German Embassy, UNDP), particularly the

NGO community, such as EFA and CSSL, who are willing to commit resources and participate in the execution of the project. The World Bank will provide co-financing via a couple of investment projects that are on-going or planned. Through NSAP communities fringing PAs receive support for basic social infrastructure such as water points, schools, clinics, market access. IDA-financed IRCBP will fund decentralization and capacity building. The EU and UNDP are financing micro-projects and environment-related programs in selected communities all over the country, while RSPB and Conservation International are already investing in protected area management, natural resources management and capacity development in the Gola Forest area. The need for collaboration and building synergies is imminent. Key actors and target beneficiaries include:

- At the local, district, and regional levels: The PA fringing rural communities, provincial/district/local governments, traditional authorities (chiefdoms), community based NGOs, village elders, women and youth groups. Consultation with these local stakeholders constitutes a major part of the project during the design and implementation phases. The stakeholder plan examines how this important element of the project can be reinforced during the implementation phase. In particular, CBOs, especially those living in and around the protected areas, will actively participate in the planning and implementation of natural resource management strategies and other conservation efforts, and they will receive direct benefits from the results of these activities. Local benefits include enhanced provision of environmental services such as protection of watersheds, as well as more tangible benefits such as improved supply of timber and non-timber forest products, improved agricultural productivity, alternative sources of income, and improved community services and livelihoods.
- At the national level: NaCEF, Ministries of Finance; Agriculture and Food Security; Minerals and Mining; Lands, Housing and Country Planning; Tourism and Culture; Local Government and Community Development; Conservation Society of Sierra Leone (CSSL); Environmental Forum for Africa (ENFORAC); Council for Human Ecology (CHECSIL); Environmental Foundation of Africa (EFA); Conservation International (SL); Birdlife International (BI); Royal Society for the Protection of Birds (RSPB); Darwin Initiative; Njala University, private sector, professional bodies, research and academia, trades associations. Key stakeholders will be represented on the Project Steering Committee, which will be the highest policy-making organ and will provide approvals on Program of Work (POW).
- At the international and global level: UNDP, EU, FAO and bilateral donors (e.g., German Embassy, GTZ, KfW, DFID) will likely co-finance the proposed project or fund micro-projects and environment-related programs that will be synergetic to SL-WPBCP. Co-financing is secured from 3 international environmental NGOs notably, Conservation International (CI), Birdlife International (BI) and the Royal Society for the Protection of Birds (RSPB). The global community will receive global benefits from services that are rendered through the creation and sustainable management of an ecologically diverse protected area system that assures conservation of areas of highest biodiversity in Sierra Leone and provides for the socio-economic development of rural communities.

- At the project level: Cooperation would be sought with the Gola Forest Concession Conservation Project financed by RSPB and CI, IDA-led IRCBP, NSAP, upcoming Bank-led RPSDP and other programs within and outside SL.

2. INSTITUTIONAL AND IMPLEMENTATION ARRANGEMENTS

The planned project will be executed by NaCEF on behalf of GoSL, with the collaboration of the Ministry of Finance and other relevant line Ministries, multilateral and bilateral donors, international and local NGOs like the Forum for Environmental Actors, Conservation Society of Sierra Leone, Environmental Forum for Africa, the RSPB and BI.

A Project Steering Committee (PSC) comprising high-level representative from key public sector agencies, private and civil society organizations will be established to provide policy direction and review and to build coordination and communication among key sectors at the national, regional and sub-regional governments. NaCEF will chair the PSC and the project management unit will function as the secretariat of this high-level body. The Ministry of Finance will be the main interlocutor with the World Bank and will supervise the project and mount joint missions at least once a year.

A project management unit (PMU) will be established under the Executive Commissioner of NaCEF, with a full-time qualified project coordinator dedicated to facilitating and coordinating the implementation of project activities. Additional administrative and technical support (e.g., project office and personnel administration, procurement, monitoring and evaluation) will be hired based on the results of the detailed capacity. The PMU will be fully mainstreamed into the core set-up of NaCEF once there is evidence that the Commission has improved its internal capacity to plan and design, oversee, coordinate and facilitate implementation and monitoring of programs.

During the implementation phase SL-WPBCP will require strong technical and scientific assistance. To do this a technical/scientific committee (TC) chaired by a representative outside NaCEF and mandated to provide technical information and guidance will be established at the national level.

At the protected area level, NaCEF will appoint a Team Leader (TL) who is responsible for overall coordination and implementation of WPBCP and other activities at the site. At each PA a protected area management committee will help with planning, decision-making and on-the-ground implementation of project activities. This committee will be chaired by the TL and comprise technical personnel from the district councils, participating public sector agencies, private sector, civil society organizations (CBOs, traditional authorities, faith-based organizations, traditional healers, etc.), women and youth groups, vulnerable groups including the unemployed, people living with disabilities, etc.

3. MONITORING AND EVALUATION OF OUTCOMES/RESULTS

Monitoring and evaluation will be a high priority activity throughout the life of the project. The objectives of the monitoring and evaluation will be to develop an organized system for capturing

and disseminating information needed for tracking project performance (actual) against planned activities, changes and trends in biodiversity; integrity and health of PA systems, and for measuring the impact of project interventions. Additionally, beneficiary and social assessments would be carried out and baseline studies would provide benchmarks for evaluation thereby allowing for an effective evaluation of: (a) the effectiveness of the project's delivery mechanisms and procedures; (b) the impact of the field activities on the basis of stated objectives, input, output and impact indicators identified in the Project Design Summary; and (c) the replication of PA management activities at a wider national scale. In addition, the project design anticipates that monitoring and evaluation would include :

- Given that significant global benefits may not be measurable during the six years of project implementation, tracking the progress made during the project's life towards global objectives and setting the stage for future assessment of outcomes and results.
- Tracking the entire logical sequencing of input-activity-output-outcome-result, including an assessment of the impact of the project on target and non-target beneficiaries. Beyond this M&E will provide evidence on how project results are contributing toward the achievement of the overall sector goals;
- Monitoring for compliance with project covenants, agreed upon action plans (e.g., stakeholder plans, etc) and fiduciary responsibilities such as financial management and procurement guidelines and for due diligence purpose whether World Bank Social and Environmental Safeguard Policies and Country Systems are fully complied with;
- Monitoring country commitment and ownership of the SL-WPBCP to ensure that implementation is country-led and driven by the SL-PRSP. Where possible, the tracking will also establish evidence how SL-WPBCP is responding to other global and international development goals such as the Millennium Development Goals (MDG), New Partnership for Africa's Development (NEPAD) and other initiatives within the Economic Commission of West African States (ECOWAS), etc;
- Monitoring risks and controversial aspects and progress in the implementation of risk mitigation measures;
- Tracking synergies and linkages with other programs and initiatives within and outside SL;

The Biodiversity Tracking Tool (Attached to the PAD as Appendix), which is consistent with the WWF designed monitoring instrument will serve as an excellent mechanism for tracking progress in the implementation of key management activities at the PAs and determining the level of improvements to the health and integrity of each individual area. Selected indicators from this tool will be applied annually to gauge PA management efficiency and effectiveness. Preliminary indicators to track and measure the attainment of the project's development and global objectives have been formulated in the Results Framework in Annex 3.

Monitoring and evaluation will be carried out at two main levels in space (i.e. national and local levels) and would involve various agencies (relevant line ministries and departments, donors, civil society organizations, etc) and beneficiary communities. At the national level, the project would support the establishment of M&E cells and build capacities within the Project

Management Unit and other Implementing Agencies in Freetown to coordinate and facilitate data collection, analyze and disseminate information, integrate SL-WPBCP M&E into NaCEF's management information system and databases, inform and signal policy makers and provide feedback on policy issues to national and project level stakeholders.

At the local level, the project will support the setting up of a local community-based M&E system at park management level and introducing community-based M&E at the community level. The project will fund local level M&E as a tool for building the capacity of natural resource management associations to implement their protected area management plans and further to re-assess their own development. M&E will build on accepted traditional methods of surveillance which exist at the village level, and involve these associations in surveillance activities and reporting to the proper local authorities. With support from the district councils, NGOs and park management administration, the associations will define the indicators that will be used to monitor implementation of project activities, evaluate the impact of the project and other local service providers on the PAs and communities, from a locally elaborated baseline. Ecological monitoring would initially be carried out by protected area managers with the possibility of transferring such responsibilities to associations as their capacities are developed. Local facilitators ("animateurs") would be trained in basic data collection and assisted with minimal equipment and transport necessary for them to effectively carry out their monitoring tasks. Monitoring at the PA level will focus mainly on adoption of conservation practices within and outside the PAs (e.g. appropriate agricultural practices including oastures; agro-forestry, management of wildlife and wildfires; micro-enetrprises; alternative income-generating and livelihood-supporting activities).

As in the baseline project, to ensure objectivity, the project will contract with third parties (preferably independent parties) to measure its outcome indicators and conduct targeted studies (specific evaluation studies, mid-term and ex-post evaluations) and surveys as needed. In year one, the project will work with these parties to define an appropriate quantitative approach to assess the project's overall impact. The results of monitoring and evaluation activities, and of decision-making monitoring and evaluation of outcomes and results based on information generated by the monitoring program will be appropriately packaged and shared with project beneficiaries at all levels. NaCEF will ensure that consolidated M&E reports are submitted to the World Bank and other co-financiers at regular intervals. Overall responsibility for the collection of indicator data and analysis of results rests with the M&E system located within NaCEF. The project will strengthen management information system capacities at the national and local levels so as to build complete ownership of the M&E system by PA management authorities. The actual installation will be done before effectiveness or pretty early at the beginning of project year one.

4. SUSTAINABILITY AND REPLICABILITY

Commitment of the Recipient

The Kabbah administration has found it politically expedient to establish the National Commission on Environment and Forestry, hiving the former divisions of Forestry and

Environment from the MAFFS (now MAFS) and MLCPE (now MLCP), respectively, to create a semi-autonomous entity charged with the responsibility to oversee the environment and forestry sectors. This is as clear demonstration of the government's commitment to substantially ameliorate its institutional capacity and productivity in biodiversity conservation, natural resource management, and environmental protection and to accomplish its objectives and meet its obligations in these initiatives at the national, regional, and international levels. The presidential endorsement of the Gola Forest Concession Conservation Program in July 2005, a clear case of buy-back of timber harvesting rights and compensation payments to chiefdoms for lost opportunities is demonstrable of the importance the government attaches to sustainable management and preservation of important ecological sites and conservation of wildlife resources and biodiversity.

Sustainability:

Accountability structures still need to mature, therefore SL is yet to make significant progress in the implementation of its decentralization policy, particularly in financial decentralization. While de-concentration of administration has occurred to a large extent, empowerment at the district and community levels will need a boost. Post-project sustainability is likely to be obtained because the decentralized structures such as the district councils, district forestry and wildlife offices, environmental protection offices, and community-based natural resources committees will be key agents that benefit from project implementation. Their inclusion in all aspects of decision-making, sub-project planning and execution would arouse interest and strengthen ownership, which should help guarantee institutional sustainability.

The structures for project implementation will need targeted capacity development that creates voice and permits active and full-scale participation in decision-making and planning, knowledge and skills upgrading, provision of performance-based incentives and benefit streams, fair and equitable sharing of benefits, and creation of livelihood-enhancement opportunities during project implementation. The project will link up outputs, systems, and processes that the project may generate with local best practices and innovations, as well as with social and economic aspirations of the people, which will help to ensure sustainability of impacts beyond the life of the project. The project is being implemented together with key international, national and local stakeholders at site level, including the chiefdoms, CBOs, women and youth groups, etc. Furthermore, the project will ensure that project beneficiaries are synonymous with project stakeholders, a situation that will increase ownership and self-confidence and therefore sustainability of project impacts. The principal objective of the project is to develop the capacities of key stakeholders for effective natural resources management, with emphasis on improving local and global benefits from PAs as a result of sustainable use, conservation, and enhancement of wildlife and biodiversity resources. A second crucial objective is to provide natural resource-dependent communities alternatives to generate additional income streams and improve their livelihood. Once the trend during project implementation is indicative that these objectives are achievable, it is likely that this triggers long-term interest and engagement of stakeholder groups in natural resource management far beyond the life of the project.

Financial sustainability: Short-term financing for PA management and biodiversity conservation may likely come from various sources including allocations from the state budget, HIPC and debt-relief funds, donor funds, user fees, license fees, entrance fees, royalties and taxes, etc.

However, this has been proven to be ad hoc, unpredictable and inadequate to cover recurrent, operational and development activities within the network of protected areas in Sierra Leone. International best practices and experience show that protected area management effectiveness, however, can only be guaranteed if long-term predictable financing arrangements are secured. In this regard, GEF PDFB Grant funds will be used prior to Appraisal to explore possibilities for future creation of sustainable long-term financing instrument(s) such as payment for environmental services, forestry-based carbon off-set projects, environmental/conservation trust funds, debt relief mechanisms, debt-for-nature swaps, user fees, charges and taxes, private sector initiatives, donor funds, state treasury, retentions from internally generated revenues, etc., to finance ecologically benign natural resource and park management activities and compensate community efforts for sound environmental stewardship and protection of valuable ecological systems that provide global and local environmental benefits. Apart from analyzing the potential sources for long-term capitalization and developing a financial capitalization strategy, the feasibility study will also analyze legal, institutional, policy and administrative challenges at national and local levels for securing predictable long-term financing mechanisms for sustainable PA management and biodiversity conservation. Specific areas to be studied will include analysis of existing legal definitions and frameworks; governance issues; organizational structures, legal authority and capabilities/capacities, consensus building, coordination and participation mechanisms, monitoring and evaluation, etc) and tools needed to be in place as well as priority actions and the number of PAs to be supported under the proposed instrument(s).

The setting up of a long-term financing instrument under this project will be informed by the findings of the proposed feasibility study, which is expected to be completed under the PDFB Grant and before Appraisal of the actual project. Once results from this study indicates clear possibilities for a or an ensemble of financing instrument(s) the project will earmark and ringfence a portion of the Project Grant Fund to be used as seed money to capitalize a sustainable financing mechanism, which will guarantee post-project financial sustainability through promotion of funding, implementation and planning of PA management and environmental conservation activities, supporting resource coordination and strengthening institutional mechanisms.

In terms of securing financial sustainability for improvement of community livelihoods, particularly under the proposed Community Investment Fund (CIF), the project will build linkages to other initiatives particularly to rural credits and finance programs and thereby connect rural people to rural credit and finance institutions, thus enabling them to borrow money and finance assets and activities aimed at adding value to their products and raising their competitiveness in domestic and global markets. It is expected that once rural people become gainfully employed their dependence on PAs may reduce. It is also expected that the increased profile that the selected PA sites will receive through the project will increase inward investment (in additions to revenues captured by the PA authorities through license fees, charges and taxes, etc) into the communities from, e.g., tourism, research, etc and this will also deliver livelihood enhancements thereby reducing pressures on natural resources. Evidence under the ongoing Ghana High Forest Biodiversity Project shows that where community members have been provided access to an alternative livelihood fund (individual accessibility depending on the type of businesses averages US\$300-800) there has been improved community perception and engagement in of PA management and biodiversity conservation, improved status of PAs

through reduction in illegal harvesting of timber and other non-timber forest products, reduced deforestation and land degradation, minimization of farm encroachment and wildfire occurrence, curtailment of hunting, improved buffer zone management as well as enhancements in livelihoods of project beneficiaries.

Social sustainability will be enhanced through the creation, strengthening and empowerment of common interest groups comprising diverse stakeholder groups who will participate in the identification and prioritization of project activities and help assure that the objectives of the project can be achieved, sustained, and expanded. Such groups will constitute, at the local level, the change agents and linkages to the project and the rest of the community.

Ecological sustainability will be achieved by using the Grant to address barriers and constraints at all levels to ensure long-term maintenance of environmental stewardship and ecological productivity as well as the enhancement of environmental services (biodiversity, watershed management, water quality, sequestration, climate change) at both national and global levels. GEF Grant funds will be used to expand the reliability of coping mechanisms for the vulnerable, to mitigate the constraints of the poor, and strengthen their ability to improve their current status beyond subsistence.

Replicability

The results achieved during the project life will be replicated in other protected areas and off-reserve landscapes within and outside Sierra Leone. The project aims at institutional capacity building at all levels and spread to all key stakeholder groups in planning and design, execution and monitoring of programs toward ensuring sustainable resource management. By creating avenues for collaboration and participation of key stakeholders at the national and sub-regional levels; and by ensuring effective coordination, sharing and mainstreaming of natural resource management information using good communication strategies in sectors such as agriculture, land management and administration, replicability of lessons and experiences from the project will be guaranteed. The successful implementation of the government's decentralization policy across the entire country will provide impetus to replicate and scale up lessons from the SL-WPBCP because the Bank-led IRCBP aims at building capacities of sub-regional structures and empower them to plan and execute development (which will include also in NRM) at that level. In the final analysis, the NaCEF will work jointly with various partners to build up the capacity of stakeholder organizations to sustainably manage protected areas in their immediate localities. At the global level, saving biodiversity and establishing protected conservation areas in perpetuity would ensure sustainable provision of environmental services, advance ecotourism, enhance research, and reduce the effects of climate change and land degradation. This will create support for similar conservation actions to be upheld and replicated in and outside SL.

Progress made in attaining the core elements of this project (a community orientation approach, long-term financing mechanisms, provision of support and dependency alternatives) will allow the lessons and experiences drawn to be replicated in other areas of the country and the West Africa sub-region in general. Further, these interventions may be replicated for the conservation of the Fouta Njalloh Massif Program, currently funded by GEF. (See Annex 18: Replication Plan).

5. CRITICAL RISKS AND POSSIBLE CONTROVERSIAL ASPECTS

Potential risks and mitigation

	Potential Risk	Risk Rating	Mitigation Measures
PDO to Sector Goals	(i). Peace in SL disturbed	M	(i) GoSL to ensure fair distribution of wealth
	(ii) Post-conflict rehabilitation and reconstruction stagnates	M	(ii) Donors deepen dialogue with GoSL and other groups
Outputs to Development Objectives and Global Environmental Objectives	(i) Political will is insufficient to complete and implement reforms	M	(i) Adequate consensus will be built prior to negotiations
	(ii) Inter-ministerial cooperation and coordination weakly implemented	M	(ii) Re-invigoration of quarterly inter-ministerial meetings
	(iii) Staffing gaps at NaCEF and other ministries not filled with qualified personnel	M	(iii) Agreement on positions and qualifications for new staff to be created before negotiations
	(iv) GPRS is not implemented	L	(iv) Assurance from high-level government to be sought
Project Components to Outputs	(i) Critical sectoral policies are not adopted and implemented	M	(i) Recommended sectoral policies for review to be agreed before negotiations
	(ii) Poor level due diligence to safeguard policies (forestry, natural habitats, environmental assessments, resettlement, pest management, etc.). Weak compliance with project covenants, agreed upon action plans (e.g., stakeholder plans, etc) and fiduciary responsibilities such as financial management and procurement guidelines.	L	(ii) Safeguard emergency response plans (e.g. ESMPs RPF) developed and agreed
	(iii) Incentives for private sector, CSO and community participation are inadequate	M	(iii) Extensive participatory planning to be done before negotiations
	(iv) M&E poorly designed and implemented.	M	(iv) Draft M&E system to be agreed before negotiations
	(v) Weak implementation capacities	H	(v) Qualified project staff assembled and capacity development carried out prior to effectiveness

Risk Rating – H (High), S (Substantial), M (Modest), L (Low or Negligible)

6. LOAN/CREDIT CONDITIONS AND COVENANTS

D. APPRAISAL SUMMARY

1. ECONOMIC AND FINANCIAL ANALYSES

2. TECHNICAL

3. FIDUCIARY

4. SOCIAL

5. ENVIRONMENT

6. SAFEGUARD POLICIES

Safeguard Policies Triggered by the Project	Yes	No
Environmental Assessment (OP/BP 4.01)	[X]	[]
Natural Habitats (OP/BP 4.04)	[]	[X]
Pest Management (OP 4.09)	[X]	[]
Cultural Property (OPN 11.03 , being revised as OP 4.11)	[]	[X]

Involuntary Resettlement (OP/BP 4.12)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Indigenous Peoples (OP/BP 4.10)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Forests (OP/BP 4.36)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Safety of Dams (OP/BP 4.37)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Projects in Disputed Areas (OP/BP 7.60)*	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Projects on International Waterways (OP/BP 7.50)	<input type="checkbox"/>	<input checked="" type="checkbox"/>

7. POLICY EXCEPTIONS AND READINESS

* *By supporting the proposed project, the Bank does not intend to prejudice the final determination of the parties' claims on the disputed areas*

ANNEX 1: COUNTRY AND SECTOR OR PROGRAM BACKGROUND

SIERRA LEONE: Sierra Leone Wildlife Protection and Biodiversity Conservation

Country and Site Profile

A country with an estimated 4.98 million and an average density of 63 persons/ km², Sierra Leone has successfully emerged from years of internal hostilities and a decade long war. Its population density varies considerably across the country, from over 1000/ km² in the Western Area Peninsula, where the capital Freetown is located, to ≤ 40 persons/ km² in sparsely populated areas in the northern and eastern sectors of the country. Sierra Leone encompasses 72,278 km² on the coast of West Africa, bordered by Guinea to the north and northeast, Liberia to the southeast, and the Atlantic Ocean to the south and west. The coast line is 560 km long.

Biogeographically, SL lies within the Upper Guinean Lowland Forest Ecosystem with an abundant richness in ecosystem and species biodiversity. Five main ecosystem types have been identified in Sierra Leone; lowland rainforests, montane forests, savanna woodlands, agricultural, freshwater and wetlands (inland valley and mangrove), and coastal and marine. Savanna vegetation covers about 35% of the total land area. There are 48 forest reserves and conservation areas, representing about 4% of the land area (c. 180,250 ha). There are over 2000 species of plants including 74 endemic species identified in SL. The total area of government wildlife reserves is estimated at 173,000 ha. SL's position as the westernmost extent of the Upper Guinea Forest Ecosystem Continuum is unique in terms of endemism and number of rare large and small mammals. 15 species of primate, 18 species of antelopes and duikers, 9 bat species and over 500 bird species have been recorded in SL. Approximately 4,837.8 km² of SL is covered by wetlands with vegetation that is typically of freshwater swamp forests, riparian and mangroves. An estimated 240 species of birds have been identified within the wetland ecosystem, with about 200,000 migrant birds flying in every year.

Political and Economic Context

Sierra Leone has had a mixed political economy, with a post-conflict era that has been largely successful. It gained independence in 1961 with high hopes for rapid socio-economic growth and development that was expected to be driven by sustained exploitation of the country's natural resources, which were in abundance at the time. Immediate post-independence growth was about an average of 4.5 percent per annum. During the 1970s and 1980s however, the country began to suffer from dramatic economic decline (registering growth rates of 1.5 percent in the 1980s), social inequalities and political instability. Rapid inflation and severe external debt payments were characteristic features at the time. The economy broke down completely during the 1990s as a result of a brutal armed conflict that lasted from 1991 to early 2002. It is believed that the factors that contributed to Sierra Leone's political instability are extreme poor governance, widespread corruption, social injustice and the marginalization and disempowerment of a large proportion of the population, particularly those of the rural communities. Ineffective central government machinery for delivering public services to the population in an efficient and equitable manner may have also contributed to breakdown of political stability.

In the late 1980s, the GoSL, in consultation with its development partners, introduced a series of macroeconomic and structural reforms, aimed at stabilizing the economy and restoring growth (reduction of the budget deficit, liberalization of the exchange rate, abolition of price controls and exchange restrictions). Before any significant and sustained turnaround could be made, the civil war that ensued in the 1990s derailed the social and economic reconstruction program, resulting in a further deterioration of the economy. The statistics show an average growth rate of negative 4.5 percent per annum between 1990 and 2000. The conflict caused significant destruction to Sierra Leone's economic and physical infrastructure. Resource "mining" intensified during this time, particularly in rebel-held strongholds. The consequent reflection of the instable political economy of SL can be seen in the abysmal social indicators: under-five child mortality is 284; life expectancy is 37 years; the adult literacy rate is 36; GDP per capita is US\$520; 70% of the population is below the national poverty line of US\$0.75 per day; and there is a widespread lack of access to food, shelter, and coping mechanisms seem non-existent. Information in the Sierra Leone PRSP (2005-2007) that was published in 2005 suggests that about 26% of the population is food-poor. SL exhibits the classical characteristics of a poor nation as manifested by low-national income and human development. The decade-long conflict exacerbated the poverty and unemployment situation in Sierra Leone and caused the population to exert enormous pressure on the land and its resources for subsistence, livelihood support and income.

Post-conflict reconstruction began following the Lome Peace Accord in July 1999 and cessation of hostilities and restoration of security after 2002. By 2004 the Government with the support of multilaterals and bilaterals completed its disarmament, demobilization, and reintegration (DDR) program for ex-combatants and had resettled over 150, 000 internally displaced persons (IDPs) and refugees, disarmed and demobilized 72,000 ex-combatants. With peace returning to SL and people including expatriates re-investing in productive ventures there was turnaround of the economy.

SL attained impressive growth figures of 4.3% GDP growth in 2002, 9.3% in 2003 to 7.4% in 2004, despite external shocks from oil price escalations. These growth rates were predominantly agriculture and mining (diamonds and iron ore) led. Sierra Leone's economy is predominantly agriculture based, contributing about 40 percent of the country's GDP and sustaining about 70 percent of the population. In GDP terms, the service sector (transport, communications and Government) ranks second after agriculture, contributing about 40 percent of the GDP, while the mining sector contributes about 20 percent. Although the economy has shown some impressive performance over the 2002-2004 period, the Sierra Leone Integrated Household Survey (SL-HIS) undertaken between May 2003 and May 2004 suggested that the economy has to grow by at least 4 percent in real terms annually to prevent the number of poor people from rising. SL-HIS claimed that to reduce poverty in both the rural and urban space per capita incomes needed to grow by at least 5.6 percent and 4.0 percent annually, respectively. As revealed by the study, an average real growth rate of about 7 percent per annum between 2005 and 2007 is what is needed to ensure that there is no further increase in the number of poor people if population pressures do not escalate and stay below 2 percent.

Another challenge facing Sierra Leone is a growing population estimated at 2 percent per annum and demographic dynamics (particularly the rural-urban drift) puts pressure on existing social infrastructure (including services) and continues to exert considerable stress on the country's natural and wildlife resources base as the status and potential of biodiversity, resulting in reduced capacities of ecological systems to function properly. As a consequence of the limited skills, employability is limited in the face of stiff competition on the job market.

The Kabbah administration is keen to reverse the social and economic decay in the 1980s and 1990s. In close collaboration with development partners and under broad-based consultative and participatory processes the Government in May 2005 formulated and discussed with the World Bank Board its strategies and priorities for addressing the country's main development challenges. Aligning its strategies with the country's Vision 2025 and the Millennium Development Goals (MDGs), the Sierra Leone Poverty Reduction Strategy Paper (SL-PRSP) is focusing on achieving high and sustained broad-based economic growth particularly in the rural space where agricultural development and increased food production are central. The SL-PRSP will contribute toward ensuring a sustained provision of essential social and economic services and infrastructure to the poor and focus on creating job opportunities for the youth whose numbers are rising fast. Under the SL-PRSP GoSL intends to improve governance, security and peace.

In the immediate post-war period (2000-03), agriculture, forestry and fisheries sectors grew at an average 4.6 percent per annum and this was attributed largely to the high demand for basic food and timber for the housing sector. Sierra Leone's post-conflict economic performance is owed largely to recovery in agriculture and mining. This overdependence of the economy on agriculture, forestry, mining, fisheries and production of bush meat might have resulted in the disastrous nature of the green environment. The present practices adopted in the land use types mentioned above are not necessarily environmentally-friendly.

Based on current biological surveys, showing distribution and composition of forest fragments, it has been assumed that approximately 70% of the country was once forested. The area of forest however has declined precipitously during the last century, with just under 5% of the original forests remaining. Deforestation is pervasive and continues unabated at approximately 2 percent per annum. Agriculture has been identified as the main cause of deforestation and land degradation. The most extensive area of primary forests in Sierra Leone today is the Gola Forest Reserves close to the border with Liberia where mineral mining and timber harvesting are the predominant land use forms, apart from farming. Separated by approximately 300 km, the Western Area Forest Reserve is another rainforest fragment adjacent to the densely populated capital city of Freetown. The remnant forest is also under severe danger of destruction by housing settlers and investors.

The decline of forests in Sierra Leone is blamed largely on slash-and-burn agriculture, although in some areas deforestation followed in the wake of timber exploitation. Commercial logging in Sierra Leone has been extensive in the interior of the country, as the supply of valuable timber along the coast became exhausted in the late 19th and early 20th centuries. At the time the most preferred species were *Heritiera utilis*, *Didelotia idae*, *Berlinia confusa*, *Terminalia ivoriensis*, *Canarium schweinfurthii*, *Oldfieldia Africana*, *Ceiban pentandra* and *Afzelia Africana*. One

characteristic feature at the time was that forest management was non-existent, with the result that subsistent farmers moved into the logged areas to burn remaining vegetation and clear the land for agricultural activities. Ecosystem fragmentation and overexploitation have contributed to reductions in wildlife populations and erosion of species diversity.

Post-independence attempts at ensuring effective natural resource management, protected area system development and conservation and sustainable use of biological diversity have been hampered due to the following barriers:

(a) Systemic Weakness in Conservation Legislation, Prescriptions, and Guidelines, and Inadequate Capacity for Their Implementation and Enforcement.

Many pieces of legislation and policy instruments have been enacted for different sectors for environmental management in SL; for example, forestry, agro-biodiversity, marine biodiversity, wildlife management, fisheries management, extractive industry and minerals extraction. General environmental management is covered by the National Environmental Policy (NEP) of 1994 and the National Environmental Protection Act (NEPA) of 2000. In fulfilling SL's obligation under the Convention on Biological Diversity, the GoSL has prepared the National Biodiversity Strategy and Action Plan (NBSAP), which outlines biodiversity conservation strategies in two broad categories: sectoral strategies (which cover wildlife, forests, biological diversity, agricultural biological diversity, inland water biological diversity and marine and coastal biological diversity), and cross-sectoral strategies (policy, legislation, capacity building, public participation, planning, monitoring, sustainable use principles, incentive opportunities, research and training, public education, impact assessment, access to technology, information exchange, benefit distribution, indigenous knowledge and financial resources). The Wildlife Conservation Act of 1972 was enacted to help regulate the utilization and protection of wildlife resources, but is outdated and deserves urgent review and update. Notwithstanding the level of comprehensiveness of most of these frameworks, they lack strength because they are out of tune with current best practices and approaches to resource management and conservation. Prescriptions, guidelines and management practices are flouted with impunity also because of weak governance and accountability structures that permeate particularly the state management structures.

Until recently, the key public institutions responsible for forestry and wildlife, biodiversity conservation and environmental protection and management were the Forestry and Environment Departments of the Ministries of Agriculture, Forestry and Food Security (MAFFS), Lands, Country Planning and Environment (MLCPE) and Marine Resources and Fisheries (MMRF). In 2005 however, the Government of Sierra Leone per an executive directive established a National Commission on Environment and Forestry (NaCEF) which now takes over the responsibilities overseen by the three Ministries mentioned above. NaCEF is executive in nature and mandated to provide policy advice and be involved in project implementation, environmental monitoring and priority setting, is currently without any organizational structures and office accommodation. It is under-equipped, under-staffed and operating with insufficient budget, with no allocations for development purposes. Lack of resources (human, technical and financial resources) is incapacitating old and newly created public sector agencies, making them incapable of delivering quality services in the management of the country's natural endowments. In many of these

organizations there is limited capacities to design, plan and implement good policies and programs, provide policy direction and monitor the sector, enforce compliance and ensure due diligence. Capacity deficiency therefore is recognized as one of the key barriers for effective protected area management, wildlife protection and biodiversity conservation in Sierra Leone.

The private sector does not have the capacities for effective management of natural resources. These limitations within the private sector do not offer opportunities for either a wholesale outsourcing of management responsibilities or a public-private-partnering. Till recently no conscious efforts were made by Government to include the private sector in resource management except in licensed exploitations.

Research and academia have an acceptable level of human and technical resources to assist in developing and managing effectively and on sustainable basis the natural resources of the country. The two main universities Fourah Bay and Njala run courses in agriculture, forestry, wildlife and fisheries management and environmental studies and research into various aspects relating to natural resources management. Lack of financial resources has been the limitation in how far they can engage.

International and local non-governmental organizations (NGOs) have committed resources to natural resources management in SL and are actively involved in decision-making and policy formulation and implementation of programs towards wildlife protection and biodiversity conservation. Generally, capacity among local NGOs may be low as compared to their international counterparts, most of which work through local organizations. Prominent NGOs in the environment and natural resource sector include the Environmental Foundation for Africa, Friends of the Earth Sierra Leone, the Conservation Society of Sierra Leone (a Birdlife International partner in Sierra Leone), BirdLife International, Conservation International and the Royal Society for the Protection of Birds (a Birdlife International partner in the UK). There is a dearth of information on the existence and capacity of community-based organizations in rural SL.

(b) Lack of Effective Partnerships for Conservation to Create the Desired Impact

Previously the public sector organizations assumed full, unchallenged responsibility for the management of wildlife resources and biodiversity conservation within protected area systems in SL and thereby alienated all other actors, severing partnerships and jeopardizing full-scale and active public participation by adopting command-and-control approaches. The off-reserve areas became a free-for-all, open access heritage that was overused and abused. The on-reserve, policing-type management practice and the open access management style have proven to be counterproductive. A shift in paradigm to shared management responsibility with other partners is emerging. There are barriers that need to be removed quickly and these are associated with public sector reluctance and the mistrust among the partners. Lack of effective collaboration may be influencing the levels at which the wealth of experience and knowledge residing with individual stakeholder groups can be harnessed for enhancing decision-making, planning, implementation, and monitoring of state policies, programs, and plans toward poverty alleviation, sustainable resource management, and biodiversity conservation. Institutionalized collaboration and partnership arrangements are key to improving management effectiveness by

pooling scarce resources and assigning management responsibilities and roles based on capabilities.

(c) Insufficient and Unsustainable Sources of Funding for Protection and Conservation

Current state budgets for both government and non-governmental institutions working in the field of wildlife protection and biodiversity conservation are insufficient and their reliability may be insecure. While the treasury allocates funds for staff emoluments and other recurrent expenditures, there are hardly any funds earmarked for development. This situation will change as the state's sources of funds are not likely to drastically expand this is due to a myriad of other challenges with resources that are scarce. Current financial flows into the sector are of short-term duration and channeled through support to projects. Thus, to be able to sustain appreciable levels of financing in the sector, an ensemble of new and innovative ways of financing would have to be developed in support of priority actions at both the national and sub-regional levels. These can be in the form of environmental trust funds, debt-for-nature swaps, debt relief mechanisms, forestry-based carbon off-set projects, user fees, charges and taxes, and private sector activities.

(d) Insufficient Public Awareness about Sustainable Management and Low Perceptions of Value of Management and Conservation of Natural Resources and Biodiversity

There is generally a low level of education/awareness and a lack of appreciation for the role of wildlife and biodiversity in human life in SL. Therefore there is a need for a pertinent remedy in helping to get people to be adequately informed, change their attitudes, and adopt rational resource utilization and management practices within the key biodiversity sites.

Making stakeholders aware of alternative uses of conserved areas that may have a higher consumptive or non-consumptive value is a challenge. Advances in technology, ecotourism, and general changes in attitudes towards natural systems are significantly changing the way biodiversity systems are valued and appreciated. Spreading this awareness may require curriculum reviews and development at all levels of the country's formal and non-formal educational system (primary-tertiary). In addition, this will have to be supplemented with public education campaigns and outreach programs using multimedia and indigenous cultural education systems, and targeting all actors.

(e) Issues Related to Lack of Employment and Livelihood-Improvement Opportunities

The 2003 UN Human Development Index report classified Sierra Leone as the poorest nation, mainly because of the high population of poor people, especially in the rural areas. The poor who survive on less than US\$0.75 a day depend heavily on the productivity of these ecological sites and the associated biological resources; their survival and income source are intrinsically linked with these environments for food, shelter, health, and sanitation needs, and their income sources are largely. Population pressures, lack of access to improved technologies, declining soil fertility, and lack of employment and survival choices cause the stress on these systems and resources to rise and a vicious poverty-degradation cycle is perpetuated.

The Sierra Leone Household Survey of 2003/2004 has shown that, indeed the Sierra Leonean economy is agriculture- and natural resource-based and is providing employment for over 75% of the population, the incidence of poverty is highest in agricultural sector social groups where the predominant farming technology is slash-and-burn shifting cultivation associated with short fallows. Sierra Leone's natural assets are under serious threat from human-induced activities and the recent internal conflicts have contributed to the degradation of environmental and land resources of Sierra Leone. Coping mechanisms and measures for reversing resource degradation are ineffective. While the Government of Sierra Leone tackles the issue of environmental degradation by reviewing and reforming policy and institutional frameworks, it will have to place at the center stage how to quickly provide choices for the people to participate in economic development, expand opportunities for economic growth, create jobs, reduce their levels of poverty, and improve their livelihood.

(f) Lack of Effective Data Collection and Information Management System

Data and information on SL's ecological systems, wildlife resources, and biodiversity is unreliable, and obsolete, and their collection, storage, and dissemination seem to have been uncoordinated. When information is available, it is stored in formats that make retrieval and dissemination very difficult. Other barriers may include a lack of institutional framework, weak governance, poor enforcement regimes and inadequate management capacity at all levels for managing data and information. An expected output is the development of an information management system that will provide the platform for gathering data, storing and disseminating information on SL's ecological sites, resource protection and biodiversity conservation.

ANNEX 2: MAJOR RELATED PROJECTS FINANCED BY THE BANK AND/OR OTHER AGENCIES

SIERRA LEONE: Sierra Leone Wildlife Protection and Biodiversity Conservation

Sierra Leone: Wildlife Protection and Biodiversity Conservation Project

Sector	Project Name *	Status	Progress	Start and End Dates	Amount (US\$ m)
<u>World Bank:</u> Public and Social Sectors	Economic Recovery and Rehabilitation Credits (ERRC-III): Procurement reform and Local Government Legislation	Closed	S		30
	ERRC-IV	Closed	S		15
Public and Social Sectors	Public Sector Management Support (PMMS): Social sectors, community development and decentralization; and infrastructure	Closed	S		3.5
Social Sector	Rehabilitation of Basic Education Project (RBEP): Re-establishment of education services and building of capacity of the education sector	Active	S		20
Social Sector	Health Sector Reconstruction and Development Project (HSRDP): Rehabilitation of health sector facilities in districts	Active	S	2003-2008	20
	HIV/AIDS Response Project (SHARP): Financed prevention, care, support and impact mitigation	Active	S		15
	Community Reintegration and Rehabilitation Project (CRRP): DDR program and Emergency recovery	Closed	S		25

	National Social Action Plan (NSAP): Restoration of infrastructure and building local capacities	Active	S		35
	Institutional Reform Capacity Building Project (IRCBP): Support GoSL decentralization process. Support to newly elected local councils to improve capacity and enhance transparency and accountability	Active	S		35
Water and Sanitation	Power and Water Project: Rehabilitation of essential infrastructure and institutional capabilities	Active	S		35
Energy/Infrastructure	Completion of Bumbuna Hydroelectric	Active	S		38
	Completion of Bumbuna Hydropower	Active	S		12.5
	Infrastructure Development Project (IDP) Transport	Active	S	2006-2011	44
ESSD/PSD	Rural & Private Sector Development: Support to agriculture production, storage, packaging, marketing	Proposed			28
	Sustainable Management of Mineral Resources	Proposed			6
	Agriculture Sector Support Project	Closed	S		21.5
World Bank: ESWs/AAAs	Agriculture Sector Review	Closed	S	FY05	
	Public Expenditure Review	Closed		FY04	
	Country Gender Assessment	Active		FY05	
	PSIA	Planned		FY07	

	Labor Market and Youth Study	Active		FY07	
	Decentralization Impact Study	Planned		FY08	
Department for International Development					
African Development Bank/Fund					
Agriculture	Multi-National NERICA Dissemination Project	Active		2004-2008	5
	Health Services Rehabilitation Project	Active		2000-2006	17
	Inst. Support for Capacity Building , Governance and Poverty Reduction	Completed			1.29m
European Union	Transitional Support LRRD (Watsan Component)	Active		2005-2010	1.92
IFAD Agriculture	Rehabilitation and Community-based Poverty Reduction Project	Planned		2006-2010	10.776
IFAD					

ANNEX 3: RESULTS FRAMEWORK AND MONITORING

SIERRA LEONE: Sierra Leone Wildlife Protection and Biodiversity Conservation

PDO	Project Outcome Indicators	Use of Project Outcome Information
Improvement of sustainable protected area management and biodiversity conservation within SL contributing to socio-economic development of beneficiary communities.	<p>C. 300,000 hectares of selected protected areas with improved effective management (from 20% to 70% by EOP using the GEF SP1 Tracking Tool) compared with baseline conditions</p> <p>40% of communities experiencing improved livelihoods or accruing benefits from improved PA management</p> <p>60% increase in level of resources committed from district councils to PA and biodiversity management in the district development plans by EOP.</p>	<p>To assess PA management effectiveness.</p> <p>To assess PA management effectiveness. To assess reward schemes for stakeholder participation.</p> <p>To assess level of mainstreaming of NRM into district development planning process.</p>
Project Global Environmental Objective (PGO)		
To enhance the ecological integrity of selected ecosystems and protected areas.	<p>Over 2,000 hectares of the buffer zones to the selected PAs with improved management effectiveness</p> <p>One (1) Forest Reserve (the 76,100 ha Gola Forest Reserve and the 1,200ha Tiwai Island Forest) upgraded to Strict Nature Reserve status by EOP..</p> <p>Rate of deforestation at the Gola Forest reserve and Yawri Bay reduced to half (1%) of the baseline rate (c.2%).</p>	<p>To assess PA management effectiveness To assess PA health To assess global and local benefits</p> <p>To assess willingness of GoSL to increase the proportion of the country under stricter protection regimes</p> <p>To assess levels of park management effectiveness</p>
Intermediate Outcomes	Intermediate Outcome Indicators	Use of Intermediate Outcome Monitoring
Component 1: Strengthening Policy, Legislative and Institutional Framework for Ecosystem and Protected Area Management and Conservation of Wildlife and Biodiversity	<p>Number of MOUs endorsing joint management with communities and other stakeholders for PA management signed and implemented</p> <p>A policy on collaborative/joint management of PAs and conservation of wildlife and biodiversity developed</p>	<p>Flags state willingness/effort to encourage participation in PA management by district councils and communities</p> <p>To assess GoSL level of appreciation for participation in PA management</p>

	<p>Legal establishment of NaCEF endorsed by parliament by mid-PY01</p> <p>Completion of policy and legal framework for the establishment of a long-term financing mechanism for PAs</p>	<p>To assess GoSL commitment to PA management and biodiversity conservation</p> <p>To assess opportunities for long-term financing of PAs</p>
<p>Component 2: Improving Management of Selected Protected Areas</p> <p><i>Sub-component 2.1:</i> Site Management Planning and Research</p> <p><i>Sub-component 2.2:</i> Awareness Creation</p> <p><i>Sub-component 2.3:</i> Creation of Alternative Sources off Livelihood-The Community Investment Fund</p>	<p>20% increase in population of 2 key wildlife species in selected PAs.</p> <p>80% of PAs with management plans completed and endorsed.</p> <p>70% of beneficiary district councils incorporate PA and biodiversity management into their development plans</p> <p>Boundaries for 4 PAs demarcated and pillared by end PY03.</p> <p>Number of staff within NaCEF with further training in PA management and biodiversity conservation</p> <p>60% increase in GIS capability at PA management level</p> <p>40% of schools in the PA catchment with established and functioning nature clubs</p> <p>40% of the farming population at the periphery of selected PAs adopted agroforestry practices</p> <p>40% increase in beneficiary household incomes</p> <p>60% of project beneficiary households with increased incomes</p> <p>At least 40% reduction in illegal timber operations at the Gola Forest Reserve</p> <p>At least 60% reduction in illegal hunting of elephants, hippos and monkeys at Outamba-Kilimi National Park, monkeys and duikers</p>	<p>Assesses health and capacity of PAs.</p> <p>Assesses progress towards Government's target of ensuring management effectiveness.</p> <p>Assesses levels of decentralization. Assesses level of mainstreaming natural resources management into district council level development planning</p> <p>Measures commitment to ensure the security of PAs and removing them from logging</p> <p>Measures GoSL's willingness to invest in PA management</p> <p>Measures level at which quality data and information on the PAs can be collected, analyzed, shared and used to improve their management</p> <p>Assess level of awareness among school going children.</p> <p>Assess level of awareness among stakeholders</p> <p>Measures reach of project benefits</p> <p>Measures reach of project benefits</p>

	<p>at the Loma Mountains-Tingi Hills Complex</p> <p>At least 50% reduction in cattle grazing at Mamunta-Mayoso Wildlife Sanctuary (as measured by size of cattle herd and incidence of movement)</p>	
<p>Component 3: Project Management and Monitoring and Evaluation.</p>	<p>80% of project activities in annual work plans effectively completed</p> <p>85% of emerging project risks effectively managed</p>	<p>Progress in implementation of project activities</p> <p>Measures progress in tracking and mitigating risks</p>

B. Arrangements for Results Monitoring

Project Outcome Indicators	Baseline	Target Values					Data Collection and Reporting			
		YR1	YR2	YR3	YR4	YR5	YR6	Frequency and Reports	Data Collection Instruments	Responsibility for Data Collection
<p>PDO/PGO: 300,000 hectares of selected protected areas with improved effective management (from 20% to 70% by EOP using the GEF SP1 Tracking Tool) compared with baseline conditions</p>	20%	22%	30%	40%	45%	60%	70%	Yearly	Surveys, Reports	Unit of NaCEF in charge of PA management
<p>40% of beneficiary communities experiencing improved livelihoods or accruing benefits from improved PA management</p>	2%	5%	10%	20%	25%	30%	40%	Yearly	Surveys, reports	NaCEF
<p>60% increase in level of resources committed from district councils to PA and biodiversity management in the district</p>	0%	10%	20%	30%	40%	50%	60%	Yearly	Sample household surveys	NaCEF

Project Outcome Indicators	Baseline	Target Values					Data Collection and Reporting				
		YR1	YR2	YR3	YR4	YR5	YR6	Frequency and Reports	Data Collection Instruments	Responsibility for Data Collection	
development plans by EOP											
Over 2,000 hectares of the buffer zones to the selected PAs with improved management effectiveness	100 ha	200 ha	500 ha	800 ha	1,000 ha	1,500 ha	2,000 ha	Yearly	Surveys, reports	NaCEF	
One (1) Forest Reserve Complex (the 76,100 ha Gola Forest Reserve and the 1,200ha Tiwai Island Forest) upgraded to Strict Nature Reserve status by EOP.	0	0	0	0	0	0	1	Yearly	Reports	NaCEF	
Rate of deforestation at the Gola Forest reserve and Yawri Bay reduced to half (1%) of the baseline rate (c.2%)	c.2%	1.8%	1.7%	1.6%	1.4%	1.2%	1.0%	Yearly	Surveys and Reports	NaCEF	
Results Indicators											
Component1 15 MOUs	0	2	5	8	10	12	15	Annually	Reports,	PA level	

Project Outcome Indicators	Baseline						Target Values		Data Collection and Reporting	
		YR1	YR2	YR3	YR4	YR5	YR6	Frequency and Reports	Data Collection Instruments	Responsibility for Data Collection
<p>endorsing joint management with communities and other stakeholders for PA management signed and implemented</p> <p>A policy on joint/collaborative management of PAs and conservation of wildlife and biodiversity developed</p> <p>Legal establishment of NaCEF endorsed by parliament by mid-PY01</p> <p>Completion of a policy and legal framework for the establishment of a long-term financing mechanism for</p>	<p>None</p> <p>None</p> <p>None</p>	<p>None</p> <p>Endorsement given</p> <p>None</p>	<p>None</p> <p>None</p> <p>None</p>	<p>None</p> <p>Endorsement given</p>	<p>Exist</p> <p>Exist</p>	<p>Exist</p>	<p>Annually</p> <p>Annually</p> <p>Annually</p>	<p>Reports</p> <p>Notes from the Attorney General's, Reports, government Gazette</p> <p>Notes from the Attorney General's, Reports, government Gazette</p>	<p>management</p> <p>NaCEF</p> <p>Office of President</p> <p>Office of President</p>	

Project Outcome Indicators	Baseline	Target Values					Data Collection and Reporting			
		YR1	YR2	YR3	YR4	YR5	YR6	Frequency and Reports	Data Collection Instruments	Responsibility for Data Collection
PAs										
Component 2 20% change in population of 2 key threatened wildlife species in selected PAs.	0%	0%	5%	10%	15%	18%	20%	Annually	Reports	NaCEF
80% of PAs with management plans completed and endorsed	0%	0%	10%		40%		80%	Annually	Reports	NaCEF
70% of beneficiary district councils incorporate PA and biodiversity management into their development plans.	0%	10%	20%	30%	40%	60%	70%	Annually	Reports	NaCEF
Boundaries for 4 PAs demarcated and pillared by end of PY03	0	0	0	4	4	4	4	Annually	Reports	NaCEF
Number of staff within NaCEF with further training in PA management	0	4	10	15	20	25	30	Annually	Reports	NaCEF

Project Outcome Indicators	Baseline	Target Values					Data Collection and Reporting			
		YR1	YR2	YR3	YR4	YR5	YR6	Frequency and Reports	Data Collection Instruments	Responsibility for Data Collection
60% increase in GIS capability at PA management level	0%	10%	20%	30%	40%	50%	60%	Annually	Reports	NaCEF
40% of schools in the PA catchment with established and functioning nature clubs	0%	5%	10%	15%	25%	35%	40%	Annually	Reports	NaCEF
40% of the farming population at the periphery of selected PAs adopted agroforestry practices	0%	0%	5%	10%	20%	30%	40%	Annually	Reports	NaCEF
40% increase in beneficiary household income	0%	5%	10%	15%	25%	30%	40%	Annually	Reports Surveys	PA level management unit
60% project beneficiary households at community level with increased incomes	0%	10%	20%	30%	40%	50%	60%	Annually	Surveys, Reports	NaCEF
At least 40% reduction in illegal	0%	5%	10%	15%	20%	30%	40%	Annually	Surveys, Reports	NaCEF

Project Outcome Indicators	Baseline	Target Values					Data Collection and Reporting				
		YR1	YR2	YR3	YR4	YR5	YR6	Frequency and Reports	Data Collection Instruments	Responsibility for Data Collection	
timber operations at the Gola Forest Reserve											
At least 60% reduction in illegal hunting of elephants, hippos and monkeys at Outamba-Kilimi National Park, monkeys and duikers at the Loma Mountains-Tingi Hills Complex	0%	10%	15%	25%	40%	50%	60%	Annually	Surveys, Reports	NaCEF	
At least 50% reduction in cattle grazing at Mamunta-Mayoso Wildlife Sanctuary (as measured by size of cattle herd and incidence of movement)	0%	5%	10%	20%	30%	40%	50%	Annually	Surveys, Reports	NaCEF	
Component 3 80 % of project activities in annual work plans effectively completed	0%	80%	80%	80%	80%	80%	80%	Annual progress reporting	Reports	NaCEF	

Project Outcome Indicators	Baseline						Target Values		Data Collection and Reporting	
		YR1	YR2	YR3	YR4	YR5	YR6	Frequency and Reports	Data Collection Instruments	Responsibility for Data Collection
85% of project risks emerging effectively managed	0%	85%	85%	85%	85%	85%	85%	Annual progress reporting	Reports	NaCEF

ANNEX 4: DETAILED PROJECT DESCRIPTION

SIERRA LEONE: Sierra Leone Wildlife Protection and Biodiversity Conservation

Component 1: Strengthening Policy and Institutional Framework for Ecosystem Management and Conservation of Wildlife and Biodiversity (Total US\$2.4m: GEF US\$0.7 m)

The objective of this component is to study and fill current gaps in policies and legislation related to PA management, conservation and sustainable use of wildlife and biodiversity in Sierra Leone. The new formulation of policy and legislative frameworks will be done using a broad based public participation and consultation process that brings together a range of local, district and national level stakeholders.

The first set of activities covers a full-scale and detailed review and elaboration of existing policy and institutional frameworks governing ecosystem protection and management of wildlife and biological diversity. GEF Grant funds will finance the elaboration of policies and legislation relating to land acquisitions and compensation payments with the view of ensuring that zoning (demarcation, mapping) and gazetting of the selected PAs are done under conformed institutional frameworks. The component will also consider and elaborate on the interface between customary and non-customary tenure management and administration sectors with a view to providing clear relationships. Elected district councils represent the government administration at the sub-regional level and have full administrative and political authority to formulate and implement development plans to cover all areas under their jurisdiction. This review will do an elaboration of the role of local governments (district councils) in PA management, conservation and sustainable use of biological resources including also issues related to the distribution of accruing benefits from PA management. The Government's decentralization policy seeks to transfer responsibility for local natural resources and environmental management to district councils and chiefdoms. Furthermore, the review and gap analyses will be broadened to cover key areas such as frameworks for stakeholder participation and joint management and sharing of benefit, in anticipation that there would be high demand for private sector and civil society participation in PA management. Other key policy and legal points such as fee level establishment, revenue collection at PA level and public expenditure allocations for PA management will be reviewed.

Follow-up activities to the reviews will include building consensus among key stakeholders on how to take the process forward and to proceed with amending or repealing existing policies and legislation and drafting new ones for submission to Parliament or the appropriate entity for approval. In addition, the Component will support the provision of technical assistance to district councils in the project areas with demonstrated institutional capacity and commitment to mainstream natural resource and environmental management into its development planning processes. Technical assistance will be provided to district governments to help establish, train and equip their environmental technical committees who will help manage, monitor, and resolve problems related to PA management and biodiversity conservation. Project funds will

provided to pilot the mainstreaming of PA management and biodiversity conservation into district plans.

Although an announcement came from the President of SL in July 2005 establishing a National Commission on Environment and Forestry (NaCEF), this is yet to be backed with legislation. In the absence of this, NaCEF is handicapped in taking up its envisaged responsibility of overseeing the management of the country's forestry and environmental resources. SL-WPBCP will provide support to GoSL to legally establish and empower the Commission. An outcome of the project will be a fully operational NaCEF with the capacities to implement its mandates assigned to it by an Act of Parliament.

Additional activities to be financed under this Component include:

- Development of a legal framework to deal with key management issues such as zoning, land use planning at district council level, organized structures, tourism activities, entry fees
- Development of regulations that legally formalizes co-management and local population participation
- Technical assistance to help in the formulation of a national strategy and analysis of legal requirements for long-term financing support of the cost of NaCEF and the PA network. This would include the review and eventual drafting of legal instruments such as statutes and by-laws, grant and operational manuals, fund raising and investment strategies
- Reviews and promulgation of a new Protected Area Management law
- Development of a basic policy framework to support tourism at the PA level
-
- Development and implementation of stakeholder consultation and participation strategies
- Technical advice and consultancy services
- Development of prototype protocols for bio-prospecting

Component 2: Improving Management of Selected PAs (Total US\$12.0m; GEF US\$3.7 m)

The main objective of this Component would be to promote the implementation of management and conservation activities in three (3) existing PAs and one (1) forest block yet to be designated as a National Park as well as their buffer areas. Table 1 presents the 4 targeted PAs, sizes, date gazetted and status (threats). The criteria for selection of these PAs include the following:

- Lack of conflicts with landowners, tenant populations or communities

- Secured land tenure situation or land tenure favorable for resolution
- Potential for successful implementation during the time horizon of the Project
- Local institutional capacity and presence of strong civil society organizations
- Existence of interinstitutional conditions that make consolidation efforts effective
- Importance of ecology and biodiversity (high conservation value, state of conservation of the ecosystem, threat of major importance and impact of population)

Table 1: Targeted PAs to be Supported by GEF Grant funds

<i>Name/Category</i>	<i>Ecosystem Type</i>	<i>Size (ha)</i>	<i>Date of Gazettement</i>	<i>Existing Status)</i>	<i>Proposed Status</i>
1. Western Area Peninsula Forest	Rainforest	17,688	1973	National Park	National Park
2. Loma Mountain and Tingi Hills Forest Complex	Montane	33,201	1973	National Park	National Park
	Montane	10,519	1973	Game Reserve	Game Reserve
3. Gola Forest and Tiwai Island	Rainforest	76,100 1,200	1926-30 1987	Forest Reserve Game Sanctuary	Strict Nature Reserve Strict Nature Reserve
4. Outamba-Kilimi	Savanna	110,900	1995	National Park	National Park

Broadly, this Component will provide support among others for: (a) defining and demarcating PA physical limits, (b) assessing limit of private property, (c) assessing effectiveness of provisional protection plan for the selected PAs, (d) establishing effective management authorities at PA level, (d) developing and implementing management plans at PA level, (e) managing buffer zones, (f) developing and implementing protection plan at PA level, (g) putting in place effective and efficient administration and maintenance systems, (h) developing and implementing staffing plan at PA level, (i) developing infrastructure and procuring vital equipment, (j) developing effective and efficient institutional cooperation and transboundary partnership arrangements, and (k) setting up a feasible mechanism for predictable long-term financing of a network of PAs (to be pursued if results from the specific studies relating to predictable financing are affirmative).

The Component outputs include:

- Four approved PA management plans under implementation
- Replication Strategy formulated and implemented, resulting in improvement in management effectiveness in non-target PAs
- Four PAs with basic infrastructure completed and equipped
- A management review system in place at NaCEF and at PA level
- PA partnership and/or concession agreements signed and under implementation
- Enhanced and tangible interinstitutional coordination and community participation at the PA level

- A strong and effective buffer zone management program
- Setting up and operationalizing a sustainable long-term financing mechanism for PA management and biodiversity conservation after defining and profiling its feasibility through a study to be completed prior to Appraisal.

Sub-component 2.1: Site Management Planning and Research (Total US\$8.2m; GEF US\$2.5m)

This component provides the necessary strategic and operational tools and experiences to improve management effectiveness of selected protected areas and high-biodiversity areas at their immediate periphery. The component will use lessons learned from other countries and initiatives in the region and sub-region to adapt them to the country and site-specific context. GEF Grant funds will conduct participatory research, reviews, revisions and development of management plans for the selected PAs and their buffer environments. Alongside the reviews, the Sub-component will support the gathering of site-specific data and information and establishment of database on social, economic and biological parameters of the selected protected areas. In addition, this component will support the creation of a new protected area within the Gola forest.

The first step will be to demarcate and regularize land occupied by the PAs. GEF Grant funds will finance land tenure assessments, including activities on baseline registry surveys, ground truthing, private property infrastructure surveys, and mapping. The Sub-component will also prepare a detailed land acquisition plan and GoSL funds will be used to finance land purchases where necessary. This Sub-component will also finance workshops/seminars on PA conflict resolution related to boundary and ownership establishment.

As second step, the Sub-component will provide support for operation of the PAs while the management plans are being prepared. Selected PAs will be outfitted with basic infrastructure, equipment, and core staff to secure basic services of protection and community outreach before the preparation and implementation of management plans. The Project will diagnose managerial systems for PAs including administrative and financial management, and will develop and implement programs to improve performance. Further, it will provide technical assistance to assess existing PAs management mechanisms and develop managerial review systems to support decision making, and to improve planning, programming, monitoring, evaluation, and reporting at PA and NaCEF levels. This Component also will fund training of staff and partners involved in PAs management by developing training packages to cover areas such as participatory planning and programming, conflict management and resolution, public information management, participatory monitoring and evaluation, gender, fund raising, accounting, transparency, accountability and reporting. Project funds will be used to support local PA management associations, small civil works, emergency communication and patrolling equipment, and basic training.

The third step under this Sub-component will comprise the elaboration and actual

implementation of the revised and updated management plans through targeted investments that may have direct conservation links. The management plans would serve as the master tool for planning and programming PAs management, and also would serve as instruments to validate PA categorization, boundaries, and for identifying possible land use conflicts. There will be strong local community and civil society participation in the preparation of the management plans, through various mechanisms. The management plans will take into account elements such as socioeconomic conditions, anthropology, archaeology, landscape, environmental education, tourism potential, and land ownership. They would also include as an objective the implementation of mechanisms to incorporate data from existing biodiversity monitoring systems to support planning and programming. NaCEF will be responsible for the preparation of management plans and will conduct the activities either directly or through contracts with selected organizations, including BGOs, academic and research institutions, and others.

Implementation of management plans will make full use of the capacities of Sierra Leonean CBOs, NGOs, scientific and academic institutions, and civil society in conservation. Civil society expertise will be especially important in the areas such as PA management planning, natural resources management, rural development, community organization, technology transfer, monitoring and evaluation, and environmental education. Collaboration with specialized agencies and organizations would be operationalized through partnership and concession agreements to increase the number of qualified stakeholders and to facilitate effective participatory management. Given the poor capacity within NaCEF to manage PAs in SL, the Project will support the identification of innovative ways of engaging young people in environmental service projects. In this regard, the Project will partner with local universities, Ministry responsible for youth affairs and youth organizations in institutionalizing a youth collaboration/participation program (including internships, credits, etc) which then allows students to receive credit and funds for involvement in the implementation of project activities. In 1933 the United States established a Civilian Conservation Corps (CCC) aimed at providing work and training to young men while at the same time preserving and developing the country's natural resources. Since then, this model has evolved into numerous Youth Conservation Corps (YCC) throughout the USA, Mexico, Honduras, Guatemala, South Africa, New Zealand, Namibia, India and the Philippines. The Project will finance the feasibility of establishing similar corps in SL to be engaged in the 4 selected PAs. This can enhance the employability of poor youth who will receive a stipend, protect critical ecosystems and create a pro-conservation citizenry.

Long-term sustainability of PAs depends heavily on the participation and effective involvement of local communities and civil society because of their unique and mutual relationships with protected areas. The Project will support community participation for the establishment and consolidation of PAs and activities to be financed will include the establishment and/or operation of PAs management associations/committees, partnerships with CBOs/NGOs for PAs management, and community sub-projects see Sub-component 2.3), among others. PAs management associations/committees' composition will include representatives from local community organizations, local governments, chiefdoms and civil society. Under this Sub-component management

committees will be strengthened by training and by the provision of improved meeting facilities and resources to support regular activities. Committees will provide advice to management authority of the PAs, and develop PA level work plans and programs. Specific activities that will ensure enhanced local participation will include: (a) planning and programming control and protection with participation of stakeholders and local population; (b) enhancing research activities and developing linkages between research and small economic activities at the community level; (c) conducting workshops, seminars and study tours to increase information dissemination and exchange; and (d) sponsoring environmental education and public relations campaigns that target the PAs and their buffer zones.

Other potential direct biodiversity conservation activities that will be financed under the GEF Grant will include PA zoning, boundary demarcation, GIS surveys and mapping, gazettement, site-specific conservation measures such as access control and regulation, soil erosion control, rehabilitation and restoration within PAs and buffer zone areas.

Managing effectively surrounding buffer zones to protected areas (including timber harvesting) is an added advantage in securing the long-term integrity of reserved areas. Beside the set of ecological and environmental services they provide, protected areas provide services to their adjoining surrounding landscapes, acting as sinks and sources of replenishment for various types of products, including timber species and an array of non-timber forest species (e.g., hunted animals, medicinal herbs, mushrooms, etc). PAs are reservoirs for wild animals that are hunted by local communities and commercial collectors for subsistence or gain. Hunting, which is widespread in SL is uncontrolled, unregulated and unsustainable. The government capacity for enforcing wildlife laws is weak and local communities lack understanding of the need for conservation more so when ownership relationships appear to be unclear. Based on experiences from the EU-financed Ghana Protected Area Management Project (PADP I and II), the SL-WPBCP will reinforce local ownership of wildlife resources by financing the establishment of off-PA management systems similar to the Community Resource Management Areas (CREMA) in Ghana and in other countries within Southern Africa (ref. Ghana PADP).

An expected outcome is the improved management of wild animals and other NTFPs in production landscapes at the periphery of PAs. This Sub-component will provide support for:

- Consolidating and implementing in a participatory way management plans covering the selected PAs
- Small civil works (building and rehabilitation of operational infrastructure at individual PA level – headquarters, office accommodation, guard posts and roads; and PA zoning including demarcation and pillaring, clearing and cleaning of boundaries)
- Goods and equipment for site management purposes
- Training, hiring and mobilizing park management staff

- Consultations and awareness raising
- Development of collaborative mechanisms, such as MOUs and basic sets of rules
- Procurement of equipment and provision of training for staff to carry out PA management and law enforcement (equipment and software for GIS data center, ecological and patrol-based monitoring)
- Cultivation and sustainable harvesting of NTFPs
- Diverse consultancy services including socio-economic and biological inventories and monitoring studies
- Implementation of the basic tourism policy and development of eco-tourism potential (catalyzing the development of basic tourism policies and data collection for tourism zoning, piloting public-private partnerships in developing ecotourism products), ensuring that private sector investment in tourism in the parks effectively contributes to conservation goals and socio-economic development. Support to NaCEF to promote private sector investment for tourism (e.g. development and implementation of research protocols to be executed on pilot scale).
- Socio-economic monitoring (additional socio-economic baseline data collection to cover all villages located in the direct periphery and within the parks limits. Data is necessary to feed into the park management process).
- Participatory park management (funding to enable the initiation and implementation of a critical proportion of the activities necessary to engage civil society and the private sector. This will enable the project to respond to demands from both the private sector and civil society for the development of participatory management initiatives. Funding will enable the parks to respond adequately to eventual high demand for participatory management initiatives coming from the private sector [logging concession, fisheries, tourism]).

A major area of support under this component is in capacity building. The support aims at: (i) building capacities at the local, district and national levels in support of protected area system management, wildlife protection and biodiversity conservation and sustainable use, and (ii) strengthening capacity for mainstreaming of PA protection, wildlife management and biodiversity conservation into development planning and economic activities at the district and national levels. At the respective PA level, this component complements the support provided under the IDA financed IRCBP, which is providing support for the implementation of the government's decentralization program including the establishment and strengthening of the policy advisory and strategic management role of the Decentralization Secretariat and establishing credibility and capacity within local councils in development planning and execution.

Under WPBCP, state, private and civil society agencies at local, district and national

levels will be trained in protected area management, wildlife protection, conservation and sustainable use of biodiversity, monitoring and evaluation, geographic information systems and mapping, and knowledge management systems. Training will include strengthening the scientific and technical knowledge base, developing improved tools for monitoring and improving data and information reliability, retrieval, accessibility and distribution through development of a geo-referenced biodiversity information management system, appropriate knowledge and experience through regional and global information networks.

NaCEF was created without the necessary capacities, particularly human and financial resources, to oversee the management of the network of PAs. It also lacks institutional and operational capacities and its institutional structure is still not elaborated. The GoSL aims to create a central structure in Freetown that will provide the necessary service to the PAs and National Parks, while revitalizing PA level management structures PA management structures will be expected to function in an independent manner as possible by doing their own annual programme of work and budgets, managing finances, raising funds, making operational decisions, building alliances and partnerships as well as contractual relationships with local operators. The sub-component finances vigorous capacity building of NaCEF at headquarters. Capacity building for PA management structures will begin in the second year of the project, by which time these structures would have been established and office accommodation provided. The GEF grant will finance the following activities:

- Provision of necessary equipment and tools, mobility systems and infrastructure
- Structuring of the central organization and its PA management apparatus by assisting in setting up units for M&E, Information Technology and GIS, Human Resources, Administration and Financial Management. At the PA management level key units will include Ecological Monitoring and Research, Communications and Eco-tourism
- Training in financial and administrative management, information and communications technology, M&E, protected area management, ecotourism
- Study tours, workshops and conferences to draw useful lessons and experiences from other countries for adaptation and adoption within the country context.

Sierra Leone recognizes the gazetting of protected areas as a suitable instrument to ensuring effective conservation and development of biodiversity. Increasing areas under permanent protection and ensuring their management effectiveness in SL will imply an increase in funding and management capacity. In SL, there are urgent financial needs firstly to ensure that appropriate infrastructures and management systems are in place (“investment” phase) and secondly to cover recurrent costs (most importantly for operational purposes) so that threats to biodiversity can be tackled in the long-term. The source of funds to public forestry and environment management authorities is the

allocations from the state budget that is hardly adequate to pay the personal emoluments of staff. In line with recommendations in the NBSAP, the GoSL is convinced that it needs to establish sustainable and predictable funding mechanisms to finance recurrent costs for the effective management of protected area systems in Sierra Leone. In a report financed by the World Bank/WWF Alliance for Forest Conservation and Sustainable Use et al. in 2002 and prepared at the request of the Ministers in charge of Forests of Central Africa (as response to resolutions of the so-called “Yaounde Declaration” of 1999), the authors (Melissa Moye and Brigitte Carr-Dirick) concluded that sustainable financing for Central African forests would require the combined implementation of an ensemble of financing mechanisms, rather than the introduction of a single mechanism. The report suggested a menu of long-term financing opportunities that could include the establishment of environmental (conservation) trust funds, drawing from initiatives such as the HIPC, debt-for-nature swaps, forestry-based carbon offsets, user fees, taxes and charges, private sector initiatives.

Sierra Leone may be keen to establish a conservation trust fund now, however, it lacks the technical and institutional capacity to analyze the opportunities and constraints, identify and develop strategies and priority actions, and put in place sustainable long-term financing mechanisms. It has limited experience with trust funds and no framework for creating trust funds in the strict legal sense of the concept. Like in many African countries, SL lacks strong traditions of public-private initiatives where mixed management is the option and where the government does not hold the majority position.

In this regard, the GEF PDFB Grant fund released under the SL-WPBCP will provide funds to conduct a full-scale review of processes leading to the design and implementation of sustainable long-term financing mechanisms for effective protected area management in SL. Such a study will cover, among other, the following: (i) review of existing institutional framework and legal statutes for raising and retaining revenues and for creating trust funds, (ii) review of the banking sector and investment products available, (iii) assessment of technical and institutional capacities, (iv) formulation of priority actions and business plans for the selected sites, (v) definition of a trust fund profile in a transparent and participatory manner, (vi) assessment of possible strategic partnerships. These studies will draw lessons from similar Bank supported initiatives in Africa and Latin America as well as the ongoing Gola Forest Conservation Concession Initiative (GFCCI) financed with resources from RSPB and CI. Such study will be the prelude to any further considerations by the Bank and GEF to earmark part of GEF Grant Funds for setting up and operationalizing an endowment or any other financing mechanism.

In the GFCCI example, RSPB is entering into partnership with GoSL and CSSL to manage the Gola Forest as a Conservation Concession and eventually re-designate it as a National Park. At the moment no timber companies have harvesting rights in the Gola forest and RSPB Grant fund will be used to pay GoSL and communities to protect the forest and not to lease any portions out for timber harvesting or cut it down for farming and other land uses. Under the proposed arrangements, payments made are expected to be used for both community development and protected area management by GoSL. The

President of SL endorsed the partnership at an official launching of the GFCCI in June 2005. Lessons from GFCCI implementation will be emerging earliest in two years from now and these will be drawn for design of a future conservation trust fund for a national network of protected areas in SL.

The project will develop a Replication Plan 30 months into project implementation and have it reviewed by all key stakeholders during the Project's mid-Term Review, 36 months after Board Approval Date (see Annex 18, page 97-100). The Plan will provide detailed guidance on scale up and replication, eligibility for financing, management regimes, etc. GEF Grant funds under Components 2 and 3 will be used to implement costed and time-bound actions and activities in the Replication Plan and the Stakeholder Participation Plan (see Annexes 18 and 19 for more detailed information on the replication and Stakeholder Participation Strategies).

Sub-component 2.2: Awareness Creation (Total US\$1.0m; GEF US\$0.4 m)

Broad-based involvement, particularly community engagement in improving management effectiveness of PAs of high biodiversity would require that adequate arrangements are made to ensure buy-in from key stakeholders in the support zones. This would involve early head-on sensitization and presentation of the alternative sustainable livelihoods concept and activities. This sub-component will raise awareness and increase know-how of key stakeholders and beneficiaries at the international, national, sub-regional and local levels and improving their capacities to manage protected areas and their peripheries, conserve and sustainably use wildlife and biodiversity in ways that improve productivity while enhancing their health and integrity. GEF funds will be used in environmental management advocacy and direct site conservation actions. Activities proposed under the 'Cross-sectoral Action Plan' in the NBSAP will be reviewed and implemented where appropriate. At the local level, the project broadens and strengthens local constituencies for ecosystem management and conservation of biodiversity e.g. through the formation, development and strengthening of interest groups and site support groups (SSGs).² Strategies will be designed and implemented to empower local communities to participate in the management and monitoring of the selected high biodiversity sites. This sub-component will focus on promoting and enhancing greater involvement of civil society at project sites through effective engagement strategies and developing programs that target children at school and the youth in the street and academic institutions by training teachers, performing voluntary examination of students on the subject of Environment, production of teachers' manuals, production of educational manuals relating to nature. The sub-component will support the following activities:

- Development and implementation of SL-WPBCP communication strategy

² 'Site Support Groups' consist of people based in or around sites who are concerned about biodiversity loss and who draw on the experience and achievements of the wider BirdLife International Partnership to create local solutions. The BirdLife Partner NGOs work with these local communities to build a stronger local voice on environmental issues.

- Development and implementation of SL-WPBCP awareness creation strategy
- Provision of communication equipment (e.g. communication van, etc)
- Training of teachers of schools that serve the project area on topics related to natural and environmental resource management, PA management and biodiversity conservation and sustainable use
- Workshops, community meetings, awareness campaigns, study tours, field days,
- Production of education and information materials and translation into local languages spoken in the project areas
- Information dissemination via radio, television, newsletters, website development, and other means of information transmission
- Goods and equipment

Sub-component 2.3: Creation of Alternative Sources of Livelihood - Community Investment Fund (Total US\$2.8 m; GEF US\$0.8 m)

The objective of the sub-component is to reduce dependencies of communities living in the fringes of the selected PA systems on natural resource exploitation by providing them with resources for developing alternative sources of income and livelihood support systems. Project funds will finance investments proposed by rural communities in targeted PA s and buffer zones in support of improved management and conservation of natural resources and biodiversity. GEF Grant funds will finance the provision of alternative and viable choices for the people to participate in economic development, expand opportunities for economic growth, create jobs, reduce their levels of poverty, and improve their livelihood. In this regard, the project will explore ways of increasing sources of livelihood for people, particularly for those staying in the rural areas. While supporting actual conservation activities, the component will provide investment support for enhancing the sustainable use of the sites and biological resources within them by financing income-generating activities that are connected to ecosystem services such as tour guiding facilities, community-based ecotourism, and rehabilitation of tourism facilities.

GEF PDFB Grant funds will be available to support detailed feasibility and market accessibility analyses during the project design stage. Terms of Reference have been developed and a consultant search will be carried out soon to hire a competent specialist to do detailed studies related to feasibility and accessibility to services and markets before project implementation. The feasibility studies will lead to the formulation of positive and negative lists, indicating which sub-projects can be funded and which not. One criterium for categorization into “positive” or “negative” list will be their environmental soundness (less or no adverse impact). Drawing lessons from the NSAP and other similar projects in the region (e.g., the GEF-supported Ghana High Forest Biodiversity Project, etc.), the Project will support the development of a Grant manual and an operational manual (which will include modalities for operating the fund, an M&E

system, a training plan, etc) as well as a set of eligibility criteria and procedures for selecting micro-projects and other off-PA activities. The operational manual will provide detailed guidance on institutional arrangements for matching grant disbursement, eligibility for CIF financing, obligations and responsibilities of community associations, fund management responsibilities, fund flow arrangements, financial reporting regarding the matching grants. Further, it will include sections to be used as guide during the screening of sub-projects against their potential social and environmental impacts during the design stages.

The proposed Community Investment Fund (CIF) will be administered by NaCEF at the center and will provide matching grants on demand-driven basis to eligible community associations in support of sub-project investments for improved natural resource and environmental management in 4 selected PAs and their peripheral areas. GEF Project Grant funds will be used to support the costs of needed investments in small-scale infrastructure, technical assistance and other goods, works and services. Eligible investments would be any of those that would be on the “positive” list. The typology of possible eligible micro-projects and other activities to be financed under the project will include:

- Promotion of apiculture and other high value products
- Development of natural resources including non-timber forest products for alternative products in response to emerging eco-markets
- Establishment of woodlots (reforestation) for sustainable production of fuel wood, poles, timber, and other merchantable wood products.
- Development and use of fuel efficient and energy saving devices and technologies (e.g., stoves, smoke houses, solar panels) for activities that currently account for a high demand on wood and fuelwood
- Promotion of environmentally-sound agri-business and product processing (e.g. palm oil, soap making, etc), with the aim also of adding value to their products and raising their competitiveness in domestic and global markets
- Cultivation, processing and marketing of non-timber forest products such as mushrooms, edible fats and oils, sources of protein (animal rearing), medicinal herbs, spices, sweeteners on farmers’ own fields, etc.
- Investments in restoration and maintenance of environmental assets (e.g. reforestation, conservation agriculture, agroforestry, soil and water conservation technologies, river/stream banks and slope protection, establishment of herbal gardens).
- Community-based nature tourism and promotion of local (village-level) tourism-related enterprises, such as local art (gift) shops and theatre productions
- Wild animal and forest management in buffer zones around PAs
- Captive breeding of wild animals

- Implementation of research-based activities to gain information and add value to the resource base

Best practice experience from other Bank supported projects showed that the most successful subprojects were those done by communities with greater management capacity, organization, and a commitment to results, and which implemented activities compatible with restrictions on natural resource use particular to their specific situation. We also know from experience that, in order to improve living conditions for the poor, the Project will have to bolster its assistance through greater integration of other factors such as development of rural enterprises and market access. In this regard, GEF Grant funds will also provide technical assistance through training activities in alternative production methods, natural resources management, sub-project administration and accounting, and marketing and other specific needs as identified by community associations. On demand, technical assistance will be provided for the formalization of community and producer organizations (e.g., gaining legal status).

Besides, the Sub-component will provide technical support to local groups and associations to identify, select, prepare, implement, and supervise sub-projects under the CIF. The Project will pay special attention in helping to commercialize products and create markets by analyzing the products and services most appropriate for market development, identifying organizations, networks, or groups interested and capable of creating markets and providing market services, defining marketing strategies, and helping put those strategies in practice.

Component 3: Project Management and Monitoring and Evaluation (Total US\$2.2m; GEF US\$0.6 m)

There are three main objectives of this component: (i) to ensure an effective facilitation, coordination and management of the project inputs and actions (both internal and external) needed for execution of the project; (ii) to coordinate periodic tracking and monitoring of implementation progress and evaluation of project results and impacts; and (iii) to disseminate and share project results and lessons learned with key stakeholders and project beneficiaries. The component encourages information exchange and synergies with other donors and projects, and among the various parties involved in the implementation of the project. This will help to minimize overlaps, draw lessons and experience and ensure efficient use of scarce resources for optimum results. This component ensures that the use of project inputs and implementation of SL-WPBCP activities comply with the World Bank Financial Management Guidelines and the Procurement Guidelines (and Country Systems if they are in place). It is expected that facilitation, coordination, management, monitoring, information dissemination and sharing will occur at all levels (national, sub-regional, community) of project implementation.

The project will finance the following:

- Full roll-out of the Monitoring and Evaluation Plan developed prior to project start-up date
- Civil Works at headquarters (office accommodation) and at PA management level (office accommodation)
- Hiring of key personnel the unit managing the project at the national level (e.g., Project Coordinator, Monitoring and Evaluation Specialist, Information and Communications Specialist and Procurement Specialist)
- Training of key staff in financial and accounts management, procurement, project management
- Workshops and seminars, radio and television discussions
- Cost of data collection and storage, and information dissemination
- Goods and equipment (e.g., vehicles, office equipment)
- Operating cost of the implementation unit and other committees at all levels
- Allowances for ancillary staff

ANNEX 5: PROJECT COSTS

SIERRA LEONE: Sierra Leone Wildlife Protection and Biodiversity Conservation

(to be completed at appraisal)

Project Cost By Component and/or Activity	Local US \$million	Foreign US \$million	Total US \$million
Component 1: Strengthening Policy, Legislative and Institutional Framework for Ecosystem and Protected Area Management and Conservation of Wildlife and Biodiversity	2.0	0.7	2.4
Component 2: Improving Management of Selected PAs	6.4	6.4	12.0
Component 2.1: Site Management Planning and Research	4.0	4.3	8.3
Component 2.2: Awareness Creation	0.4	0.6	1.0
Component 2.3: Creation of Alternative Sources of Livelihood-The Community Investment Fund	2.0	1.5	3.5
Component 3: Project Management and Monitoring and Evaluation	1.6	0.8	2.2
Total Project Costs¹			16.6
Interest during construction			
Front-end Fee			
Total Financing Required			

¹Identifiable taxes and duties are US\$m ____, and the total project cost, net of taxes, is US\$m ____. Therefore, the share of project cost net of taxes is ____%.

ANNEX 6: IMPLEMENTATION ARRANGEMENTS

SIERRA LEONE: Sierra Leone Wildlife Protection and Biodiversity Conservation (To be firmed up during Pre-appraisal)

The planned project will be executed by NaCEF on behalf of GoSL, with the collaboration of the Ministry of Finance and other relevant line Ministries, multilateral and bilateral donors, international and local NGOs like the Forum for Environmental Actors, Conservation Society of Sierra Leone, Environmental Forum for Africa, the RSPB and BI.

A Project Steering Committee (PSC) comprising high-level representative from key public sector agencies, private and civil society organizations will be established to provide policy direction and review and to build coordination and communication among key sectors at the national, regional and sub-regional governments. NaCEF will chair the PSC and the project management unit will function as the secretariat of this high-level body. The Ministry of Finance will be the main interlocutor with the World Bank and will supervise the project and mount joint missions at least once a year.

A project management unit (PMU) will be established under the Executive Commissioner of NaCEF, with a full-time qualified project coordinator dedicated to facilitating and coordinating the implementation of project activities. Additional administrative and technical support (e.g., project office and personnel administration, procurement, monitoring and evaluation) will be hired based on the results of a detailed capacity evaluation that is ongoing during project preparation. It is anticipated that the PMU will be fully mainstreamed into the core set-up of NaCEF once there is evidence that the Commission has improved its internal capacity to plan and design, oversee, coordinate and facilitate implementation and monitoring of programs.

During the implementation phase SL-WPBCP will require strong technical and scientific assistance. To do this a technical/scientific committee (TC) chaired by a representative outside NaCEF and mandated to provide technical information and guidance will be established at the national level.

At the protected area level, NaCEF will appoint a Team Leader (TL) who will be responsible to the Project Coordinator for overall coordination and implementation of WPBCP and other activities at the site. At each PA a protected area management committee will be formed to help with planning, decision-making and on-the-ground implementation of project activities. This committee will be chaired by the TL and comprise technical personnel from the district councils, participating public sector agencies, private sector, civil society organizations (CBOs, traditional authorities, faith-based organizations, traditional healers, etc.), women and youth groups, vulnerable groups including the unemployed, people living with disabilities, etc.

Monitoring and evaluation will be a high priority throughout the life of the project. The project design anticipates that monitoring and evaluation will be done at various levels, a few of which are elaborated below:

- Tracking the entire logical sequencing of input-activity-output-outcome-result, including an assessment of the impact of the project on target and non-target beneficiaries. Beyond this M&E will provide evidence on how project results are contributing toward the achievement of the overall sector goals;
- Monitoring for compliance with project covenants, agreed upon action plans (e.g., stakeholder plans, etc) and fiduciary responsibilities such as financial management and procurement guidelines and for due diligence purpose whether World Bank Social and Environmental Safeguard Policies and Country Systems are fully complied with;
- Monitoring country commitment and ownership of the SL-WPBCP to ensure that implementation is country-led and driven by the SL-PRSP. Where possible, the tracking will also establish evidence how SL-WPBCP is responding to other global and international development goals such as the Millennium Development Goals (MDG), New Partnership for Africa's Development (NEPAD) and other initiatives within the Economic Commission of West African States (ECOWAS), etc;
- Monitoring risks and controversial aspects and progress in the implementation of risk mitigation measures;
- Tracking synergies and linkages with other programs and initiatives within and outside SL;

The Biodiversity Tracking Tool will be an excellent mechanism for tracking progress in the implementation of activities at the PAs and determining the level of improvements to the health and integrity of each individual area. Preliminary indicators to track and measure the attainment of the project's development and global objectives have been formulated in the Results Framework in Annex 3. The project will support the establishment of M&E cells and build capacities within the PMU in Freetown and at the PA site-level to collect and analysis data and to store, retrieve and share information using communication channels and partnerships (e.g., with DACO [Development Assistance Coordination Office]) that will be established under the project.

ANNEX 7: FINANCIAL MANAGEMENT AND DISBURSEMENT ARRANGEMENTS
SIERRA LEONE: Sierra Leone Wildlife Protection and Biodiversity Conservation
(To be filled in during Pre-appraisal)

ANNEX 8: PROCUREMENT ARRANGEMENTS

**SIERRA LEONE: Sierra Leone Wildlife Protection and Biodiversity Conservation
(To be filled in during Pre-appraisal)**

ANNEX 9: ECONOMIC AND FINANCIAL ANALYSIS

SIERRA LEONE: Sierra Leone Wildlife Protection and Biodiversity Conservation

Based on the nature of the project, classical financial and economic analyses cannot accurately measure the impact of the project on the beneficiaries, as well as on the country. The weakness of environmental data collection in Sierra Leone, exacerbates the difficulty of measuring and valuing many of the effects involved, especially the likely off-site benefits (positive externalities) of the eight proposed Protected Areas (PAs), and in the non-protected areas.

Because of these limitations, this annex presents a description of the likely costs and benefits, and the likely fiscal impact, of the project. It will lay some emphasis on the social aspect of the project activities.

The WBCP is not only concerned with the general well being of people, including their rights, but also their indigenous knowledge and skills and the institutions, such as communities, that express and foster human relationships and the development of social capital. The Project recognizes that the communities have rights as well as responsibilities, which should be protected and improved just as environmental policy and law aims to protect and improve the environment.

A specific quantitative study based on the framework provided by this annex would be completed by the Mid Term Review of the project.

Costs

In addition to the costs of implementing the project, there are opportunity costs from foregoing the use of project areas by local communities. Given the current looseness of the PAs covered by the project and the lack of relevant data, identified threats to ecosystems are used as a proxy of foregoing use of the resources in the PAs.

Project costs

The projected financial costs of the project are US\$5.0 million for six years (2006-2012).

The activities to be undertaken under the Wildlife Biodiversity and Conservation Project include: (i) to review and reform institutional frameworks and policies and legislation that govern natural resource management in Sierra Leone; (ii) provision of a legal foundation for development and implementation of protected area management plans and for action against violations of environmental policies and laws, (iii) broadening of participation by Government organizations and NGOs in decision-making and implementation of programs; (iv) creating effective mechanisms for fair and equitable distribution of benefits from protected area management, wildlife protection, and biodiversity conservation; (v) to build capacity at the local, district and national levels in support of protected area system management, wildlife protection and biodiversity conservation; (vi) to build capacity for mainstreaming of PA protection, wildlife

management and biodiversity conservation into development planning and economic activities at the district and national levels; (vii) to raise awareness and increase know-how of key stakeholders and beneficiaries at all levels and improving their capacities to manage and develop high-biodiversity sites in ways that improve productivity while enhancing their health and integrity; (viii) establishment of a sustainable and predictable funding mechanisms will be established for the effective management of protected area systems in Sierra Leone; and (ix) to reduce dependencies of communities living in the fringes of the selected PA systems on natural resource exploitation by providing them with resources for developing alternative sources of income and livelihood support systems.

Opportunity costs

There are opportunity costs associated with the set of activities aiming to improve management of the high biodiversity sites, including the PAs. In order to allow the trees, animals, fish and birds to recover and in some cases prevent collapse, these activities are likely to limit hunting, logging and other deforestation activities. In the Yawri Bay PA, activities will limit fishing effort and possibly the number of fishers and the volume of catch. At all these sites, the reduction in activities should last over a recovery period that is at least as long as the project implementation. This naturally leads to a short-term loss of income for the local communities. The activities aiming to conserve critical habitats and species through strengthened or created PAs also have opportunity costs associated with them. Brief descriptions of the reserves and game parks that make of the PAs, to indicate the sort of activities that will be limited or given up in terms of hunting, fishing and other forms of harvesting of natural resources, are provided below:

1. Tiwai Island Wildlife Sanctuary: Over 135 different bird species, including 8 types of hornbills can be found on Tiwai. The sanctuary has one of the highest concentration and diversity of primates in the world. Eleven different species, including the rare pygmy hippopotamus, have been identified there. Additionally, over 700 different plant species live on Tiwai.
2. Loma Mountains Forest Reserve: It is reported that there are 60 species of bird at Bintimani peak. Additionally, 10 species of primates and several other large mammal species are found at Loma. These include threatened primates such as Western Chimpanzee, Red Colobus monkey, Black-and-White Colobus Monkey, Sooty Mangabey, and Diana Monkey. Other threatened mammals are, Forest Elephant, Leopard, Pigmy Hippo, Water Chevrotain, Savanna Buffalo, Jentink's Duiker, Black Duiker and Maxwell Duiker. The reserve also has forest trees of great variety.
3. Outamba Kilimi National Park: It is reported that there are 9 species of primates in the area, including four threatened ones; Western Chimpanzee, Red Colobus Monkey, Black and White Colobus Monkey and Sooty Mangabey. A small population of Western Elephant, could also be found at Outamba. Other large mammals include Leopard, Pigmy Hippopotamus, Water Chevrotain, Maxwell Duiker and Savanna Buffalo. The 1994 IBA survey recorded 220 species of birds at

the park. This accounts for 40% of the species considered dependent on the Guinea-Sudan savanna biome that occur in Sierra Leone.

4. Mamuta Mayosso: Surveys have listed a total of 252 species of birds belonging to 51 families. These include two near threatened species - Turati's Boubou and Rufous-winged Illadopsis. A waterfowl census conducted in 1994 at the two wetlands of Dakrafi and Robierra gave a total of 1280 birds of 18 species and includes a large count of the White-faced Whistling Duck. Eight species of primates are known to occur in this sanctuary, in addition to other big game such as bushbuck, bushpig, genets and duikers. The threatened primate species are Western Chimpanzee and Red Colobus monkey. Other threatened fauna are Pigmy Hippo and Dwarf Crocodile.

5. Gola Forest: The Gola Forest is the largest tract of closed canopy, lowland rain forest in Sierra Leone. *Heriteria/Lophira* tree community dominates the flora in Gola Forest. Other tree species include *Heriteria utilis* and *Cryptosephalum teraphyllum*. It is recorded that there were 216 species including 169 forest dependent species in the Gola forest between 1970 and 1976. Additionally, there are 274 species including 8 globally threatened species: White-breasted Guinea fowl, Rufous Fishing Owl, Western Wattled Cuckoo-shrike, Green-tailed Bristlebill, Yellow-throated Olive Greenbul, White-necked Picathartes, Nimba Flycatcher and Gola Malimbe.

6. Yawri Bay: The mangroves are a critical nursery ground for many species, directly affecting the production of fish stocks and indirectly affecting the presence of fish eating dolphins and birds. Forty-six species of Palaearctic migrant birds are known to occur in the bay. Four of these species – Avocet, Lesser-crested Tern, Water Dikkop and the near-threatened Damara tern were first recorded for Sierra Leone at this site. The presence of the latter species has increased the conservation significance of the bay since this is now the westernmost record of the species in Africa.

7. Western Area Peninsula Forest: A total of 374 species including occasional vagrants and migrants that visit water bodies within the forest, have so far been recorded in this forest. Two threatened species -White-necked Rockfowl and Green-tailed Bristlebill are found in this PA. Over 50 species of mammals have been recorded, of which seven species are primates, five of which are threatened - Western chimpanzee, Red Colobus monkey, Black-and-White Colobus Monkey, Sooty Mangabey, and Diana monkey. Other threatened mammals include Leopard, Jentink's Duiker, Black Duiker and Maxwell Duiker. An endemic toad *Cardioglossus aureolli* also occurs in the area.

8. Kangari Hills Forest Reserve: The IBA survey produced a bird list indicating 115 species. This includes three globally threatened - White-necked Rockfowl, Black-faced Rufous Warbler, and Green-tailed Bristlebill. The forest holds 33% of the Guinea forest biome, and 18% of Guinea-Sudan savanna biome species. Threatened primate species within the reserve include Western Chimpanzee, Red Colobus Monkey, Black-and-white Colobus Monkey, Diana monkey. Other threatened mammals are Leopard, Water Chevrotain, Black Duiker, Maxwell Duiker, Forest Elephant and Forest buffalo.

With the creation of the PAs, some activities like hunting, fishing, fuel wood gathering, farming would certainly be forbidden and others would be regulated in order to avoid progressive biodiversity destruction. This should result in short-term foregone incomes for some of the local population. The amount of losses depends on the exact intensity of harvesting and on the interdiction and regulation introduced for the PA management. The project will likely forbid or at least strictly regulate these activities in order to restore the animal and fish stocks. Consequently, this should result in income losses for some community members.

If the project succeeds in halting ecosystems services degradation in the proposed PAs and putting in place a sustainable management of the PAs, opportunity cost are like to be generated in the short term for the local communities. Although qualitative information is available on many threats, data are insufficient to quantify them. For this reason, the project will compensate the community for foregone income in the short-term, through the introduction of alternative livelihoods.

Specifically in the Gola Reserve the Project intends to buy back the rights of exploitation, so that the integrity of the forest will be maintained.

Benefits

As mentioned previously, in the eight PAs, the project will implement nine separate but complementary and interdependent groups of activities under three components: (i) Strengthening Policy, Legislation, and Institutional Framework for Ecosystem and Protected Area Management and Conservation of Wildlife and Biodiversity; (ii) Improving Management of Selected PAs (*Site Management Planning and Research, Capacity Building and Awareness Creation*); (iii) Sustainable Funding for Long-term PA Protection and Biodiversity Conservation and Creation of Alternative Sources of Livelihood (*Sustainable Long-term Funding Mechanisms; and Creation of Alternative Sources of Livelihood – The Community Investment Fund*).

The success of the three components is interdependent, and the benefits produced by them cannot be treated separately. Thus, the three main benefits of the project are: (i) better preservation of animal, bird and marine biodiversity, both in the short and long terms; (ii) increased recreation ecotourism rent; and (iii) increased fisheries rent some years after the project implementation as a consequence of stock recovery and reduced fishing effort

Ecotourism benefits

The presence of the varied bird species, species of primate and large animals, as shown in the description of the PAs, makes the areas havens for ecotourism. This could even include cultural tourism as an alternative livelihood for the communities within the fringes of the PAs. It should be noted that ecotourism benefits of the project depend on the additional number of visitors that is made possible by the Project over time (compared to the numbers of visitors that would come without the Project) and on the

economic rent from tourism captured by Sierra Leone from the additional visitors. Because nature tourism is based upon scarce natural resources, it generates economic rents. These rents will generally be proportional to the uniqueness of the tourism asset, being fairly low for sun-sand-and-sea destinations, therefore, but potentially very high for ecotourist destinations. Sierra Leone has the advantage of having both destinations. Rents can be captured in a variety of ways, including through park entrance fees, airport and visa fees, and hotel taxes.

Biodiversity preservation benefits

The eight PAs support extensive terrestrial and marine biodiversity that is described in details above. By protecting the ecosystems in these areas and non-protected areas, the Project protects natural habitat that is important for rare animals and birds, fish breeding, forest trees of great variety. Consequently, this action will indirectly protect other migratory mammals and birds that are attracted to these resources. A proxy for the benefits of biodiversity conservation in PAs, arising from the Project are the likely additional payments made from the international donor community to the Sierra Leonean network of protected areas. Indeed, those direct payments for biodiversity conservation reflect the willingness to pay (WTP) of the international community and are linked to the existence of biodiversity in the protected and non-protected areas.

Fiscal Impact

On the fiscal and distributional impact of the project, further work is needed during project implementation to assess the recurrent costs of the project and to identify the winners and the losers in order to design transfer mechanisms to compensate losers and provide for a sustainable financing mechanisms for recurrent costs.

Conclusion

If the project succeeds in halting degradation of ecosystems services within the three proposed project areas, it is likely that benefits will be generated, both on site and, especially off site. In the PAs themselves, outstanding ecosystems would be protected and their potential for attracting tourism preserved.

However, at this stage, data are insufficient to say that the economic benefits (additional WTP for biodiversity conservation, additional tourism rent and fishery rent) generated by the project are sufficient to justify the investments involved plus the opportunity cost, even if it is likely. Further effort is needed during project implementation to collect data and to monitor the impact of the project especially the likely short term opportunity cost for local population, the biophysical relationship between better protection of the ecosystem and stock recovery, and the amount of rent generated from that. Monitoring the impact of the project is particularly vital, since the scarcity of relevant data limits the ability to make *ex-ante* estimates of benefits. In the long term, the number of tourists visiting the parks embedded in the protected and non-protected areas and the fees they pay or are willing to pay would provide direct estimates of some of the possible economic benefits.

ANNEX 10: SAFEGUARD POLICY ISSUES

SIERRA LEONE: Sierra Leone Wildlife Protection and Biodiversity Conservation

ANNEX 11: PROJECT PREPARATION AND SUPERVISION

SIERRA LEONE: Sierra Leone Wildlife Protection and Biodiversity Conservation

	Planned	Actual
PCN review		
Initial PID to PIC		
Initial ISDS to PIC		
Appraisal		
Negotiations		
Board/RVP approval		
Planned date of effectiveness		
Planned date of mid-term review		
Planned closing date		

Key institutions responsible for preparation of the project:

Bank staff and consultants who worked on the project included:

Name	Title	Unit
Edward F. Dwumfour	Team Leader, Sr. Natural Resource Management Specialist	AFTS4
Andrew O. Asibey	Sr. Monitoring and Evaluation Specialist	AFTKL
Nyaneba E. Nkrumah	Sr. Natural Resource Management Specialist	AFTS4
Beatrix Allah-Mensah	Social Development Specialist	AFTS4
Frederick Yankey	Sr. Financial Management Specialist	AFTFM
Ferdinand T. Apronti	Procurement Specialist	AFTPC
Manush A. Hristov	Counsel	LAGEF
Wolfgang Chadab	Finance Officer	LOAG2
Emanuele Santi	Communications Associate	EXTCD
Fatu Karim-Turay	ET Temporary	AFMSL
Rose Ampadu	Program Assistant	CD10
Rohan Selvaratnam	Sr. Program Assistant	AFTS4
Kristine Ivarsdotter	Sr. Social Development Specialist	AFTS1
Christine Kimes	Sr. Operations Officer	AFOS
Gayatri Kanungo	Consultant	AFTS4
Melanie Eltz	Junior Professional Associate	AFTS4
Robert Robelus	Sr. Environmental	AFTS1

Yvonne Fiadjoe Aiah Randolph Lebbie Tommy Smith	Assessment Specialist ET Consultant	ENV
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Bank funds expended to date on project preparation:

1. Bank resources:
2. Trust funds:
3. Total:

Estimated Approval and Supervision costs:

1. Remaining costs to approval:
2. Estimated annual supervision cost:

ANNEX 12: DOCUMENTS IN THE PROJECT FILE

SIERRA LEONE: Sierra Leone Wildlife Protection and Biodiversity Conservation

ANNEX 13: STATEMENT OF LOANS AND CREDITS

SIERRA LEONE: Sierra Leone Wildlife Protection and Biodiversity Conservation

Project ID	FY	Purpose	Original Amount in US\$ Millions				Cancel.	Undisb.	Difference between expected and actual disbursements	
			IBRD	IDA	SF	GEF			Orig.	Frm. Rev'd
P078389	2006	SL-IDP Transp (FY06)	0.00	0.00	0.00	0.00	0.00	43.52	0.00	0.00
P087203	2005	SL-Power & Water SIL (FY05)	0.00	35.00	0.00	0.00	0.00	31.85	8.46	0.00
P078613	2004	SL-Inst Reform & Cap Bldg TAL (FY04)	0.00	0.00	0.00	0.00	0.00	14.08	2.55	0.00
P079335	2003	SL-Natl Soc Action (FY03)	0.00	35.00	0.00	0.00	0.00	19.92	8.27	0.00
P074320	2003	SL-Basic Edu Rehab (FY03)	0.00	0.00	0.00	0.00	0.00	10.88	4.30	0.00
P074128	2003	SL-Health Sec Reconstr & Dev (FY03)	0.00	0.00	0.00	0.00	0.00	14.39	9.03	0.00
P073883	2002	SL-HIV/AIDS Response (FY02)	0.00	15.00	0.00	0.00	0.00	5.99	2.95	0.00
Total:			0.00	85.00	0.00	0.00	0.00	140.63	35.56	0.00

SIERRA LEONE
STATEMENT OF IFC's
Held and Disbursed Portfolio
In Millions of US Dollars

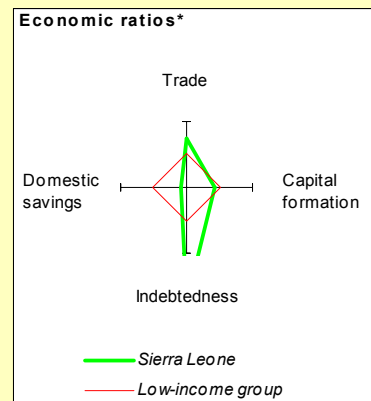
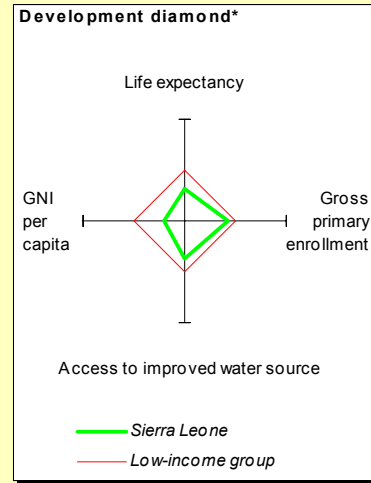
FY Approval	Company	Committed				Disbursed			
		IFC				IFC			
		Loan	Equity	Quasi	Partic.	Loan	Equity	Quasi	Partic.
	CeltelSierraLeon	0.58	0.00	0.00	0.00	0.58	0.00	0.00	0.00
	Total portfolio:	0.58	0.00	0.00	0.00	0.58	0.00	0.00	0.00

FY Approval	Company	Approvals Pending Commitment			
		Loan	Equity	Quasi	Partic.
	Total pending commitment:	0.00	0.00	0.00	0.00

ANNEX 14: COUNTRY AT A GLANCE

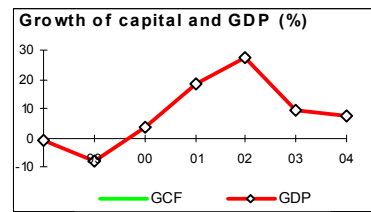
SIERRA LEONE: Sierra Leone Wildlife Protection and Biodiversity Conservation

POVERTY and SOCIAL	Sierra Leone	Sub-Saharan Africa	Low-income	
2004				
Population, mid-year (<i>millions</i>)	5.4	719	2,338	
GNI per capita (<i>Atlas method, US\$</i>)	200	600	510	
GNI (<i>Atlas method, US\$ billions</i>)	1.1	432	1,184	
Average annual growth, 1998-04				
Population (%)	2.0	2.2	1.8	
Labor force (%)	18	10	2.1	
Most recent estimate (latest year available, 1998-04)				
Poverty (<i>% of population below national poverty line</i>)	70	..	..
Urban population (<i>% of total population</i>)	40	37	31	
Life expectancy at birth (<i>years</i>)	37	46	58	
Infant mortality (<i>per 1,000 live births</i>)	166	101	79	
Child malnutrition (<i>% of children under 5</i>)	27	..	44	
Access to an improved water source (<i>% of population</i>)	57	58	75	
Literacy (<i>% of population age 15+</i>)	30	65	61	
Gross primary enrollment (<i>% of school-age population</i>)	79	95	94	
Male	93	102	101	
Female	65	88	88	
KEY ECONOMIC RATIOS and LONG-TERM TRENDS				
	1984	1994	2003	2004
GDP (<i>US\$ billions</i>)	1.1	0.91	0.99	1.1
Gross capital formation/GDP	12.7	8.5	14.3	19.6
Exports of goods and services/GDP	10.6	29.5	19.9	22.9
Gross domestic savings/GDP	10.9	12.4	-7.0	3.4
Gross national savings/GDP	9.7	2.7	6.7	14.8
Current account balance/GDP	-4.7	-5.8	-7.6	-4.8
Interest payments/GDP	0.9	2.9	0.9	1.1
Total debt/GDP	56.7	170.9	162.3	161.3
Total debt service/exports	24.3	60.3	113	10.7
Present value of debt/GDP	89.3	..
Present value of debt/exports	395.7	..
	1984-94	1994-04	2003	2004
<i>(average annual growth)</i>				
GDP	-1.7	3.0	9.2	7.4
GDP per capita	-3.9	0.9	7.1	5.4



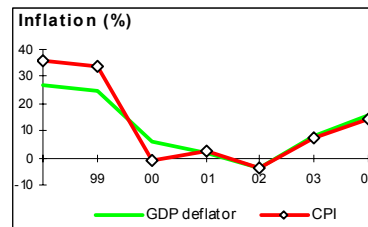
STRUCTURE of the ECONOMY

	1984	1994	2003	2004
<i>(% of GDP)</i>				
Agriculture	40.1	39.4	..	..
Industry	13.6	40.4	..	..
Manufacturing	5.7	9.9	..	..
Services	46.2	20.2	..	..
Household final consumption expenditure	82.1	76.5	91.4	83.4
General gov't final consumption expenditure	6.9	11.1	15.6	13.2
Imports of goods and services	12.4	25.6	41.2	39.1
	1984-94	1994-04	2003	2004
<i>(average annual growth)</i>				
Agriculture	-7.2	..	..	..
Industry	2.5	..	..	..
Manufacturing	..	..	..	..
Services	0.7	..	..	..
Household final consumption expenditure	-7.7	10.3	8.2	-0.5
General gov't final consumption expenditure	-3.2	..	..	..
Gross capital formation	6.2	..	..	..
Imports of goods and services	0.8	..	..	..



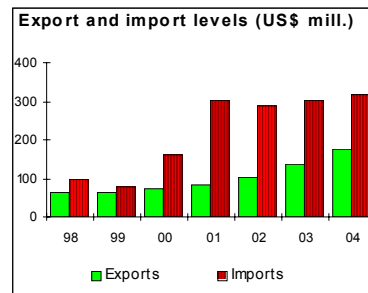
PRICES and GOVERNMENT FINANCE

	1984	1994	2003	2004
Domestic prices				
<i>(% change)</i>				
Consumer prices	66.7	24.2	7.5	14.2
Implicit GDP deflator	39.8	25.0	8.3	15.9
Government finance				
<i>(% of GDP, includes current grants)</i>				
Current revenue	..	12.9	20.1	21.3
Current budget balance	..	-18	-2.0	11
Overall surplus/deficit	..	-5.9	-6.8	-3.5



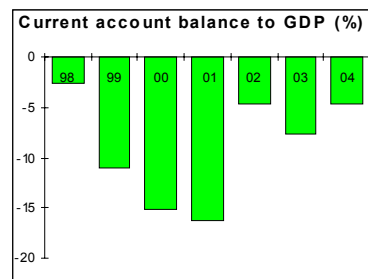
TRADE

	1984	1994	2003	2004
<i>(US\$ millions)</i>				
Total exports (fob)	127	194	138	174
n.a.	..	..	..	..
n.a.	..	..	..	..
Manufactures	..	..	..	..
Total imports (cif)	172	149	300	319
Food	39	52	61	57
Fuel and energy	45	29	40	42
Capital goods	54	27	29	33
Export price index (2000=100)	..	105	109	107
Import price index (2000=100)	..	98	99	99
Terms of trade (2000=100)	..	107	111	108



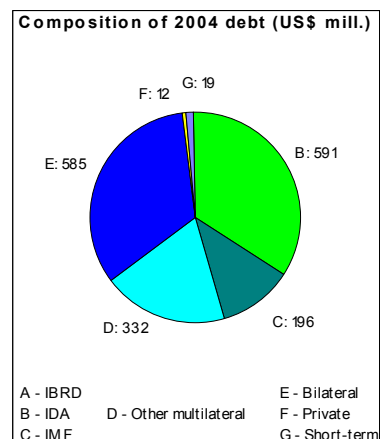
BALANCE of PAYMENTS

	1984	1994	2003	2004
<i>(US\$ millions)</i>				
Exports of goods and services	177	269	197	246
Imports of goods and services	215	234	408	421
Resource balance	-38	35	-211	-174
Net income	-30	-14	-27	-28
Net current transfers	17	26	163	151
Current account balance	-51	-53	-75	-51
Financing items (net)	25	52	65	99
Changes in net reserves	26	0	10	-48
Memo:				
Reserves including gold (US\$ millions)	8	41	59	82
Conversion rate (DEC, local/US\$)	2.5	586.7	2,347.9	2,691.0



EXTERNAL DEBT and RESOURCE FLOWS

	1984	1994	2003	2004
<i>(US\$ millions)</i>				
Total debt outstanding and disbursed	616	1,558	1,606	1,735
IBRD	8	3	0	0
IDA	47	186	543	591
Total debt service	43	163	25	29
IBRD	2	1	0	0
IDA	1	2	2	3
Composition of net resource flows				
Official grants	25	72	223	..
Official creditors	10	45	31	76
Private creditors	-3	0	-1	0
Foreign direct investment (net inflows)	6	-3	3	..
Portfolio equity (net inflows)	0	0	0	..
World Bank program				
Commitments	21	0	65	35
Disbursements	6	38	25	31
Principal repayments	1	2	0	0



ANNEX 15: INCREMENTAL COST ANALYSIS

SIERRA LEONE: Sierra Leone Wildlife Protection and Biodiversity Conservation

Proposed objective(s)

The Project Development Objective (PDO) will be the improvement of sustainable protected area management and biodiversity conservation within SL contributing to socio-economic development of beneficiary communities. Progress would be measured, among other things, by: (i) increased involvement of local communities in the management of selected protected areas; (ii) improved flow of benefits to local communities from use and management of resources within and around protected areas; (iii) improved management of selected protected areas, conservation and sustainable use of wildlife and biodiversity; and (iv) recovery of biodiversity (key species) in each selected protected area system.

Broad Development Goals

The Government of Sierra Leone has proposed to strengthen and consolidate its system of wildlife protection and biodiversity conservation through Protected Areas (PAs) by combining their protection and management to improve the quality of life of the communities who are reliant upon these areas.

The conservation and environment scene in Sierra Leone, which was unsatisfactory before 1990, got worse during the 11-year war that ended in 2002. Additionally, the pressures from a growing population estimated at 2 percent per annum and the demographic dynamics within Sierra Leone have exerted enormous stress on the country's natural and wildlife resources base as well as the status and potential of biodiversity. In spite of the glaring looming disaster, the policy, institutional and administrative framework for sustainable natural resource management is inadequate; Also policy and program planning, implementation and monitoring in Sierra Leone is done by weak public sector institutions and an unwillingness to partner with others.

Natural resources and biodiversity management has been poorly financed using state funds. While the private sector has benefited from exploiting these resources, it has shied away from investing in their management.

The Government's response to calls for sustainable use of its natural heritage has been, first, to establish many regulatory and institutional frameworks for different sectors of the economy, such as forestry, wildlife, agro-biodiversity, marine biodiversity, fisheries management, mines, and mineral exploitation. Two key pieces of instruments, namely the National Environment Policy (NEP) and the National Environmental Protection Act (NEPA), were enacted in 1994 and 2000, respectively, to cover environmental management in the country. In 2003 the Government of Sierra Leone produced and adopted the National Biodiversity Strategy and Action Plan (NBSAP), a report that highlighted the status of the nation's various ecosystems and biological resources, outlined the threats to the existence and performance of these systems, and provided actions for addressing these looming dangers. These actions are short-, medium-, and

long-term in nature and are poised help save the biodiversity (as well as other environmental and ecological goods and services) of Sierra Leone from total collapse, and to maintain the integrity of critical ecological systems in perpetuity. The NBSAP further identified eight ecological sites of important biodiversity and suggested that urgent actions were needed to restore the integrity and ecological functionality of these systems. The eight ecological sites are spread over four major types of ecosystems comprising the Arid and Semi-arid; Coastal, Marine and Freshwater; Forest; and Mountain zones.

Despite these recent initiatives and official commitment, the current economic situation in Sierra Leone does not allow for adequate financing for the continued conservation efforts needed at the national level.

2. Global Biodiversity Objective

The Global Environmental Objective (GEO) of the project of the project will be to enhance the ecological integrity of selected ecosystems and protected areas. More specifically, the proposed project will aim to: (i) improve the integrity of selected critical protected areas and ecological functions through strengthening management of protected areas (PAs) and elimination of risks from uncontrolled, non-conforming activities such as logging and mining; (ii) enhance biodiversity protection within PAs and adjacent landscapes; (iii) ensure the conservation of genetic diversity within and outside PAs that rural people traditionally use for medicinal and consumptive purposes (medicinal plants, wood fuel, bush meat); and (iv) enhance the sustainable use of biological resources.

Incremental Cost Assessment

Baseline activities and Costs:

Context and Scope

Since independence Sierra Leone, although acknowledged by national stakeholders for its unique ecosystems and globally significant biodiversity, has not received adequate protection (including control and use restrictions) by the government. This situation stems from the weak policy, legislation, and institutional framework for a sustainable ecosystem.

In the absence of GEF assistance, Government of Sierra Leone, with limited support from other donors, would undertake limited interventions to meet selected domestic development objectives in ensuring a sustainable ecosystem, wildlife protection and biodiversity conservation. Such limited conservation support under the baseline scenario will be restricted to few biodiversity sites without any opportunity for mainstreaming biodiversity conservation and without being built on principles for sustainability as to link economic, social and environmental issues. It would also be insufficient to provide scientific data on the economic value of the use of existing biodiversity in order to ensure

effective involvement of all stakeholders at national, regional and local levels in strategic planning and management.

As a conclusion, without the Sierra Leone Wildlife Protection And Biodiversity Conservation Project the baseline would be continued dismal funding for protected area management, poor regional and national economic development planning from biodiversity protection and conservation management, all leading to persistent degradation of high-value, unique biodiversity and natural resources; and lastly, loss of opportunities for providing sustainable alternative livelihoods people currently living off the protected areas.

Cost

Over the 6-year Project period, the total expenditures associated with the Baseline Scenario are estimated at US\$ 11.6 million. These are described as follows:

Component 1: Strengthening Policy, Legislation and Institutional Framework for Ecosystem and Protected Area Management and Conservation of Wildlife and Biodiversity (Total US\$ 1.7m)

The project will focus on supporting the endorsement and, to a limited extent, enforcement of related environmental legislation and policies (National Environmental Policy (NEP) of 1994 and the National Environmental Protection Act (NEPA) of 2000, other policies on concessions, etc.), including dissemination of these policy and legal documents.

Component 2: Improving Management of Selected PAs (US\$Total US\$ 8.3m: GEF US\$3.7m)

Sub-component 2.1: Site Management Planning and Research

Project activities relate to three pillars: (i) training and research related to the management of selected sites of high biodiversity importance; the creation of additional new protected area; (ii) actual implementation of the revised and updated management plans through targeted investments associated with conservation links, and (iii) establishment of sustainable and predictable funding mechanisms for the effective management of selected protected area systems in Sierra Leone. The baseline activities include provision of sectoral capacity building measures at the local, district and national levels in support of protected area system management, wildlife conservation and sustainable use. It includes mainstreaming environmental issues in the development planning and economic activities at the district and national levels. At the various levels, it includes the provision of basic hardware and software for local councils to improve accessibility and communication capacities.

Sub-component 2.2: Awareness Creation

The project activities will include raising awareness and increasing know-how of key stakeholders and beneficiaries at all levels and improving their capacities to manage and

develop high-biodiversity sites (protected areas and their peripheries) in ways that improve productivity while enhancing their health and integrity.

Sub-component 2.3: Creation of Alternative Sources of Livelihood – Community Investment Fund

The baseline includes small grants to the communities living on the fringes of the selected protected area systems. These grants would be used to develop alternative sources of income and livelihood systems. Village tracks, roads, health posts and schools will be considered on demand-driven basis.

Component 3: Project Management and Monitoring and Evaluation (Total US\$ 1.6m)

The activity focuses on provision of effective implementation coordination of the Project, making sure it complies with the World Bank Financial Management Guidelines and the Procurement Guidelines.

Benefits

The domestic and global benefits under the baseline scenario focus on the basic maintenance of the ecosystems, PA management, and conservation of wildlife and biodiversity. This would be done through limited, unstreamlined and uncoordinated environmental planning and management, principally at the local and national levels. The baseline would confer decreasing global benefits through limited and insufficient protection to sites with high-biodiversity conservation value.

GEF Alternative

Context and Scope

Conservation of biodiversity through mainstreaming protected area management and conservation of wildlife and biodiversity into local, regional and national development planning and implementation has been identified by key stakeholders in the country as the only sustainable option for ecosystem development and biodiversity conservation in Sierra Leone. It is the overarching rationale behind the GEF alternative; and it clearly stands at the center of the Project design through its four inter-related Project components and through the NaCEF's implementation arrangements.

Global experience with similar PA management and biodiversity projects, which aim to support sustainable development in the project areas, has shown that biodiversity conservation and sustainable use of natural resources is best managed in the long term if addressed as early in the local and regional development processes as possible. The SL-WBCP builds on this experience by complementing in a timely manner the operational move in the current decentralization process, and by piloting the transfer of responsibilities related to planning, management and monitoring of ecosystems,

biodiversity conservation and their mainstreaming opportunities in relevant production landscapes from national to regional and local level from the outset.

The GEF alternative would lead towards the development and implementation of broad-based development plans for the selected PAs, where biodiversity issues are truly integrated and reflected. Vertical and horizontal coordination would lead to a better connection of development and biodiversity conservation (i.e. supportive of a ‘big picture’- even transfrontier map given conservation areas (e.g. Gola Forest), with sustainable biodiversity benefits to all role players. The Project would enhance the knowledge base for sound ecosystem management and decision-making, including monitoring and evaluation for sustainable long-term tourism, mining and fishing practices. To further achieve this goal of mainstreaming, national, regional and local players would be provided with technical, financial and institutional support to develop such an enabling policy framework, adequate skills and targeted capacity. This will be achieved through the full involvement of national, regional and local governments, the private sector and other civil society stakeholders, and the implementation of a detailed Project Participation and Communication Strategy.

The result of the alternative scenario would be conservation of biodiversity, its mainstreaming into enhanced national, regional and local development planning and management for the Sierra Leonean ecosystem in a way that is sustainable and in line with national and global biodiversity objectives and strategies.

Importantly, the lessons generated under this Project would help a broader mainstreaming of biodiversity considerations in other sectors and regions in Sierra Leone, the West Africa sub-region and other countries.

Cost

Over the six-year Project period, the total expenditures associated with the Baseline Scenario are estimated US\$5.0 million. The total expenditures associated with the GEF Alternative are estimated US\$16.6 million; these are summarized in Table 1. The Project would involve expanded and new activities as follows:

Component 1: Strengthening Policy, Legislation and Institutional Framework for Ecosystem and Protected Area Management and Conservation of Wildlife and Biodiversity (Total US\$2.4m: GEF US\$0.7m)

Main output

A collaborative vision and an improved policy, legal, institutional and planning framework for sustainable development of the Sierra Leonean ecosystem, shared by all stakeholders as a driving force for biodiversity conservation of high global importance. Up to now, the approach to regulation, control and management of the PA resources has been hampered by poor funding, unclear and overlapping institutional mandates for natural resource management, inconsistent and outdated legislation and insufficient data and information on the ecosystems. This component will bring the stakeholders together,

and seek to reach consensus on a common vision for the management of the Sierra Leonean ecosystem. The vision will be based on the idea that the environment is part of a transfrontier ecosystem that permits industrial development, recreation, mining and other activities without compromising the environment and biodiversity in specific. Building on the needs and benefits for mainstreaming biodiversity conservation into production landscapes and local and regional development, this component will promote the development of a comprehensive environmental policy through a participatory process and stakeholder consultation. This component would involve removal of root causes to unsustainable and non-mainstreamed biodiversity management at the Sierra Leonean coast through clarification and harmonization of institutional mandates, review of financing needs and suitable mechanisms for biodiversity and, thus, improved coordination and inter-agency collaboration between local councils, national-level line ministries, private sector and others.

The GEF alternative would fund a series of stakeholder consultations and workshops to facilitate the process of developing a joint PA management vision, which will guide the mainstreaming of biodiversity efforts at regional and local levels.

Component 2: Improving Management of Selected PAs (Total US\$12.0m: GEF US\$3.7m)

Main output

Local councils, Local Authorities, National Commission on Environment and Forestry, other line ministries and other role players enabled to implement environmental policies with a priority given to mainstreaming biodiversity conservation and sustainable use into development planning, decision-making and key economic activities. This expanded component would involve removal of institutional and capacity barriers to biodiversity mainstreaming through support for the Government's decentralization efforts. It would involve targeted training and capacity building for identified key players on planning, regulations, management and monitoring the national ecosystems. Capacity building at regional and local levels would also build a basis for active involvement of local population and visitors around identified ecosystems of biodiversity importance. Resources would also be provided to set up a monitoring system, in conjunction with similar efforts by the National Commission on Environment and Forestry and other related bodies to provide for monitoring of the biodiversity status of identified ecosystem of biodiversity importance habitats and species across the national ecosystem, and an early identification of potential threats. The GEF alternative would, in particular, focus on the development and implementation of a high-impact communication strategy and public awareness campaign/action plan, which will increase knowledge of issues relating to biodiversity conservation and reinforce sustainable use of natural resources, in support of the mainstreaming of biodiversity into local and regional development issues. In that regard, this component would also facilitate the preparation of regional coastal profiles, which will provide regional and local stakeholders with socio-economic and environmental information necessary for the integration of conservation along the coastal areas into their regional and local development planning and management decisions.

Subcomponent 2.1: Site Management Planning and Research (Total US\$8.2m: GEF US\$2.5m)

Main output

On the ground biodiversity conservation in existing and emerging priority protected areas is substantially strengthened together with increased economic benefits from sustainable resource-based activities in line with sub-regional and local development objectives

This activity provides expanded on-the-ground investments in biodiversity conservation efforts in areas with high biodiversity conservation potential to improve their biodiversity status. This component would comprise core activities to address site-specific planning, protection and management in identified terrestrial, freshwater and coastal ecosystems of biodiversity importance. It would focus on the highlighting of a couple of Sierra Leone's protected areas. A phased approach would be taken over SL-WPBCP's lifetime to support the National Commission on Environment and Forestry and other national bodies to agree on the basic approach and numbers of PAs, delimiting provisional boundaries and identifying issues and management objectives before developing management plans and launching the necessary legislative process. In order to introduce functioning biodiversity conservation management in priority ecosystems, demarcation and gazetting of sites would be supported based on support for use of GIS for zoning and land-use planning and monitoring purposes. A consultative site-specific management plan for the areas and their buffer zones/surrounding production landscapes would be developed based on recommendations for the appropriate institutional and financial mechanism emerging from the participatory process under Component 1, and based on built capacity under Component 2. This component would also provide support for site-specific limited infrastructure and equipment for management purposes.

The study into Sustainable Long-term Funding Mechanism would help determine and plan how to secure increased fund flow to the natural resource management sector through a menu of options, including large donor support for PA management, sustainable forest management, community-based natural resource management and institutional strengthening and policy development. It will also ensure the availability of an alternative financing mechanism that could be used to buy-back forestry concession rights from forestry/timber companies that renounce their rights.

This study will embrace various existing types of sustainable financing mechanisms, including environmental (conservation) trust funds, initiatives such as the HIPC, debt-for-nature swaps, forestry-based carbon offsets, user fees, taxes and charges, private sector initiatives.

Subcomponent 2.2: Awareness Creation (Total US\$1.0m: GEF US\$0.4m)

GEF funds will be used in environmental management advocacy and direct site conservation actions. Activities proposed under the 'Cross-sectoral Action Plan' in the NBSAP will be reviewed and implemented where appropriate. At the local level, the

project will broaden and strengthen local constituencies for ecosystem management and conservation of biodiversity e.g. through the formation, development and strengthening of interest groups and site support groups (SSGs).³ Strategies will be designed and implemented to empower local communities to participate in the management and monitoring of the selected high biodiversity sites. This sub-component will focus on promoting and enhancing greater involvement of civil society at project sites through effective engagement strategies.

Sub-component 2.3: Creation of Alternative Sources of Livelihood – Community Investment Fund (Total US\$2.8m: GEF US\$0.8m)

Funds will be used to finance the provision of alternative and viable choices for the people to participate in economic development, expand opportunities for economic growth, create jobs, reduce their levels of poverty, and improve their livelihood. In this regard, the project will explore ways of increasing sources of livelihood for people, particularly for those staying in the rural areas. While supporting actual conservation activities, the component will also provide investment support for enhancing the sustainable use of the sites and biological resources within them by financing income-generating activities that are connected to ecosystem services such as tour guiding facilities, community-based ecotourism, and rehabilitation of tourism facilities. The CIF will fund basic infrastructure such as village access roads, small bridges and drifts, farm trails, health posts, schools, latrines and water points in communities fringing the PAs on demand-driven basis. These activities will be complemented with support from the Bank-led NSAP.

Component 3: Project Management and Monitoring and Evaluation (Total US\$2.2m: GEF US\$0.6m)

Main output:

The expectation is that project implementation will be rated highly satisfactory, with well-documented achievements of results. This component will provide complementary resources to NaCEF and other implementers of the project for an effective and timely project management, coordination and the set-up of a project performance monitoring system, all of which are conditions for successful project implementation. This expanded support will include project management, coordination, reporting, monitoring and evaluation for all project activities. The GEF increment will enable further beneficial outcomes beyond those already specified in the baseline scenario. In addition to the Baseline benefits, incremental global environmental benefits include:

- Effective conservation of globally important ecosystems and species as part of priority biodiversity ecosystems of biodiversity importance/conservation areas (including support of transboundary conservation);

³ 'Site Support Groups' consist of people based in or around sites who are concerned about biodiversity loss and who draw on the experience and achievements of the wider BirdLife International Partnership to create local solutions. The BirdLife Partner NGOs work with these local communities to build a stronger local voice on environmental issues.

- Investments at ecosystem of biodiversity importance-level removing the root causes of threats, thus improving the efficacy and cost-effectiveness of management endeavors;
- Agreement on consolidated national biodiversity monitoring and information system accessible to key stakeholders (harmonized data collection and effective data dissemination will be a valuable capacity for national, regional and local decision makers);
- Strengthened institutions at national, regional and local levels through targeted capacity building for planning, management and monitoring of national biodiversity conservation including land-use planning and zoning);
- Harmonization of fragmented national environmental policies and legislation Increased partnerships at all levels, providing opportunities to better collaborate and communicate the exchange of good practices; and
- Increased local ownership through enhancement of public participation in planning and management of biodiversity resources.

3. Incremental Cost Matrix

TABLE 1: INCREMENTAL COST MATRIX FOR SIERRA LEONE

Components	Category	Expenditure (US\$ million)	Domestic Benefit	Global Benefits
Component 1: Strengthening Policy, Legislation and Institutional Framework for Ecosystem and Protected Area Management and Conservation of Wildlife and Biodiversity	Baseline	1.7	<ul style="list-style-type: none"> ▪ Improved national, regional and sub-regional planning through progress with decentralization process; improved capacity building measures and multi stakeholder consultations; ▪ Strengthened environmental legal and policy framework (e.g protected area regulation policy framework; ▪ Achieved progress with relevant line ministries devolution plans and staffing, as they relate to environmental issues. 	<ul style="list-style-type: none"> ▪ Enactment of Environmental Management Act and other environmental legislation to provide for environmental regulation compliance and enforcement measures of relevance to globally significant habitat and species protection

	GEF Alternative	2.4	<ul style="list-style-type: none"> ▪ Improvement in the coordination of inter-agency collaboration among all key players through well-defined and harmonized 	<ul style="list-style-type: none"> ▪ Overall ecosystem management, protected area management and wildlife and biodiversity conservation are embedded
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			<p>institutional mandates and responsibilities;</p> <ul style="list-style-type: none"> ▪ More cost effective use of national and local council budgets 	<p>in a coherent policy, legal and institutional framework;</p> <ul style="list-style-type: none"> ▪ Decentralization of environmental management functions ▪ Identification of opportunities to mainstream protected area management, and wildlife and biodiversity conservation considerations into national and local council development planning ▪ Development and implementation of financial sustainability strategy by the relevant line ministry; ▪ Greater cost-effectiveness in achieving global impact
	Increment	0.7		
Component 2: Improving Management of Selected PAs	Baseline	8.3	<ul style="list-style-type: none"> ▪ Capacity enhancement for relevant line ministries, local councils on development planning, management, and monitoring, including broader environmental issues; ▪ Collection of national biodiversity data, the relevant government body's routine species monitoring; ▪ Improved capacity of the country's Environmental Economics and Natural Resource Accounting 	<ul style="list-style-type: none"> ▪ Improved information regarding the protected area management and biodiversity.

	GEF Alternative	12.0	<ul style="list-style-type: none"> ▪ Improvement of inter-ministerial and inter-agency cooperation at all levels; ▪ Strengthened institutional and technical capacity within the local councils; ▪ Awareness for effective environmental and biodiversity planning and management including land use planning to benefit the national, regional and local institutional and human capacity through training, study tours and the involvement of international, national and local experts in the project; ▪ Strengthened national and local knowledge and capacity in assessing biodiversity values and assets as well as identifying and prioritizing protected areas. ▪ Availability of profiles of economic, social and environmental baseline data for development planning and management both at the national and local levels. ▪ Providing necessary strategic and operational tools and experiences to improve management effectiveness of selected high-biodiversity areas; ▪ Woodlot establishment through reforestation; ▪ Use of fuel efficient and energy saving devices and technologies for activities that currently account for a high demand on wood and woodfuels; ▪ Cultivation of non-timber forest products such as medicinal herbs, spices, sweeteners, fuel wood, poles, timber to enhance the resource base; ▪ Community-based nature tourism and promoting tourism-related local (village-level) enterprises; ▪ Protection of river bank and slopes; ▪ Buffer zone management ; ▪ Implementation of research-based activities to improve the resource base; 	<ul style="list-style-type: none"> ▪ Mainstreaming biodiversity and sustainable use of resources within the protected areas (PA) into national and local development planning and management processes, e.g, through sharing of PA biodiversity data and linking to socio-economic and other data by all stakeholders.; ▪ Enhanced monitoring and information exchange through development and implementation of PA biodiversity M&E systems permitting adaptive management; ▪ Improved scientific and technical knowledge base for decision-making and ecosystem of biodiversity importance site selection.; ▪ Incorporating of global biodiversity elements and promotion of integrated planning and management presented in targeted communication campaigns to increase public awareness and enhance appreciation of PA biodiversity among policy makers. ▪ The creation of one new protected area within the Gola forest stretch to cover Sierra Leone and Guinea.
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			<ul style="list-style-type: none"> ▪ Increased fund flow to the natural resource management sector and large donor programs for PA management, sustainable forest management, community-based natural resource management and institutional strengthening and policy development have never been implemented.; ▪ Availability of an alternative financing mechanism that could be used to buy-back forestry concession rights from forestry/timber companies that renounce their rights. ▪ Conducting participatory research, reviews, revisions and development of management plans for selected key biodiversity conservation sites and their buffer environments; ▪ Potential direct biodiversity conservation activities such as PA boundary demarcation, GIS surveys and mapping, gazettement, site-specific and species-specific conservation measures, access control and regulation, soil erosion control, vegetation cover rehabilitation within PAs and buffer zone areas rehabilitation and management. ▪ Establishment of environmental (conservation) trust funds, drawing from initiatives such as the HIPC, debt-for-nature swaps, forestry-based carbon offsets, user fees, taxes and charges, private sector initiatives; ▪ Reduced dependencies of communities living in the fringes of the selected PA systems on natural resource exploitation by providing them with resources for developing alternative sources of income and livelihood support systems; 	<ul style="list-style-type: none"> ▪ Enhanced sustainable use of the sites and biological resources within them by financing income-generating activities that are connected to ecosystem services such as tour guiding facilities, community-based ecotourism, and rehabilitation of tourism facilities; ▪ Establishment of effective management of protected area systems in Sierra Leone.

			<ul style="list-style-type: none"> ▪ Cultivation of non-timber forest products such as medicinal herbs, spices, sweeteners, fuel wood, poles, timber to enhance the resource base 	<ul style="list-style-type: none"> ▪
	Increment	3.7		
Component 3: Project Management and Monitoring and Evaluation	Baseline	1.6	<ul style="list-style-type: none"> ▪ Operational functioning of the Sierra Leone Wildlife Protection and Biodiversity Conservation Project 	<ul style="list-style-type: none"> ▪
	GEF Alternative	2.2	<ul style="list-style-type: none"> ▪ Strengthened capacity of the National Commission on Environment and Forestry, other government bodies, local councils and other stakeholders for managing core environmental awareness from increased communication efforts and coordination. 	<ul style="list-style-type: none"> ▪ Efficient administration of Project funds, coordination of implementing institutions, and evaluation of progress towards improved protection and management of globally significant ecosystems and species. Use of project indicators and data within national biodiversity M&E mechanism for adaptive management. Improved scientific knowledge for decision-making on targeted investments.
	Increment	0.6		
Total for all components	Baseline	11.6		
	GEF Alternative	16.6		
	Incremental	5.0		

ANNEX 16: STAP ROSTER REVIEW

SIERRA LEONE: Sierra Leone Wildlife Protection and Biodiversity Conservation

STAP Roster Technical Review

Andrew Grieser Johns

Forests and Biodiversity Conservation Specialist, FRR Limited

Project title: Sierra Leone Wildlife Protection and Biodiversity Conservation

Date: 20 March 2006 (DRAFT 1)

Endorsement

Interventions under this project are an extremely important contribution to saving the biodiversity of SL from total collapse. The project addresses this issue both from the top, with capacity building and enablement of the executive authority charged with this task, and from the bottom through the support and sensitisation of communities around target high-priority biodiversity sites. The stand-alone GEF component has clear incremental benefits in enabling and mainstreaming PA management and biodiversity conservation, which is currently completely unattainable by GoSL, its current partners and their pooled resources. Reviewer considers the GEF component as globally and regionally of extreme importance, as a well-conceived response to a very difficult project environment, and strongly recommends its support.

Key issues

1. Scientific and technical soundness of the project

SL is perhaps still the world's poorest nation. The national capacity to manage forests and biodiversity is minimal, and Government priorities of necessity lie elsewhere. However, the economy is re-building and there is a window of opportunity to mesh biodiversity conservation within Government development planning processes and the introduction of democratisation and decentralisation as these processes are institutionalised.

However, for this to happen, significant support is required in capacity building at all levels and in reawakening awareness of the role of protected areas at the grassroots level - and in providing alternatives to the current necessity among poor people to exploit and degrade their own natural resources base. There has been no large scale financial support for the forestry and wildlife sector in SL for many years. Government budgets cover only basic staff support and some recurrent expenses. Around 95% of operational funds for the natural resources sector are thought to originate with donors, and there are not enough of these funds to adequately address the issue of protected areas and biodiversity conservation. The proposed GEF intervention is extremely timely and important in addressing this and the proposal has been developed with clear attention to the root issues and in finding common solutions.

Component 1 of the project is concerned with assessing and revitalising the legislative and policy framework for conservation and management of biodiversity, which is currently largely non-functional for reasons of rural poverty and low implementation capacity of Government agencies – which add up to a complete absence of an enabling environment for conservation. There is an

additional intent to create effective mechanisms for fair and equitable distribution of benefits from protected area management, wildlife protection and biodiversity conservation. Achieving these is a major challenge, but the project structure addresses the challenge in a well-conceived manner.

Sub-component 2.1 focuses first on the development of integrated protected area and buffer zone management plans, although it is not clear if a buffer zone is a legal entity under which specific regulations are applied or a largely project-driven entity defined by the distribution of project activities and benefits. The second focus is on the re-evaluation of the PA system and legalisation of sites already identified by other projects and surveys (notably NBSAP), but currently not formally established. This is, or should be, a rather complex procedure of stakeholder consultation and establishment of agreement on user rights, etc, with negotiations of trade-offs among buffer zone communities prior to legal definition and demarcation. Reviewer notes and commends the intent to establish systems of local ownership of wildlife resources off-reserve, as practised in Ghana and southern Africa (Project brief p.48).

Potential activities and capacity building indicated under this component are justifiably kept extremely broad and there is a clear need to focus down with initial needs assessments at the individual PA level at an early stage of the project. Reviewer notes that this GEF intervention is aimed at a) urgent capacity building of NaCEF (Project brief p.50) as a prerequisite for more local level interventions (this doesn't really fit under this sub-component but is part of the logic), b) addressing immediate and urgent issues at the PA level as they are defined, and c) that GEF intends additional support to identify longer-term financing mechanisms – which is an entirely sensible approach.

Sub-component 2.2 is important in its focus on the engagement of civil society in the wider interventions of the project. A high priority here would be to develop the legal structure for communities to participate in site management and decision-making. Civil society structures such as the Ghana Rights and Voice Initiative could be referred to here, which lead to a potentially more powerful form of empowerment than forming a local NGO (such as a Site Support Group on the Birdlife model).

Sub-component 2.3 concerns the establishment of a community fund that provides the leverage to establish trade-off agreements with local communities and thus help to define management regimes for protected areas and buffer zones. It is not clear if this fund supports, or meshes with, any integrated planning process for the rural community or whether it is essentially a stand-alone process that provides inputs into communities that have no decentralised planning or support structure. All grants under this fund will be environmentally appropriate, but they should go further and include an agreement clause reinforcing any community-level agreements made concerning a reduction of exploitative activities within the protected areas. As part of the funding structure, some form of participatory patrolling and monitoring in the buffer zone might be required, to discourage incursion from communities outside the buffer zone area who are not eligible for these support funds and may thus see a vacuum that can be exploited.

Component 3 concerns the project management and monitoring structure, and it is clear here that an important role is to share experience and dialogue both among the stakeholders and with other projects in the region who for reasons of recent political stability are more advanced with planning and implementation approaches.

An over-arching theme of the project is that approaches envisaged will assist in forest and biodiversity protection and conservation by a) improving the capacity of the relevant authorities

to manage protected areas for environmental goals – including improving enforcement of the already existing, although weak, legislation and up-coming regulations, and b) improving alternative livelihood opportunities for the poor people surrounding the PAs, both as compensation for a loss of access rights and also in recognition of a real need for extreme poverty conditions to be ameliorated. Increased awareness and various other interventions to help lessen reliance on natural resources, such as local ownership of off-reserve wildlife resources, are also designed to reduce the need or inclination to exploit wild biodiversity resources.

The project documents note that it is impossible at this stage to quantify actual threats on wild timber and biodiversity resources (case studies in Project brief Annex 19), or the foregone income to the target communities caused by access restriction (Project brief p.66), but generally these threats are considerable. Considerable capacity building and consultative stakeholder processes are required to enable the support funding mechanism. In the meantime the target communities can be expected to respond primarily to continuing opportunities to extract forest products illegally, rather than to project aims. For this reason, there is an extreme urgency for interventions to begin to address the real needs of the communities (and of the threatened biodiversity). Adequate monitoring and enforcement of linkages between project benefits, and community conformance to project rules, would appear to be rather crucial at early stages of the project, but global experience to date is that it is quite difficult to develop a linkage mechanism between receiving project benefits and monitoring/enforcement of rules, and for different parties to agree on such a mechanism.

In the longer term a considerable effort will need to be expended in planning for integrated conservation and development (within a framework of Poverty-environment linkages) and mainstreaming these new approaches.⁴

2. Identification of global environmental benefits

Global environmental benefits are clearly expressed (Project brief p.87) and amount to an enhanced enabling environment for biodiversity conservation and management. At the national level this would be achieved through enablement of the executive authority charged with biodiversity conservation to begin to undertake its very considerable task. At the local (protected area) level this would be achieved through improved management capacity and a reduction of conflict in the use of biological resources between the protected area and other stakeholders (to facilitate this, the project includes funding support for conservation-oriented livelihoods alternatives). Ultimately, the project aims to facilitate the sustainable use (not only protection) of biological resources.

In effect, GEF intervention will both improve conditions for sustainable natural resources management and provide the relevant stakeholders with the capacity and physical means to take advantage this. At present the biodiversity and environmental resources of the target areas are currently unmanaged or provide only domestic benefits unrelated to environmental protection – the project provides the opportunity for these areas to begin providing measurable global benefits.

The importance of this approach at this time in this location is clear. The country is extremely diverse in biodiversity but socio-political factors have caused catastrophic declines, and the

⁴ The intent to mainstream biodiversity conservation into development planning and economic activities at the national, regional and sub-regional levels of administration is mentioned (Project brief p.12) and this is a major opportunity, but the processes whereby this will occur are not greatly enlarged upon.

situation is now critical. The biodiversity values of target areas are noted (Project brief p.64-65 and Annex 21). These areas are of high global conservation importance in themselves, and some have additional value as part of trans-boundary conservation units with sustainable biodiversity benefits to all stakeholders (Project brief p.83).

3. How does the project fit within the context of the goals of GEF

The project is fully consistent with GEF Operational Programs OP-1 (Arid-Semi-arid Zone), OP-2 (Coastal, Marine & Freshwater), and OP-3 (Forests); maybe also OP-4 (Mountains) in the case of the Loma Mountains site. Identified target areas within these different ecosystems are all in need of immediate support to maintain both their internal biodiversity values and also wider environmental and human benefits (particularly in the case of Yawri Bay which is a critical nursery area for a variety of marine species and thus important for regional fisheries).

The project is in particular rooted in GEF strategic priorities SP-1 (Catalyzing Sustainability of Protected Areas). A primary focus is the development of effective and sustainable management regimes in already established protected areas and in facilitating the establishment of additional identified but not yet gazetted areas, both sets of activities including a wide stakeholder involvement to assure sustainability.

The project is also meshed with other GEF planned interventions, notably the pipeline project to define sustainable financing mechanisms for protected areas.

4. Regional context

The design and implementation of the project has benefited and will continue to benefit from a wide range of similar interventions in the Upper Guinea Forest Ecosystem, of which SL is a part, and from further afield (example of similar projects are given in Project brief p.16). The specific focus of the project on priority sites is necessary to pilot integrated conservation management approaches in depth in the country context, and Reviewer supports the decision not to take the wider 19 parallel project approach suggested by the SL-NBSAP (Project brief p.18). The target areas are wholly in need of support and GEF intervention here assists with realization of the emerging national-level biodiversity conservation strategies, their mainstreaming into enhanced national, regional and local development planning and management for the Sierra Leonean ecosystem in a way that is sustainable and in line with national, regional Upper Guinea Forest Ecosystem and global biodiversity objectives and strategies. Lessons learned will assist with a broader mainstreaming of biodiversity considerations in other sectors and regions in Sierra Leone, the West Africa sub-region and other countries.

5. Replicability of the project

A key feature of the project is to develop capacity at national level (within NaCEF) that will then filter down to the entire forest and protected area estate under this executive authority. GEF action thus helps build a common vision and common approaches for the management of the natural resources of SL. As stated, this common vision is based on the idea that the environmental conservation is part of a wider approach that permits industrial development, recreation, mining and other activities without necessarily compromising environment and biodiversity conservation goals. Specific implementation approaches developed by GEF (e.g. for capacity building and for management of protected areas and community integration in planning and management) will be clearly replicable to other protected areas in SL and provide lessons learned for wider uptake. Any success developing local-level community-driven planning

processes that link delivery of donor project and Government programme benefits around protected areas with achievement of conservation objectives for these areas would be particularly important to replicate. Reviewer considers attention paid to replicability (Project brief p. 23-24) as appropriate.

6. Sustainability of the project

Continuation of political stability and introduction of good governance are of course essential for project sustainability (noted in project risks, Project brief p.24), but the indications are favourable that these overriding conditions will be met and the commitment of GoSL to the project is apparent.

A key constraint at project start-up is that the appointed executive authority, NaCEF, is itself currently non-functional, and revision of policy agendas will need to wait until the executive authority is fully established and provided with the necessary capacity.⁵ The expected phasing of policy revision to create the framework for project sustainability is not given (Project brief p.47), but the timing of monitorable achievements for establishment of an enabling framework (Policy brief p.42) are probably realistic and hopefully will be completed around project mid-term.

Reviewer considers the project pays good attention to establishing the linkages between conservation and development planning that will be necessary for sustainable project impacts beyond the project lifetime (Project brief p.23), notably a high degree of stakeholder ownership. However, the sustainability of implementation of management plans for protected areas and particularly their continued support by communities might be questioned. A sustainable financing strategy is expected, as mentioned earlier, but the capacity of this financing also to top up the buffer zone community funds over a longer period might be questioned – if not possible through PA income generation, this will be dependent to some extent on post-project external (national or international) support.

Secondary issues

7. Linkage to other focal areas

Project outcomes related to community engagement are in line with OP-12 (Integrated Approach to Ecosystem Management), and OP-15 (Sustainable Land Management). A further link is expected to OP-13 (Conservation and Sustainable Use of Biological Diversity Important to Agriculture). In general terms, the project will also contribute to biodiversity strategic priorities BD-4 (Generation and Dissemination of Best Practices for Addressing Current and Emerging Biodiversity Issues) and BD-2 (Cross-cutting Capacity Building). Addressing the catastrophic decline of SLs forests, currently reduced to around 5% of their former area, will also indirectly address issues of land degradation and local climate change.

8. Linkage to other programmes and action plans at the regional or sub-regional level

GEF interventions apply tools and lessons learned from previous GEF and other projects at national level and elsewhere (e.g. use of the Biodiversity Tracking Tool, Project brief Annex 18). Site selection and overall focus results from a critical analysis of the NBSAP, and, more

⁵ Reviewer notes and commends GoSL commitment to get the NaCEF at least on some sort of operational level by 28 February 2006 (*Aide Memoire, Project Preparation Mission, February 2006*).

specifically, activities proposed under the ‘Cross-sectoral Action Plan’ in the NBSAP will be reviewed and implemented by the GEF intervention where appropriate.

The project is meshed within current GoSL programmes for decentralization and represents an important pilot for the transfer of responsibilities related to planning, management and monitoring of ecosystems, biodiversity conservation and their mainstreaming opportunities in relevant production landscapes from national to regional and local level. Due attention is paid to other sectoral programmes including the emerging global focus on the P-E nexus and implications within SL.

9. Other beneficial or damaging environmental effects

[A detailed appraisal of environmental issues and potential environmental and social impacts are not yet included in the project proposal.]

The key issue for the project as a whole is the extent to which project benefits reach the communities who are most proximate to and who rely to the greatest extent on natural resources from the target protected areas. Successful execution of project capacity building initiatives, strengthened control of the protected areas and better enforcement of legislation could result in reduced access and potential hardship for already critically poor communities. The project clearly aims to support these communities through a variety of appropriate instruments, but may need to clarify at an early stage more precisely how these benefits will be delivered or facilitated (if Government programmes) by the project on an individual community basis. Experience from elsewhere is that it is sometimes hard to develop financial benefits for communities adjacent to protected areas at a level that compensate for a closure of access to valuable (if illegal) resources – although early establishment of fund instruments would certainly help to ameliorate this.

10. Degree of involvement of stakeholders in the project

The involvement of stakeholders in project design, aimed at ensuring that project goals meet local stakeholder needs, appears to have been quite complete. Reviewer considers that a high level of attention has been paid to ensuring that stakeholders from national to local level remain completely engaged and involved in project decision making and implementation. Fund mechanisms (setting of priorities and criteria, definition of board members, delivery of capacity building to manage funds) are not explained in detail, but are expected to ensure that fund benefits are shared equitably and with due attention to considerations of gender.

Reviewer notes and commends the intention of the project (Component 2.2) to focus on advocacy and the engagement of civil society as a whole and disadvantaged stakeholder groups in particular.

11. Capacity building aspects

The project pays considerable attention to capacity building which will be extremely complex due to the number of stakeholders involved and the need to start almost from point zero in many cases. Capacity building initiatives are clearly presented, however, and appear comprehensive. Reviewers only comment relating to GEF component would be that project should ensure adequate attention is paid to PA staff responsible for community liaison and deployment skills for PA guards. There is perhaps a concern that the project will succeed in reducing needs for resource exploitation by buffer zone communities, but will not necessarily address the issue of professional forest and wildlife exploiters coming into the protected areas from elsewhere. The

BZ communities may need to be actively engaged in assisting PA staff in controlling these pressures exerted from outside the target sites. Adequate attention should also be paid to this in developing the M&E system.

12. Innovativeness of the project

The innovativeness of the project lies in its intention to address the issue of integrating biodiversity conservation and protected area management within Government planning and decentralisation as it happens. This is an unusual opportunity to create an entire planning system (in effect a system of values) that pays due attention to integrating conservation criteria, as well as broader poverty-environment linkages, rather than to try to incorporate these elements into a planning system that has already been institutionalised and implemented. It includes capacity development and sensitisation of all stakeholders to understand and implement this integrated planning process. There is a potential for development of a quite remarkable holistic approach to conservation.

Of course, the main focus of the project is to respond to the biodiversity crisis in SL. Implementation methods for protected area management planning, monitoring systems and tools, systems for buffer zone community engagement, fund design and administration, etc., are well tested in the region. PA management planning models are not proposed in detail, but Reviewer would urge that these should take the opportunity to be innovative in addressing the issue of linkages with decentralised planning and financing processes, as these are rolled out at the local level, as well as in making best use of their high level of independence in terms of managing their own finances and establishing private-public partnerships (Project brief p.50). Devolving a high level of responsibility to the individual PAs is innovative, but could backfire unless there is a safety net of essential Government support.

Specific comments on Project Brief

p.7 Poverty reduction

The state of development of the SL-PRSP (complete, evaluated?) and the linkages with MDGs might be briefly outlined (especially promotion of gender aspects within all MDGs, not only within MDG3, which is a common failing of PRSPs). This is not the focus of this proposal but is an overriding feature of the project environment.

p.11 Key performance indicators

The third indicator, waterfowl numbers increasing, is not monitorable within the project framework, except at one proposed site (Yawri Bay).

p.20 Institutional and management arrangements

A legal basis should be aimed for whereby the protected area management committee has a direct responsibility, together with the PA, for developing and approving the PA/Buffer Zone management plan and submitting it to Government (rather than a purely advisory role). In the long-term, Government budget should be allocated for continuance of this wider stakeholder group.

p.40 Results framework and monitoring

The indicator '20% increase in wildlife numbers in selected PAs' is much too broad: perhaps '20% increase in selected key species' (i.e. threatened and/or easily monitored species) would be a better indicator.

The indicator 'Boundaries for **X PAs** demarcated and pillared by end PY03' seems optimistic, given the lack of consultative and legal structures, and the need to involve all stakeholders in an equitable manner.

p.41 ditto

'**Number of local community members** who have adopted more sustainable practices' is rather vague and should perhaps specify the more sustainable practices referred to.

RESPONSE TO STAP REVIEW

KEY ISSUES

Comment 1: Component 2.1. Potential activities and capacity building indicated under this component are justifiably kept extremely broad and there is a clear need to focus down with initial needs assessments at the individual PA level at an early stage of the project. Reviewer notes that this GEF intervention is aimed at a) urgent capacity building of NaCEF (Project brief p.50) as a prerequisite for more local level interventions (this doesn't really fit under this sub-component but is part of the logic), b) addressing immediate and urgent issues at the PA level as they are defined, and c) that GEF intends additional support to identify longer-term financing mechanisms – which is an entirely sensible approach.

Response: The creation and real on-the-ground management of protected area system requires adequate consideration of key stakeholders, particularly the human populations already living in or around these areas. Involving local people and other groups in the management of PAs is one way of addressing challenges that protected area managers face in converting paper protected areas into managed areas. Involvement and participation could manifest in two main forms: park managers sharing some of their functions, rights and responsibilities with key stakeholders and/or partnering with key actors including local institutions, thus improving the overall capacity for management. The project recognizes that the level of stakeholder engagement would differ depending on interests and capacities of the actors involved. Knowing this, various studies including an assessment of stakeholder capacities for PA management and conservation and sustainable use of wildlife and biodiversity have been completed using proceeds from the GEF PDF Block B Grant. These studies also focused on gap and initial needs analysis of key stakeholders at the national, regional, sub-regional (district council) and protected area levels for participatory management of the selected PAs. Capacity building efforts will include creating the legal capacity to establish the NaCEF and to manage these areas; providing stakeholders with skills in PA planning and management; managing risks and conflicts; establishing and providing skills in alternative dispute resolution mechanisms; creating and maintaining governance systems; providing skills in simple financial and procurement management, providing techniques for raising funds and support for protected area; providing skills and techniques for improving participation; providing skill in monitoring and evaluation as well as in communication skills.

Comment 2: Sub-component 2.2 is important in its focus on the engagement of civil society in the wider interventions of the project. A high priority here would be to develop the legal structure for communities to participate in site management and decision-making. Civil society structures such as the Ghana Rights and Voice Initiative could be referred to here, which lead to a potentially more powerful form of empowerment than forming a local NGO (such as a Site Support Group on the Birdlife model).

Response: In Annex 4, page 46 paragraph 2 the need to review and analyze gaps in existing frameworks for stakeholder participation, joint/co-management and distribution of benefits has been highlighted. The follow-up paragraph in the same Annex 4 talks about doing amendments, repeals and new drafting of policies, strategies and legislation. GEF funds will be used to develop legal and administrative mechanisms and instruments (memoranda of understandings, management agreements, etc) that will ensure and legalize complementary and more inclusive stakeholder participation at both national and PA level. Participation and partnership agreements should motivate complementarity in capacities, comparative advantages of actors involved and increase opportunities for financial sustainability. It will be highly important to ensure any such participation law is incorporated into the government's larger framework for decentralization. This project will benefit from Bolivia's experiences in co-management of protected area and lessons from the Ghana Rights and Voice Initiative (RAVI) in forest management and land administration. The experiences from the World Bank-financed Ghana Savanna Resource Management Project and the two GEF-supported Ghana High Forest Biodiversity Project and Northern Savanna Biodiversity Conservation Project show that local level structures could be strong and effective rallying and entry points for stakeholder participation and involvement in protected area management. This project will support the introduction of both types of engagement – the RAVI type and the use of community structures.

Comment 3: The Sub-component 2.3 concerns the establishment of a community fund that provides the leverage to establish trade-off agreements with local communities and thus help to define management regimes for protected areas and buffer zones. It is not clear if this fund supports, or meshes with, any integrated planning process for the rural community or whether it is essentially a stand-alone process than provides inputs into communities that have no decentralised planning or support structure. All grants under this fund will be environmentally appropriate, but they should go further and include an agreement clause reinforcing any community-level agreements made concerning a reduction of exploitative activities within the protected areas. As part of the funding structure, some form of participatory patrolling and monitoring in the buffer zone might be required, to discourage incursion from communities outside the buffer zone area who are not eligible for these support funds and may thus see a vacuum that can be exploited.

Response: The community fund is intended as a stand-alone process that is compensating communities for lost opportunities and helping them to wean off dependency (“safety net”) on the selected protected areas and providing them with income sources and means to improve their lives. All grants under this fund will be environmentally appropriate and recipients will be obliged under appropriate legal mechanisms to undertake activities that will not result in environmental degradation. Funds under Component 2.1 will be used to engage buffer zone communities in boundary cleaning, patrols and monitoring so as to maintain control over the PAs under their jurisdiction and keep colonizers out. The project will draw lessons and experiences from the ongoing GEF-supported Ghana High Forest Biodiversity Project and other similar projects within the region. The project will support the creation of PA level voluntary fire management squads who will be trained in bush fire control and prevention.

SUSTAINABILITY OF THE PROJECT

Comment 4: The Reviewer considers the project pays good attention to establishing the linkages between conservation and development planning that will be necessary for sustainable project impacts beyond the project lifetime (Project brief p.23), notably a high degree of stakeholder ownership. However, the sustainability of implementation of management plans for protected areas and particularly their continued support by communities might be questioned. A sustainable financing strategy is expected, as mentioned earlier, but the capacity of this financing also to top up the buffer zone community funds over a longer period might be questioned – if not possible through PA income generation, this will be dependent to some extent on post-project external (national or international) support.

Response: The sustainability of the project beyond its lifetime is dependent on the degree of stakeholder interest and ownership, particularly among the local population, district council and the national protected area authority. It also depends on the level of stakeholder participation and the nature of the financing mechanism that will be operating at a particular PA level. However, the level of stakeholder involvement and type of management arrangement will depend on interest and capacities of the actors, the willingness of the state to involve other actors and the legal and administrative mechanisms that exist. Management schemes may range from complete government control to alliances between government and other stakeholders like civil society and/or private sector to completely private management. The project will support the establishment of protected area management committees and development of joint/co-management schemes. These are expected to facilitate the development of cooperative relationships, trust, an increased commitment and support of stakeholders to protected area management. Co-management, particularly co-administration (a formal agreement between the state and a civil society institution like the Ghana RAVI to share the responsibilities for protected area management) will be expected to increase opportunities for financial sustainability and PA level budgetary agility as private resources become available. The Bolivian experience in the co-administration of seven PAs shows that co-administrators often provided complimentary support for community development. This is a good case for SL-WPBCP to draw lessons from. GEF funds will be used to promote nature-based tourism in potential protected areas and it is expected that part of revenues thereby generated will be used to preserve and manage PAs and associated biodiversity. However, it is important that co-administration agreements are adequately robust and include legal safeguard clauses that protect the interest of the state, given that PAs are a public interest in SL.

SECONDARY ISSUES

Capacity Building

Comment 5: The Reviewers only comment relating to GEF component would be that project should ensure adequate attention is paid to PA staff responsible for community liaison and deployment skills for PA guards. There is perhaps a concern that the project will succeed in reducing needs for resource exploitation by buffer zone communities, but will not necessarily address the issue of professional forest and wildlife exploiters coming into the protected areas from elsewhere. The BZ communities may need to be actively engaged in assisting PA staff in

controlling these pressures exerted from outside the target sites. Adequate attention should also be paid to this in developing the M&E system.

Response: The entire PA management structure in SL is weak and capacities for management are woefully inadequate. In this regard, GEF funds will be used to support the hiring and training of PA level personnel (Project Brief p. 48 and 49). Also at the national level, the national authority, NaCEF, established through a recent Presidential directive will be supported through legal capacity building, skills development and training (Project Brief p. 50). Project funds will be used to build relationships, engage and involve communities surrounding the selected PAs in boundary cleaning, patrolling and monitoring since community participation is important basis for solving the likely stream of external challenges such as colonization by people from outside the PAs. There is a specific reference in Annex 3 (Results Framework and Monitoring) to the number of co-management agreements signed with communities.

Innovativeness of the project:

Comment 6 - PA management planning models are not proposed in detail, but Reviewer would urge that these should take the opportunity to be innovative in addressing the issue of linkages with decentralised planning and financing processes, as these are rolled out at the local level, as well as in making best use of their high level of independence in terms of managing their own finances and establishing private-public partnerships (Project brief p.50). Devolving a high level of responsibility to the individual PAs is innovative, but could backfire unless there is a safety net of essential Government support.

Response: The project recognizes that the central authority in Freetown, PA level management structures and potential co-administrators of PAs do have serious capacity weaknesses in a number of areas. Full-scale devolution of management authority from the center to the protected area management level at this time and possibly during the lifetime of the project is not anticipated. Co-management will produce the environmental objectives when the central authority is strong and is fully ensuring implementation of certain key functions such as law enforcement, because this cannot be delegated under the current laws in SL. However, it is important that co-administration agreements are adequately robust and recognize the need to include legal safeguard clauses and safety nets that protect the interest of the state, given that PAs are a public interest in SL.

SPECIFIC COMMENTS IN THE BRIEF

Response: The points made by the reviewer have been made to clarify the specific concerns.

Additional Comments

Comments: Adequate monitoring and enforcement of linkages between project benefits, and community conformance to project rules, would appear to be rather crucial at early stages of the project, but global experience to date is quite difficult to develop a linkage mechanism between

receiving project benefits and monitoring/enforcement of rules, and for different parties to agree on such a mechanism.

Response: A participatory M&E system for the project will be developed before Board Approval Date and it will make suggestions on how to deal with the actual substance and structures that need to be established to follow up on how benefits accruing are shared and how these also have a bearing on compliance levels as they relate agreed rules. GEF Grant funds will be used to sensitize and build capacities to monitor and enforce rules. The details of how to enforce project rules will be worked out in the early stages of project implementation.

Comments: The project is fully consistent with GEF Operational Programs Op-1, OP-2 and OP-3; may be also OP-4 in the case of Loma Mountains site.

Responses: The omission of OP-4 in the draft Brief has been corrected (See A3D of the Brief).

Comment: A key constraints at project start-up is that the appointed executive authority, NaCEF, is itself currently non-functional, and revision of policy agendas will need to wait until the executive authority is fully established and provided with the necessary capacity.

Response: Even while preparing this project NaCEF has requested some support from UNDP and EU to jump-start building its capacity. GEF Grant funds under this project will be used to strengthen vigorously capacities at NaCEF and PA level. NaCEF will seek partnerships and collaborations with and request technical assistance from both local and international organizations and civil society agencies to help in implementing activities it doesn't have the capacity to deliver. Particularly with thenrevisions of institutional and policy frameworks NaCEF will need so much external support which the project will finance.

Comment: Fund mechanisms are not explained in detail, but are expected to ensure that fund benefits are shared equally and with due attention to considerations of gender.

Response: The modalities and manual for operating the proposed Community Investment Fund (which has been elaborated further in Annex 4 of the Brief) will be formulated prior to actual disbursement in PY01.

Comment: A detailed appraisal of environmental issues and potential environmental and social impacts are not yet included in the project proposal.

Response: Draft social and environmental assessments reports and a resettlement policy framework have been developed and under review by the Bank. Results will be incorporated into the Brief before or at Appraisal.

Comment: Degree of involvement of stakeholders in the project.

Response: Particularly communities and chiefdoms were well informed and consulted during the conceptualization and formulation stages of the project. Series of meetings were held at district councils and within chiefdoms to educate stakeholders and to take feedbacks and inputs, particularly with regard to indigenous knowledge and practices. The project has also developed a Stakeholder Participation Plan that will be integrated into the project and financed with GEF Grant funds under Components 2 and 3.

Specific comments on Project Brief

Comment: Poverty reduction.

Response: Linkages have been struck in section A1B and Annex 1 of the Brief.

Comment: Key performance indicators in Results framework and Monitoring Plan

Response: They have been revised and made more sharp and focused

Comment: Institutional and management arrangements

Response: This has been described under Annex 4 and one of the vital policy changes suggested is to formulate new policies and statutes that empower communities to fully participate in PA management and not to just provide advice. It is expected that any financing arrangement short, medium and long-term, whether from GoSL or from other sources such as endowments will finance activities related to buffer zone management since this is an integral part of PA management.

ANNEX 17: BIODIVERSITY TRACKING TOOL

SIERRA LEONE: Sierra Leone Wildlife Protection and Biodiversity Conservation

(Assessment of the 8 selected PAs using the Biodiversity Tracking Tools have been completed and referenced in Annex 12)

ANNEX 18: THE REPLICATION PLAN

SIERRA LEONE: Sierra Leone Wildlife Protection and Biodiversity Conservation

The Sierra Leone Wildlife Protection and Biodiversity Conservation Project (SL-WPBCP) is the first attempt by the GoSL to respond to recommendations made under the NBSAP. Annex 4 of the Project Brief outlines sets of activities that will be carried out during project implementation and mechanisms have been outlined as to how outcomes, results and lessons learned from this operation can be captured and shared with relevant stakeholders. The project will cover eight whole protected areas within five ecosystem types. SL-WPBCP will build capacities of key stakeholders (see Annex 19 for the Stakeholder Participation Plan) for the management of these eight selected protected areas and conservation and sustainable use of wildlife and biodiversity. Lessons learned and experiences gained during implementation of the project will be replicated and scaled up in other protected areas within and outside Sierra Leone successive years. GoSL is seeking about US\$16.6 million internal and external support for the initial phase of the 6-year project. The principal single financier is the Global Environment Facility (GEF), with a US\$5.0 million support. GoSL has leveraged co-financing from IDA, RSPB and other bilateral donors.

Given the level of focus of ensuring environmental sustainability in the government of Sierra Leone's Vision 2025 and consistency of the project with donor and Bank country support frameworks, the replicability of this operation can be rated high. Also, given GoSL, donors and Bank's growing preference for result-based interventions and budget support funding mechanisms, the operation will prove to be highly replicable. The operation offers major key stakeholders (Government, decentralized entities, private sector, civil society institutions and the donor community) opportunities under a flexible framework (the Bank's CAS and the SL-PRSC) linked to the Government's decentralization and growth acceleration process to actively participate and collaborate in natural resource management, particularly in PA management and biodiversity conservation.

The amount and level of replication of this operation will be dependent on the level of financial sustainability that could be guaranteed during and after the lifetime of this phase of the project. Financial sustainability (partial) will be achieved through opportunities that the project will provide for co-administration. Full-scale financial sustainability is unlikely in the short-term except, possibly, for sites where profitable ecotourism programmes could be quickly developed, which seems impossible. GEF Grant facility will leverage other sources of funding to establish sustainable long-term financing schemes such as conservation trust fund, user fees, taxes and charges, debt relief mechanisms, HIPC, private initiatives, etc, to finance ecologically benign natural resource and park management activities and compensate community efforts for sound environmental stewardship and protection of valuable ecological systems that provide global and local environmental benefits. Project funds will be used to support the completion of a study into what could constitute a sustainable and long-term financing mechanism for the network of PAs in SL. Based on recommendations from such a study, an ensemble of options suitable within the country context will be formulated including the legal instruments, operation manual, grant manual, fundraising strategy and investment strategy.

Increasing village-level income-generation and livelihood improvements sources and reducing dependency levels of rural population on PAs will likely lead to reinvigoration of PA health and revitalization of ecosystem functions. The project will build linkages to other initiatives particularly to rural finance programs and thereby connect rural people to rural credit

institutions. Putting monies into rural people's pockets will likely gear them up to re-invest in environmental sustainability of the areas at least peripheral to the PAs.

The operation has been designed based upon the experiences of the previous and ongoing GEF funded programs in countries outside Sierra Leone but within similar climatic and biogeographical zone. These include the Ghana High Forest Biodiversity Project, Ghana Northern Savanna Biodiversity Conservation Project, Guinea Coastal and Biodiversity Management Project, Gabon Strengthening Capacity for Managing National Parks and Biodiversity Project, Namibia Coastal Biodiversity Conservation and Management Project, Brazil Ecosystem Restoration of Riparian Forests in Sao Paulo Project, Brazil National Biodiversity Mainstreaming and Institutional Consolidation Project, Mauritania Community-based Watershed Management Project and B in Ghana. Nevertheless, actual replicability will ultimately depend on the success the operation will be able to show.

This project will focus on four out of the 8 priority PAs and of the 48 PAs identified in SL. Lessons and experience will be drawn for replication in the remaining PAs in SL and beyond in neighboring countries and other GEF and non-GEF supported projects where appropriate. To this effect, a replication plan will be prepared after 30 months and reviewed by all key stakeholders during the Project's mid-Term Review, 36 months after Board Approval Date. The basic elements of the replication plan will include a catalogue of lessons learnt and focusing on issues related to but not limited to institutional strengthening and capacity building, mainstreaming PA management into sub-regional and national development planning and decision-making processes, conservation education and conservation stewardship, collaboration and partnerships, co-management/co-administration as an alternative management option, user rights and tenure, mechanisms for knowledge, information and skills transfer, monitoring and evaluation systems sustainable long-term PA financing including budgetary allocations (expenditures and revenue streams), etc.

Replication will take place at the local and national scales throughout the life of the project. Perhaps most important among these is replication at the community scale. Ideas and information on project activities and lessons learned concerning community participation programs, alternative sources of income, innovative agricultural techniques, improvement of services, etc. will be quickly exchanged between communities on the periphery of a given protected area and facilitate replication. Best practices should also be quickly replicated at the national level, given that the project will establish/re-establish management programs simultaneously at several PAs across the country, and information on the success of initiatives and interventions will be readily exchanged between PAs and promote timely replication and project efficiency. The anticipated role of local NGOs in the SL-WPBCP who have extensive experience in public awareness and networking will also greatly enhance the exchange of information and knowledge between stakeholders and the replication of best practices at the local and national levels. Replication at the regional and international scales will be largely facilitated through the dissemination of knowledge and lessons learned in the SL-WPBCP at regional workshops, trainings, and site tours, regional and international meetings/conferences on PA management and biodiversity conservation, and a comprehensive and informative project website to be developed by NaCEF and partner NGOs.

A budget line will be established under the present project to draw lessons and gather experience for replication purposes.

Replication Strategy:

Component	Outcome	Replication Strategy
1. Strengthening Policy, Legislation and Institutional Frameworks for Ecosystem and PA Management and Conservation of Wildlife and Biodiversity	<ul style="list-style-type: none"> - Endorsement of legal status of NaCEF by parliament - An effective legal protection status for selected sites PAs (sites of high biodiversity) - Comprehensive legislation and institutional policies for use and exploitation of ecological systems and natural resources within PAs. - MOUs that define collaborative management of PAs by NaCEF, local communities and other stakeholders 	<ul style="list-style-type: none"> - the capacity of NaCEF to plan and implement projects in PA management, wildlife protection and biodiversity conservation in partnership with other GOs, NGOs, and local communities will be tested and strengthened by the Project and create the foundation for replication of good practices throughout SL; - frameworks for development of policies for PA management, wildlife protection, and biodiversity conservation by NaCEF will be flexible and allow for modifications/ameliorations based on lessons learned during the initial years of on-the-ground implementation of the SLWPBCP - NaCEF will create a knowledge management unit in coordination with local NGOs to assure the dissemination and exchange of ideas and lessons learned in the SL-WPBCP within government institutions, between project stakeholders (including the public sector), and between the project and national and international projects, programs, and organizations concerned with PA management and biodiversity conservation.
2. Improving Management of Selected PAs: 2.1 Site Management, Planning and Research Sustainable Funding for Long-Term PA Protection and Biodiversity Conservation	<ul style="list-style-type: none"> - Comprehensive management plans implemented at each PA in the system - Increase in abundance and diversity of wildlife and decrease in illegal human activity in PAs - Model(s) for long-term sustainable funding of PA management system identified - Increased capacity at local, district, and national levels in support of PA management, wildlife protection, and biodiversity conservation and sustainable use - Mainstreaming of PA management, wildlife protection and biodiversity 	<ul style="list-style-type: none"> - Lessons learned from recent management initiatives, community participation, and eco-tourism at Gola Reserves and Tiwai Island will be replicated in initial work plans for other PAs in the System. - Subsequent management plans for PAs developed by the SLWPBCP and based on community participation and development will serve as models for replication in other PAs in SL and the region. - Two PAs, Gola Reserves/Tiwai Island and OKNP, will serve as field demonstration sites for training on management procedures, infrastructure development, and community participation initiatives of the SLWPBCP. - Community development programs (CDP) led by the SLWPBCP at PAs will insure that workshops and consultations are held regularly for knowledge exchange and that lessons learned in PA management are mainstreamed into development planning at the local level and district levels –
2.2 Awareness Creation		

2.3 Creation of Alternative Sources of Livelihood – the Community Investment Fund

conservation into development planning and economic activities at the district and local levels

- empowerment of civil society, particularly local communities, to participate in and benefit from PA management, wildlife protection, and biodiversity conservation

- Dependencies of communities in the vicinities of PAs on unsustainable exploitation of natural resource reduced
- Alternatives sources of income and livelihood support systems developed and functional in communities around PAs

undoubtedly CDPs at certain PAs will advance early in the Project allow for replication of successful management initiatives at other PAs

- Activities of CDPs will allow for replication of best practices identified in the early stages of the SLWPBCP to be replicated throughout the PA system.

- National NGOs will play a major role in CDPs and public awareness initiatives to disseminate knowledge and promote replication of lessons learned concerning community participation in PA management, alternative livelihood opportunities, etc.

- NaCEF will establish a committee or unit dedicated to development of an international network of partners (donors, NGOs, GOs) to obtain and exchange information and lessons learned on mechanisms for sustainable funding of PA from which a suite of potential models for replication of this information in the SL PA system will be formulated
- existing initiative by RSPB to obtain long-term funding for the Gola Reserves will provide knowledge for identifying potential sources and mechanisms of long-term funding and hopefully a model for replication of lessons learned throughout the PA system in SL

- the CDPs at individual PAs, in cooperation with NGOs and development partners (e.g., UNDP, DFID, FAO) will organize workshops, consultations, trainings, site tours, etc. to disseminate of information and to promote and assist the replication of alternative actions and sources of income/livelihood in local communities on the peripheries of PAs.

ANNEX 19: STAKEHOLDER PARTICIPATION PLAN

SIERRA LEONE: Sierra Leone Wildlife Protection and Biodiversity Conservation

Stakeholder Participation Plan

Stakeholder	Capabilities/Current role	Participation in project	Possible conflicts / Mitigation strategy
National Commission on Environment and Forestry (NaCEF)	Management of the new PA network. A new organisation whose capacities will be developed during the course of this project.	Principal beneficiary and Lead implementing agency of the project. Coordination role for all park-related activities at national and site-levels	<p>Possible conflicts:</p> <ul style="list-style-type: none"> • Local community goals and aspirations may not be compatible with national park management objectives. • NaCEF: competition for responsibilities in managing buffer zones. <p>Mitigation strategy:</p> <ul style="list-style-type: none"> • Develop conflict resolution skills within NaCEF. • Encourage active participation of local communities in buffer zones in decision-making. • Ensure that economic spin-offs from national parks benefit local communities (employment, services, revenue sharing, etc.). • Monitor socio-economic parameters to feed into the national parks management planning process. • Ministry of Forest: Support to Technical Management committees that already in place at site-level; formal collaboration agreement to be attached to the Grant agreement. Will be monitored as part of the PSC and project supervision.
Ministry of Agriculture and Food Security (MAFS).	<ul style="list-style-type: none"> • Responsible for coordination and implementation of national agricultural policy • Responsible for agricultural and food production in the off-reserve landscapes, processing and 	MAFS is a key beneficiary of project and a member of the Project Steering Committee and PA level management committees. Will assist in agricultural land management since subsistence agriculture in zones peripheral to protected areas may be affected by PA management measures. Will ensure	<p>Possible conflicts:</p> <ul style="list-style-type: none"> • Conflicting interests with NaCEF, Ministry of Mining and Minerals, Ministry of Tourism and Culture, District Councils (particularly with regard to exploitation of minerals and timber). • Competition with NaCEF for responsibilities in

Stakeholder	Capabilities/Current role	Participation in project	Possible conflicts / Mitigation strategy
	marketing. <ul style="list-style-type: none"> Responsible for land management. Responsible for enforcement of laws and regulations. Current technical capacities are weak because of lack of resources and investment. 	consistency of the project with SL's agric. Policies and strategies. Coordination role for creation of new protected areas and enforcement role for protection of wildlife in production landscape	managing buffer zones. Mitigation strategy: <ul style="list-style-type: none"> Resolution of conflicting interests through dialogue within the framework of the multi-stakeholder Project Steering Committee. Establishment of MOUs
Ministry of Tourism and Culture	<ul style="list-style-type: none"> Responsible for coordination and implementation of national tourism and cultural policy and programmes Responsible for the promotion of tourism and culture 	Play a critical role in determining tourism potential of selected PAs. Coordinate and facilitate the development of tourism and community-based nature tourism in the PAs	Possible conflicts: <ul style="list-style-type: none"> Competition with NaCEF for responsibilities in managing buffer zones Ensuring equitable distribution of "accruing" tourism benefits to NaCEF, district councils, private tourism operators and communities How to make tourism and conservation mutually supportive. Mitigation strategies: <ul style="list-style-type: none"> Resolution of conflicting interests through dialogue within the framework of the multi-stakeholder Project Steering Committee. Resolution of conflicts by establishing MOUs with NaCEF, district councils, private sector and communities
Njala University and Fourah Bay College.	<ul style="list-style-type: none"> Responsible for Training and Research. 	Key actors in the execution of activities under Component 1, 2, & 3.	Possible conflicts: Competition for job could create conflicts among the two universities Mitigation strategies <ul style="list-style-type: none"> Make competition for jobs as transparent as possible Sign MOUs
Chiefdoms and Local communities living in buffer zones of	<ul style="list-style-type: none"> Derive predominantly their livelihoods from subsistence agriculture crop 	Main target beneficiary group of the project. Expected to reap benefits through: <ul style="list-style-type: none"> Institutional capacity and skills raising 	Possible conflicts: <ul style="list-style-type: none"> Local community goals and aspirations may not be compatible with national park and wildlife

Stakeholder	Capabilities/Current role	Participation in project	Possible conflicts / Mitigation strategy
protected areas	<p>farming and livestock) and harvest of particularly non-timber forest products including wildlife, edible fruits, mushrooms, medicinal herbs. Products are harvested from within and outside PAs</p> <ul style="list-style-type: none"> • Could derive some income and benefit from employment in national parks and ecotourism activities. • Chiefs are traditionally the custodians of the lands and do command respect and authority from their subjects • Exhibit weak capacities (local associations and NGOs) often without voice. • Usually directly affected by PA management, protection of wildlife and conservation of biodiversity. 	<ul style="list-style-type: none"> • Creation of awareness • Creation of local employment and income-generating opportunities <p>Will be involved in participatory management and project monitoring initiatives as part of Components 2, 3 and 4. Will be involved in local consultations as part of Components 1, 2, 3 and 4.</p>	<p>management objectives.</p> <p>Mitigation strategy:</p> <ul style="list-style-type: none"> • Develop conflict resolution skills within NaCEF and at the PA management level • Inclusiveness is key. Encourage active participation of local communities in decision-making and PA management. Define roles and responsibilities for local communities • Where possible strengthen and work with existing local institutions and structures • Adopt and practice joint/collaborative management agreements for PA and wildlife management. • Ensure that economic spin-offs from national parks benefit local communities (employment, services, revenue sharing, etc.). • Monitor socio-economic parameters in surrounding communities and feed results into the national parks management planning process. • Make effort to address social and economic needs through this project or any other
Regional and District Councils	<ul style="list-style-type: none"> • Responsible for development planning for the regions and districts in general • Responsible for revenue generation and collection • Responsible for the implementation of regional and district level development plans • Minimally 	<ul style="list-style-type: none"> • Can provide strong support for project activities, particularly with respect to natural resource use by communities and enforcement of wildlife regulations. • Have an important role to play in terms of public awareness and outreach (hunting regulations, bushmeat, health issues, etc.). • Will be involved in project 	<p>Possible conflicts:</p> <ul style="list-style-type: none"> • Competition with NaCEF for responsibilities in managing development in periphery of PAs • District council goals and aspirations may not be compatible with national park and wildlife management objectives • Ensuring equitable distribution of “accruing” tourism benefits to NaCEF, district councils, private

Stakeholder	Capabilities/Current role	Participation in project	Possible conflicts / Mitigation strategy
	<p>responsible for the implementation of forestry and wildlife regulations.</p>	<p>management at the PA level through the park-level multi-stakeholders Technical Management Committees.</p> <ul style="list-style-type: none"> • Will also be involved in local consultations as part of Components 2, 3 and 4. 	<p>tourism operators and communities.</p> <p>Mitigation strategy:</p> <ul style="list-style-type: none"> • NaCEF to deepen dialogue and consultation with district councils • Ensure transparency and peer pressure by involving all stakeholders (local communities, authorities, private sector) in wildlife management collaborative agreements • Resolution of conflicts by establishing MOUs with NaCEF, district councils, private sector and communities • Develop upfront frameworks for benefit distribution
<p>Local opinion leaders and elites.</p>	<ul style="list-style-type: none"> • These are influential people who have vested interests in their region of origin, but who are often not permanently resident there. • These may include politicians, teachers, nurses and midwives, village catechist and Islamic clergies, church elders, earth priests and priestesses, businessman/woman 	<ul style="list-style-type: none"> • Likely to champion and support project interventions if consulted early and sensitized. • Given often their strong influence over local resident populations could assist to mobilize community support and involvement. • Their buy-in is key for success of component 2, 3 and 4. 	<p>Possible conflicts:</p> <ul style="list-style-type: none"> • May have interests in natural resource harvest and trading which conflict with project objectives. • May feel threatened of breakdown of power base and authority <p>Mitigation strategy:</p> <ul style="list-style-type: none"> • Ensure implication of elites in local consultation structures established by the project. • If possible place responsibilities on them, but avoid hijack of processes
<p>Private sector (Extractive industry including oil, gold, diamond and other minerals)</p>	<ul style="list-style-type: none"> • Licensed to conduct exploitation, exploration and prospecting work in PAs or in buffer zones • One of the most important employers in oil/mineral-rich rural areas 	<ul style="list-style-type: none"> • Their operations have direct and indirect impacts on the integrity and status of PAs. • Given their financial resources extractive industries have the potential to be key players in sustainable funding mechanisms for the PA networks. They will be 	<p>Possible conflicts:</p> <ul style="list-style-type: none"> • Income generating focus of business may conflict with conservation goals. <p>Mitigation strategy:</p> <ul style="list-style-type: none"> • Active participation in decision making and monitoring processes. • NaCEF to enforce country environmental management

Stakeholder	Capabilities/Current role	Participation in project	Possible conflicts / Mitigation strategy
	<ul style="list-style-type: none"> • Their operations are usually conducted on unsustainable basis, particularly the illegal artesinal operators. • They generally lack expertise in PA, forest and wildlife management. • Their activities impact adversely on PA, wildlife and biodiversity management 	involved in particularly Components 1 and 2 of the project.	<p>systems</p> <ul style="list-style-type: none"> • Deepen awareness creation and educate extractive companies
Logging/timber firms	<ul style="list-style-type: none"> • Commercial timbering in few forested areas within and outside of PAs. • One of the most important employers in timber-populated rural areas. • Their operations are usually conducted on unsustainable basis, particularly the illegal chainsaw operators. • While they may have expertise in forest management in its limited sense, logging companies generally lack expertise in wildlife management. • Their activities impact adversely on biodiversity management 	<ul style="list-style-type: none"> • Given their financial resources, logging companies have the potential to be key players in sustainable funding mechanisms for the PA networks. They will be involved in particularly Components 1 and 2 of the project. • Logging companies are the main target group of component 2 which aims to enforce PA management and sustainable forest and wildlife management plans. 	<p>Possible conflicts:</p> <ul style="list-style-type: none"> • Income generating focus of business may conflict with conservation goals. <p>Mitigation strategy:</p> <ul style="list-style-type: none"> • Ensure active participation in decision making and monitoring processes. • Deepen consultation and awareness levels • Demonstrate consumptive and non-consumptive gains of conservation to logging firms
Tourism and hospitality industry operators	<ul style="list-style-type: none"> • This group of stakeholders could undertake nature-based tourism activities (wildlife viewing, sport fishing) in the PAs. • They create source of rural employment 	<ul style="list-style-type: none"> • Private tourist operators have much to gain from improved management of the PAs and national parks where they operate because improved protection would lead to improved wildlife viewing possibilities 	<p>Possible conflicts:</p> <ul style="list-style-type: none"> • Income-generating focus of tourist operations may conflict with conservation goals <p>Mitigation strategy:</p> <ul style="list-style-type: none"> • Active participation in decision making and

Stakeholder	Capabilities/Current role	Participation in project	Possible conflicts / Mitigation strategy
	<p>in local communities.</p> <ul style="list-style-type: none"> Operators may contribute financially for long-term financing of PA management. 	<ul style="list-style-type: none"> Operators could contribute toward long term investment for PA management Group will be involved in Component 3. 	<p>monitoring processes.</p> <ul style="list-style-type: none"> NaCEF to enforce country environmental management systems Deepen awareness creation and educate tourism and hospitality companies. NaCEF to sign MOUs with operators to ensure their operations are mutually-supportive
<p>International conservation NGOs (including RSPB, WWF, WCS, CI)</p>	<ul style="list-style-type: none"> Fund and implement conservation and research programs in PAs, national parks and buffer zones. Contribute to capacity building and transfer of competences. CI and WWF have long term presence in SL through CEPF. RSPB is currently supporting the Gola Forest Conservation Concession Initiative 	<p>Service providers for:</p> <ul style="list-style-type: none"> Co-management and implementation of project activities. Involved in Components 1, 2, 3 and 4 of the project including training and transfer of knowledge to national institutions. 	<p>Possible conflicts:</p> <ul style="list-style-type: none"> Inadequate cooperation between NGO and other stakeholders <p>Mitigation strategy:</p> <ul style="list-style-type: none"> Joint participation in decision making and monitoring of project implementation. Deepen consultation and collaboration Build synergies
<p>Local environmental NGOs (ENFORAC, CSSL, EFA, etc)</p>	<ul style="list-style-type: none"> Usually their operations are funded by international donors and NGOs. Interests have been traditionally advocacy. Lately more and more are getting involved in implementation of project activities Implement conservation and research programs in PAs, national parks and buffer zones.. 	<ul style="list-style-type: none"> Key player in community mobilization, outreach and education Will assist in focus groups' discussions Will assist in co-management and implementation of project activities. 	<p>Possible conflicts:</p> <ul style="list-style-type: none"> Inadequate cooperation between NGO and other stakeholders <p>Mitigation strategy:</p> <ul style="list-style-type: none"> Joint participation in decision making and monitoring of project implementation. Deepen consultation and collaboration. Build synergies between this projects and others run by NGOs Sign MOUs with NGOs for co-management of PAs Contract out to NGOs specific activities, given their comparative competences

ANNEX 20: DESCRIPTION OF SELECTED PROTECTED AREAS

SIERRA LEONE: Sierra Leone Wildlife Protection and Biodiversity Conservation

1. Introduction

1a. Background:

There are approximately 48 forest reserves and conservation areas in Sierra Leone, most of which are inadequately protected and managed. As at present, only two protected areas have been elevated to the status of national park and wildlife sanctuary, and these are Outamba Kilimi National Park (OKNP) and Tiwai Wildlife Sanctuary (TWS), respectively, both of which fulfill the IUCN classification system. Several protected areas have been “proposed” as national parks, game reserves, etc. See Appendix 1 to this annex.

Sierra Leone’s rich biological diversity is reflective of the categories of existing ecosystems. The flora and fauna are impressive and consists of wild life and domesticated species. The species richness and diversity had been recognized since colonial times and are distributed in various forest reserves, protected areas and conservation areas.

Five ecosystem types have been identified in Sierra Leone. These are (1) Lowland rainforest, (2) savanna, (3) montane, (4) wetlands (freshwater, inland valley and mangrove) and (5) marine ecosystems. With the exception of the marine ecosystem in its strictest sense, the other ecosystem types are all represented within the protected area system of Sierra Leone. Currently, Sierra Leone has 11 protected areas with moist forest formations (closed moist and semi-deciduous) within their boundaries. Three of these protected areas have entirely moist evergreen forest and include two strict nature reserves (Gola North and Gola East) and one proposed national park (Western Area forest reserve). Kangari Hills in central Sierra Leone is made up of semi-deciduous forest. Other protected areas with some moist forests within their boundaries are Lake Sonfon, Loma Mountains, Kambui Hills, Dodo Forests, Nimini Hills, Yawri Bay and Tingi Hills (Allan 1990, Harcourt et al. 1992). Protected areas with both moist and semi-deciduous forests have an estimated land area of just over 339 km² (Harcourt et al.1992). The wetland ecosystem occupies the largest land area, with numerous “proposed” protected areas than the other ecosystem types. The marine ecosystem has a limited protected area known as Inshore Exclusion Zone (IEZ).

1b. Prioritization and selection of Targeted sites

After a careful analysis of its natural heritage, which included an in depth study of the potential threats and causes (Annex 22) to environmental degradation as well as socio-economic and ecological significance of the protected area system in the country, the government of Sierra Leone has selected eight of the protected areas for support. This work was done under the auspices of the UNDP-financed National Biodiversity Strategy and Action Plan (NBSAP) in the early 2000s.

The methodology used for prioritization of these 8 sites has combined lessons learnt from approaches used by Birdlife International’s African partners to identify a list of priority IBA sites for conservation, the Conservation International hotspots and the World Wildlife Fund ecoregion approach. The method combined objectivity and practicality to

categorise level of importance of PAs based primarily on their biological entity, representative habitats, ecological function and threat status. A quantitative approach has been employed wherein scores are assigned to sites based on their relative importance to a particular variable. The variables have been carefully selected and these constituted the set criteria used in assessing the potential of each PA as outlined below (Table 1). Of the eight identified sites, GEF funds will support four (4) Protected Areas with a total area of 249,588ha, representing 3 main ecosystem types: The Western Area Peninsula Forest (17,688ha of remnant moist closed forest, representing the westernmost in the Upper Guinea Forest Block, established as forest reserve in 1916 and re-gazetted in 1973 as a National Park); The Gola Blocks of Forests (76,100ha tract of closed canopy, lowland rain forests; tropical wet evergreen to moist-semideciduous closed forest vegetation type, established as forest reserve in 1926 and 1930) and Tiwai Island Forest (1,200ha rainforest, established in 1987 as Game Sanctuary); the Outamba-Kilimi (110,900ha savanna vegetation type, gazetted in 1995 as National Park); and the forest complex of the Loma Mountains (33,201ha montane ecosystem type, gazetted as National Park in 1973) and Tingi Hills (10,519ha montane ecosystem type, gazetted in 1973 as Game Reserve).

Table 1: Criteria used for prioritization of PAs

Criteria	Natural Resource Quality
Criterion 1	The species diversity, threatened and charismatic species
Criterion 2	Representativeness of PA (vegetation types)
Criterion 3	The level of protection (legal status)
Criterion 4	Critical function of the PA – water catchments, river sources etc.
Criterion 5	Severity and category of threats facing the PAs
Criterion 6	Gaps in knowledge and socio-economic importance of the PA

Explanation of criteria

Criterion 1: Species diversity, number of threatened and endemic species and charisma based on species of national and international conservation concern.

This criterion has only considered bird and mammal diversity simply because these species in many instances serve as indicators of the biodiversity status of a site. Because of the very high level of overlap between globally threatened species and endemic species, only the former has been used in this case as about 90% of the globally threatened species found in Sierra Leone are also endemic to West Africa.

Criterion 1.1: Species of Global Conservation Significance (including rare, threatened and endangered)

The scores applied in this category are based on the global status (IUCN, 2000) of the species found in the PAs. The highest score of 3 is assigned to species that are endangered (En) globally; the score of 2 is assigned to species that are vulnerable; and the least score of 1 is assigned to species that are near threatened. Population status has not been considered because of lack of reliable information. The final score given to a site would depend on the number of species in each category of status found in the PA.

Criterion 1.2 - Distribution of flagship species in each protected area

This sub category takes into cognizance the fact that species may be globally threatened but some (not necessarily globally threatened ones) are of national significance. The scores of 3 is applied uniformly across the board on the consideration that all of them are of the same national importance. What distinguishes PAs in this regard is the number of flagship they hold. The list of flagship may not be exhaustive, but it is based on information that is currently available.

Criterion 2 - Representativeness of PA (vegetation/habitat types)

This category refers to the extent to which a site contains the different vegetation types in the country. The level of uniqueness of the vegetation determines the score assign to the vegetation. A site would rank high if it contains a variety of habitats or contain a few of the most critical vegetation types in the country.

Criterion 3 – Critical function of the PA

The critical function of PAs has been considered based on observations and information generated during field visits to PAS. These functions range from ecological to resource acquisition by adjacent communities

Criterion 4 – Legal status of PAs

The legal status applied here is based on national legislations on the protected area system in Sierra Leone. Scoring has been based on the relative importance of the legal status the site have. Some sites have equal ranking due to the nature of the legislations they have.

Criterion 5 - Severity and category of threats facing the PA

Threats are the most important factors as far as biodiversity conservation is concerned. A site would certainly need little or no conservation action if there are no threats to it. Therefore threats have been given the highest importance because they are the most important factors to biodiversity conservation. Most of the threats identified in this study are anthropogenic or driven by anthropogenic influence. For example agriculture has been given the highest weighting because it clears the land of its natural vegetation and in most cases converts it into a monoculture; whereas pollution and exotic species are thought to cause the lowest damage to site as far as current findings are concerned.

Criterion 6 - Gaps in knowledge base and socio-economic importance of PA

The gaps in knowledge take into consideration the fact that the level of research that has been undertaken differs from site to site. This is important because the amount of data available prejudices the scores allocated to that site especially in terms of criteria that are

based on biological data. The socio-economic importance of the site has been determined by the number of communities adjacent to the site, the population of such communities and the level of dependence of these communities on the resources of the PAs.

2. Biophysical Features of Selected Protected Areas

The GEF funds will support the four (4) following Protected Areas:

2.1 Western Area Peninsula Forest (WAPF)

General Site Description: The WAPF (central coordinates 8° 23'N and 13° 10'W) is located on the hills of the Western Area Peninsula, on the extreme western edge of the country, about 5 km south of the capital, Freetown. It occupies a narrow chain of hills approximately 37 km long and 14 km wide, with a range of peaks, the highest being Picket Hill in the south, which rises to about 900m. It forms the only place in West Africa where a mountain range occurs near the coast. A thin coastal strip lines the peninsula to the north, west and south. Freetown (population in excess of 1.5 million) occupies the northern end and numerous small settlements are found along the roads leading from the capital towards the reserve.

This forest reserve forms the only remnant of moist closed forest remaining in western Sierra Leone (and probably the westernmost in the Upper Guinea forest block). Between 150 m and 900 m the hills are covered by closed moist forest, whilst along the coastal strip, the forest vegetation is interrupted by laterite plains covered by natural grassland. The relief is generally fairly steep and the hills are drained by a number of rocky permanent or seasonally flowing streams. The reserve supports two major reservoirs, the Guma Valley and Congo dams, which supply water to Freetown and other communities surrounding the peninsula.

Generally the Freetown Peninsula experiences some of the heaviest rainfall in the country with annual rainfall ranging from 3000 - 7000 mm. Mean daily temperatures vary from 25-30°C in the dry season and 22-27°C in the rainy season. Relative humidity at 1500h varies between 45% and 80% annually. The WAPF occurs on an exposed part of a large igneous intrusive Precambrian body of layered basic and ultra basic gabbros.

Access and Facilities: The reserve is within 5 km of the centre of the capital Freetown. A motorable road, most portions of which had recently been reconstructed, runs right around the reserve, with a number of feeder roads and a few trails within reserve zones. Hotels and beach bars are found on extensive scenic beaches around the coastal areas of the peninsula. The Guma Trail, starting from the Guma dam, is the most frequently used by visitors and provides some opportunities for watching birds and wildlife. Yawri Bay on the southern coast and Sierra Leone River estuary on the northern coast, are within 40km and 10km respectively.

Biodiversity of the Area

Flora: No comprehensive botanical survey for the WAPF has been undertaken. However, Okoni-Williams (2003) recorded 53 tree species and 47 shrubs species during a survey of sample plots in all eight constituent reserves. Among the tree species recorded are valued timber species including *Heritiera utilis*, *Phyllocosmos africanus*, *Parinari excelsa* and *Xylopiya quintasi*. These species are generally scarce and can only be found in less disturbed areas of the reserve; *Terminalia ivoriensis*, which is the most priced timber species in the WAPF was not recorded in the study. This study however, recorded *Heretira utilis*, *Daniela thurifera* and *Chorophora excelsa* as dominant tree species in canopy and *Maranthes excelsa*, *Xylopiya rubescense*.

The species composition of the secondary forest and forest regrowth differ significantly from that of the closed forest. Most common species encountered are *Musanga cercropioides*, *Albizzaia adianthiofora*, *Anthocliester nobilis*, *Daniella thurifera*, *Erythrina senegalensis*, *Phyllanthus discoideus*, *Fagara microphylla*, *Chlorophora regia*, *tarrietta utilis*, *Amphimas pterocerpoides*, *Chysophyllum sp*, *Lophira alata*, *Diallum guineensis*, *Uapaca guineensis* and *Anisophyllea laurina*.

Fauna: Over 50 species of mammals have been recorded, of which seven species are primates, five of which are threatened - Western chimpanzee (En), Red Colobus monkey (Vu), Black-and-White Colobus monkey, Sooty Mangabey (NT) and Diana monkey (Vu). Other threatened mammals include Leopard (Vu), Jentink's duiker (Vu), Black duiker (NT) and Maxwell duiker (NT). An endemic toad *Cardioglossus aureolli* also occurs.

A total of 374 species of birds including occasional vagrants and migrants that visit water bodies within the forest, have so far been recorded, following the work of Field in the 1960s and early 1970s, Ausden and Wood in 1990 and Thompson in 1992. Five species of global conservation concern occur: the White-necked rockfowl (Vu) and Green-tailed bristlebill (Vu), Yellow-casqued hornbill (NT), Turati's boubou (NT) and Rufous-winged illadopsis (NT). Four active colonies of White-necked rockfowl containing of eight nesting sites were discovered during a study of the ecology and breeding biology of this species (Thompson, 1993; Thompson, 1997).

Levels and Causes of Degradation: Many parts of the Western Area Peninsula continue to experience extensive and intensive deforestation from severe exploitation by illicit woodcutters, charcoal producers and stone miners. Visible evidences (degradation of perennial flows from naturally forested hills, which has been carefully stripped of its cover) can be seen from numerous extraction tracks leading up to the watershed. The forest has been cleared all the way along the mountain villages, leaving bare slopes, landslides (Charlotte Falls) and mud slips (at Leicester) as a result of very large-scale erosion, indicating the fragility of the slopes. Further landslides may be imminent considering the current extent of deforestation of hill slopes.

The extent of soil erosion on the hill slopes of WAPF is evident around the estuary of the Sierra Leone River, which is loaded with brown silt up to half a kilometer into the sea brought down by active erosion during heavy rains.

There are four main causes of degradation - increased land clearance for farms, new settlement, mining and illegal logging. Much of the forest in the interior of the reserve remains fairly pristine, presumably, because the steep slopes render these areas inaccessible. On the other hand most of the forest extensions and buffer zones outside the reserve have been degraded to secondary farm bush. This is mainly due to slash and burn farming which is widespread around the margins of the reserve.

Although prohibited by law in this reserve, hunting is intensive, and is carried out mainly by local inhabitants and people belonging to "hunting societies" in and around Freetown. About 35 such societies occur in Freetown alone and every village around the reserve has its own society (one or more). These societies operate year round and each group makes at least four expeditions to the reserve, with an estimated off take of more than 10 animals (displayed) at each time. This represents a lot of animals killed on a yearly basis. The leopard that inhabited this forest is now thought to be extinct.

Illegal cutting of timber, using chain-saw is presently increasing. Woodcutting for fuelwood and charcoal production has a major impact on the forest, especially on the more accessible slopes and areas close to Freetown and Tombo.

One of the major means of livelihood of the seaside villages around the peninsula is fishing and fish smoking, which is highly fuel wood consuming and contributing to the reduction in the density (and availability) of some species. A species like the *Uapaca guineensis* has almost been wiped out of the WAPF. It is feared that similar fate may befall the other 13 preferred fuelwood species found in this area.

Although platinum and gold mining have ceased in the WAPF, granite mining for export and stone quarrying for local housing construction is continuing.

Okoni-Williams (2003) estimate a 69% percent increase in urbanisation between 1986 and 2000. Increased rural-urban mobility has resulted in rising demand for shelter and hill slopes are being cleared at an alarming rate to create building sites as the city expands. The clearing of the hill slopes has led to increased soil erosion, leading to siltation of the shores of Freetown. This threatens the ecology of creeks and bays and even the natural harbour in the long run.

Housing construction on the hill slopes is expected to increase when the peninsula road presently under construction is completed.

Management and Conservation Status: The WAPF was declared a forest reserve in 1916 and gazetted a non-hunting forest reserve in 1973. The Forestry Department (FD) plans to manage some portions of the reserve as resource areas for ecotourism, fuelwood and timber, and the remaining closed forest as a strict nature reserve. The WAPF is made up of the core area, the Peninsula Forest Reserve (13926 ha) and several smaller forest reserve extensions that form separate units for management purposes: Freetown

Waterworks (1121 ha). Number Two (691 ha), Kent extension (637 ha), Fabaina (378 ha), John Obey (204 ha), Moku Hills (115 ha) and Waterloo (85 ha).

In the late 1980s and early 1990s the FD embarked on a fuelwood plantation programme as a step towards a sustainable fuelwood extraction system. Plantations to provide fuel wood for Freetown and its environs with active community participation were established. It was expected that the communities would continue with this initiative at the expiration of the project, but this has not been so, instead the exploitation of the forest for fuel wood is now on the increase. During and after the civil war, illegal chain-saw operations increased dramatically. Local community groups, e.g. The Peninsular Action Group on Environment (PAGE), attempt to police and reduce this activity, but are often frustrated by high level influence wielded by the chain-saw operators.

Community Participation: The population of the inhabitants of all villages adjacent to the peninsula forest is estimated at 50,000. The demography of these villages has changed over the year, as a result of the war. Significant number of people migrated into these communities during the periods when Sierra Leone was one of the main tourist destinations in West Africa. The lands that form the buffer zones are owned by the communities and people from Freetown. Because of the lack of boundary marks, encroachment into reserve areas is common and widespread, especially in most of the extension forests of the reserve.

Edible seedpods of *Parkia biglobosa* and fruits of *Parinari excelsa* are some of the wild food resources obtained from the reserve by the communities. There is commercial extraction of the leaves and roots of trees like *Cassia sieberiana* and *Cassia siameae*, for medicinal products, which are useful in treating malaria and many other ailments. Oil from seeds of *Carapa procera* is used to treat stomach aches. Mansaray (2005) recorded 70 species of plants that are used for treatment of over 20 ailments. Over 25 species of plants were identified as being obtained directly from the forest and used as food species.

The Peninsular Action Group on Environment (PAGE), a member organisation of ENFORAC is a very active group working assiduously in the protection and conservation of the Reserve. PAGE is mainly composed of youths and young adults, who are enthusiastic in protecting and conserving the resources of the forest and environs. The organisation has 13 satellite groups in almost every village around the peninsula, and the activities and programmes of these groups are coordinated by a central coordination committee. PAGE has developed a three-year strategic plan and is registered under the Ministry of Social Welfare, Gender and Children's Affairs.

Existing Conservation Initiatives: A new forum of green actors, the Environmental Forum for Action (ENFORAC), has been established recently and it comprises a consortium of green actors from different groups in society including environmental NGOs, the University and media actors. ENFORAC is currently engaged in developing partnerships and programmes for the conservation of the WAPF. A number of consultations with stakeholders have been held and potential donors contacted for possible areas of funding and collaboration.

A chimpanzee rehabilitation centre has been established to provide semi-wild habitats for orphaned chimpanzees, which are victims of the pet trade. The long-term aim of the centre is to reintroduce these chimps into their natural environment and through awareness programmes reduce the incidence of pet trade for chimps.

Recommendations

- (i) A draft management plan developed by the CSSL exists and needs to be finalized and executed.
- (ii) The greenbelt and fuelwood plantation programmes around the reserve initiated by the FD, needs to be revisited and implemented as a matter of urgency to stem degradation.
- (iii) Sensitisation programmes, which have already been undertaken by the FD, CSSL and other environmental NGOs should not be restricted only to radio programmes but should be broadly community-based for effective awareness creation on the environmental hazards that may result from the destruction of the forest.
- (iv) Law enforcement should be made more effective by strengthening the Wildlife Conservation Branch (WCB) and improving links with the police. A police training programme developed by CSSL should be expanded to include community policing and both police and FD field officers should be empowered to effectively enforce forest protection regulations.
- (v) Efforts should be made to demarcate the boundaries of the reserve to prevent encroachment and illegal settlement. The lack of boundary marks has made it difficult for community people to distinguish between forest reserve and community land and encroachers have seized advantage of this loop hole to violate the rules indiscriminately.
- (vi) Opportunity exists at the Fourah Bay College Botanic reserve for the establishment of a living herbarium and seed bank of plant species that occur in the WAPF. Such an establishment would ensure the perpetual existence of a source for species that are threatened with extinction in the WAPF; if need be this may be replicated in other areas of the reserve.
- (vii) The ecotourism potential of the reserve should be developed within the context of a multipurpose management plan. Siaffa (2003) identified several potentials for ecotourism development in the reserve. The communities should be trained and encouraged to be involved in managing ecotourism activities. The Number Two community has developed a good scheme for tourism which provides good lessons for the replication of such schemes in other seaside villages. A viable ecotourism would certainly reduce the dependency of such communities on the forest for their living.

- (viii) Local community groups around the WAPF should be encouraged to participate and benefit from the management of the reserve.
- (ix) Part of the core areas of the Peninsula forest, incorporating catchment and sources of the water supply dams and Picathartes sites should be upgraded to a national park or a strict nature reserve.

2.2 Gola Forest

General Site Description: The Gola Forest is the largest tract of closed canopy, lowland rain forest in Sierra Leone. Three forest reserves comprise Gola Forest (Gola North, 45,800 ha; Gola East 22,800 ha; Gola West 6,200 ha). Gola Forests reserve is located in the Eastern and Southern Provinces, about 330km southeast of Freetown. Gola forest covers parts of the Gaura, Tunkia, Nomo, and Koya Chiefdoms in the Kenema District; Barri and Makpele Chiefdoms in the Pujehun District; and Malema Chiefdom in the Kailahun District. The forest forms part of Sierra Leone's border with the Republic of Liberia. Small areas of forest remain outside the reserves and connect the reserves to each other and to forests in Liberia. Tiwai Island, in the Moa River, west of Gola West forms part of the Gola forest protected Area system.

Gola North is fairly hilly and rugged with most land lying over 300m asl, the highest point being 475 m. The Mogbai is the main river draining Gola North and its catchment area lies at the centre of the reserve. This river discharges east into the River Mano, which runs along the border with Liberia. Gola East and Gola West, which are separated by the Mahoi River, are low lying with swampy areas and a few low hills (up to 150 m). Bagra Hill (330 m) is the highest point in Gola East. Mean annual rainfall is 3000mm, most of which falls between June and October. Seasonal temperature variations are relatively wide: daily values run between 18°C and 33°C in the dry season, and 21°C and 28°C in the wet season. Relative humidity at 1500h varies between 50% and 80% annually. The site is primarily founded on Precambrian Birimian Granite. Part of Gola North is on restricted Mano-Moa granulites.

Access and Facilities: Kenema, 38 km to the west, and Pujehun, 30 km to the south, are the nearest big towns through which different sections of the reserve can be accessed by road. Accommodation facilities in villages around the reserve are very basic. Electricity is currently lacking, but most of the villages have gravity water supply systems. Key areas of interest around the reserves are the Tiwai Island Game Sanctuary (part of the Gola Forest IBA about 10 km west of Gola West), and Lakes Mape and Mabesi (proposed IBAs), which are the largest lakes in the country and are about 55km southwest of Gola Forest. These places are also accessible by road.

Biodiversity of the Area

Fauna: Davies (1987) recorded 56 mammal species, of which nine are rare and threatened species. Six threatened primates species occur: Western Chimpanzee (En), Red Colobus Monkey (Vu), Black and White Colobus Monkey (NT), Olive Colobus (NT), Sooty Mangabay (NT) and Diana Monkey (Vu). Other mammals of conservation

concern include the Forest Elephant, Leopard (Vu), Zebra Duiker, Maxwell Duiker (NT), Jentink's Duiker (Vu), Black Duiker and (NT), Pigmy Hippopotamus (Vu), and the Forest Buffalo (NT).

A total of 274 species of birds have been recorded in the reserve, among which seven are globally threatened (Allport, 1989). Earlier, Field (1979) recorded 216 species including 169 forest dependent species, including the Gola Malimbe in the Gola forest between 1970 and 1976. Davies (1987) reported the presence of the rare White-breasted Guineafowl in the Gola. The forest is also known to hold eight globally threatened species, all of which, eight are restricted to the upper Guinea Forest block, and five near-threatened species. The forest is most certainly holds the largest population of the vulnerable White-necked Rockfowl and the endangered White-breasted Guineafowl in the country.

Flora: The vegetation cover in the Gola Forest Reserves is tropical wet evergreen to moist semi-deciduous closed forest in places. Inland swamp forests and fringing forests are common on the edge of large streams and river banks. Tree species include *Heritiera utilis* and *Cryptosephalum teraphyllum* mainly forming the canopy and *Erythrophleum ivorense*, *Lophira alata*, *Brachystegia leonensis* and *Didelotia idae* commonly occurring in the lower strata. The height of the canopy varies but is typically 30-35m with emergents up to 50-55m. The dominant species are *Brachystegia leonensis* and *Lophira alata*. The co-dominants include, *Heritiera utilis*, *Piptadeniastrum africanum*, *Cynometra leonensis*, *Klainedoxa gabonensis*, and the greagarios *Gilbertiodendron splendidum*, and *Parinari exelsa*. Among the understorey trees are *Protomegabaria stapfiana*, *Diopyros sp.*, *Funtumia sp.*, and *Brussaea occidentalis*.

The dominant species in the Gola North are *Antiaris Africana* and *Nesogordonia papaverifera*. The sub-dominants include *Alstonia boonei*, *Chlorofora regia*, *Canarium schweinfurthii*, *Pachypodantum staudia*, *Dialum guineense*, *Pycnanthus angoloesis*, *Anthonotha fragrans*, *Terminalia ivorenensis*. The understorey trees are *Xylopia quintasi*, *Octhocosmus Africana* and *Dideloti idea*.

The inland swamp forests are dominated by *Nauclea diderichii*, *Mitrygina stipulosa*, and *Raphia* palms. The sub-dominant trees include *Symphonia globulifera*, *Uapaca guineensis* and *Pterocarpus santalinoides*. The understorey is characterized by many species such as *Raphia vinefera*, *Calamus deeratus*, *Eromoapatha macrocarpa*, *anciatrophyllum seconiflorum*, and small trees; *Bridelia micrantha*, *Macaranga heudelotii* and *Cleistopholis patens*.

Heritiera/Lophira tree community dominates the flora of Gola Forest. Tree species include *Heritiera utilis* and *Cryptosephalum tetraphyllum* mainly forming the canopy and *Erythrophleum ivorense*, *Lophira alata*, *Brachystegia leonensis* and *Didelotia idea* commonly occurring in the lower strata.

Management and Conservation Status: The Gola North Forest Reserves was established and gazetted in 1930 as a timber production forest to supply both local and

international markets. Extensions to it were made from 1956 to 1963. The Gola East and Gola West Forest Reserves were gazetted in 1926. The Tiwai Island Game sanctuary was established and gazetted by MANR in 1987 under the Tiwai Island Management Committee. Land use and management plans were done for Tiwai Island Game sanctuary (1989a, 1989b) and that for the Gola (West, East and North) Forest Reserve was done under the Tropical Forestry Action Plan (TFAP, 1990). The conservation value of the Reserve has been variously documented (Cole, 1980; Davies, 1987; Davies and Palmer, 1989; Oates, 1989).

Levels and Causes of Degradation: Commercial logging is one of the most important long-term threats to the reserve. The Gola West Forest reserve was logged during 1960s and 1970s by a logging firm called SILETI. In Gola East logging was done between 1974 and 1984 when the concession was granted to another company, FIC, which continued logging up to 1991 when their operations were interrupted by the rebel incursions. Tiwai Island has never been logged but had been farmed many years ago (up to about 70 years ago). Now mature secondary forests exist on most of the Island. Most of Gola East and Gola North have never been logged due to the terrain.

In order to control extraction of timber, the Forestry Division adopted the Gola Management Plan in which a 29,000 ha area was defined for logging concessions with an extraction rate of 29,000 m³ (1 m³/ha). This low extraction rate and a minimum return time of 40 years is appropriate for ecologically sustainable timber production. Unlicensed pit and power sawing was widespread in forests outside the reserve and in some areas deep into the reserve. The logging problem is however, being addressed through the proposed conservation concession project, currently underway. The project seeks to purchase logging concession for the Gola forest reserve and use it for conservation. Woodcutting is done on a subsistent basis, mainly because of the distance to the nearest big towns.

Local hunters or "Kamajos" are highly respected groups within the communities surrounding the Gola forest. Hunting is an important additional source of food and income. Primates and duikers, irrespective of threat status, are the most commonly hunted animals, and the activity is particularly common in secondary growth close to villages. Liberian hunters who crossed the borders to hunt and smuggle out large quantities of bush meat increased hunting intensity. Hunting by miners may have a serious effect on forest mammals as it takes place deep in the forest, in areas where hunting is otherwise at a low intensity. The poor security situation in the area reduced hunting pressure during the civil war, but it is expected to increase again as people return to settlements around the forest, although the ongoing community arms collection is contributing significantly to reducing hunting pressure in and around the reserve.

Gold and diamond mining is common along stream/rivers traversing Gola forest. Miners dam small sections of streams and dig pits along the banks resulting in local disturbance to the ecology of the stream, reduce flow and increase turbidity down stream.

Community Participation: Population densities vary widely between the chiefdoms surrounding the Gola Reserves. The average density around Gola North is generally moderate. Guara chiefdom, Malema chiefdom, which makes up about 30 per cent of the

total area of the reserve, has a population of density of about 25 persons per sq km. Local changes in chieftdom populations particularly around the forest edge, have sometimes been significant due to the industrial logging in the 1960s, but lately due to displacement of people by the civil conflict. The surrounding area of Tiwai is sparsely populated with small rural settlements, although the Island itself carries no human settlement. The rebel war disrupted demographic patterns in the area and the population was temporarily reduced adjacent to the forest.

The prominent land use around the Golas and Tiwai is crop farming. Some productive areas are conserved for the dual purpose of timber production and the provision of shade for cash crops, particularly coffee and cocoa. The main subsistence crop of communities in this region is rice grown under rain fed conditions in swamps and upland cleared of forest or bush fallow. Since Tiwai became a Game Sanctuary, the local population of the surrounding chieftdoms have responded to recommendations pertaining to farming and hunting and altering the habitats. As a result, no new farms have been cleared or established since 1985 and hunting of wildlife and the cutting down of trees was prohibited.

Research had always formed an important activity in the reserve. Ecological surveys have been undertaken by researchers from overseas universities (Miami, London, Hunter, and other colleges from abroad) as well as Njala University College and Fourah Bay College, IUCN, RSPBP and ODA. The status of the primate species, and local peoples' use of the forest were studied by workers throughout the 1980s. Further studies have concentrated on the status of birds and forest elephants.

Existing Conservation Initiatives: The reserve as a whole (including Tiwai) has been proposed as a biosphere reserve and parts of Gola North and Gola East have been proposed as strict nature reserves. Conservation and management of Gola forest is now largely undertaken by the Gola Rain Forest Conservation Concession Programme through collaboration between FD and CSSL and funded by the RSPB. The first phase of the development of the project is ongoing, with funds up to UKP 1 million being spent on conducting biodiversity research, developing community-based income generation and development initiatives and building partnership with major stakeholders including the government and local communities. The long-term aim of the programme is to purchase the timber concession for conservation instead of extraction.

The Environmental Foundation for Africa is implementing a project for the conservation of the Tiwai Island, provide research facilities and develop income generating options for adjacent communities. A number of research work has been conducted on the ecology and species diversity of the island, including its mammal and bird diversity, hepato-fauna and plant communities.

Recommendations

- (i) The conservation concession for Gola forest reserves proposed by CSSL and RSPB must be vigorously pursued. The current project process must capitalise on the interest shown by the Forestry Division and the

local communities to ensure a participatory long-term involvement of these major stakeholders in the management of the reserves under the conservation concession initiative.

- (ii) The draft management plan for the Gola forest needs to be finalized and funding sought for its implementation under the Gola Rain Forest Conservation Concession Project. The management plan must include a regular monitoring programme.
- (iii) Within the context of a management plan, a buffer zone development programme should be established to ensure that local communities benefit from the exploitation of the forests.
- (iv) Mining regulations must be strictly enforced, especially within the proposed strict nature reserve areas, to protect river courses and banks and to ensure clean and unpolluted water supply to local communities and to protect the aquatic ecology.
- (v) The size of the Gola forest complex and the poor road access in the area means that large resource input is required to implement effective monitoring and patrolling programmes in the reserve complex.
- (vi) Considering the importance of the Gola forest reserve in Sierra Leone's biodiversity conservation proposals to designate Gola Forest a biosphere reserve and the establishment of a strict nature reserve within the forest complex should be vigorously pursued and finalised to promote recognition of its internationally important status.

2.3 Loma Mountains

General Site Description: Loma mountains forest reserve is found in the Nieni and Neya Chiefdoms in the Koinadugu District, Northern Province, about 346 km northeast of Freetown. The area of the reserve is remote and sparsely populated. The forest reserve is found on a range of hills of wide altitudinal range (400 - 1945m), the highest being Bintimani Mountain (1945m), which is the highest in West Africa, west of Cameroon. Many rivers drain the mountain range and two of Sierra Leone's major rivers have their sources from this region; the Sewa to the southwest and Rokel to the northwest. The Loma Mountain covers an area 33,201ha. The area records an annual rainfall of between 2286mm and 2540mm. Temperatures show slight variation with season; mean daily values lie between 15-32 °C in the dry season, and 19-26 °C in the wet season. Relative humidity at 1500h varies between 38% and 77% annually. The Loma mountain range is founded on Precambrian-Birimian granite that underlies half of the country. It comprises the northernmost outlying forest in Sierra Leone, and the largest area of montane forest in the country. Bintunani is the highest peak in West Africa. The reserve encompasses a wide range of habitats.

Access and Facilities: Loma Mountains is 346 km from Freetown. The nearest big towns to the reserve are Kabala, which is 100 km to the northeast and Bendugu, 40 km to the northwest. Roads leading to the Loma Mountain region are poor, though motorable with the use of strong vehicles. Yiffin, the chiefdom headquarters, which is about 25 km away, has a government clinic run by a dispenser, and there is a modern missionary compound nearby. The reserve and highest peak can be accessed through two routes: by a 10 km foot path from Kurubonla (about 70 km from Koidu town) to Sukurela or by a 25 km foot path from Yifin to Senekoro. The Tingi Hills forest reserve and Lake Sonfon are within 60 km and 40 km to the east and northeast respectively.

Biodiversity of the Area

Fauna: Ten species of primates and several other large mammal species occur at Loma Mountains. These include threatened primates such as Western Chimpanzee *Pan troglodytes verus* (En), Red Colobus Monkey *Poliocolobus badius* (Vu), Black and White Colobus Monkey (NT) and Sooty Mangabay (NT) and Diana Monkey *Cercopithecus diana*(En). Other threatened mammals are Forest Elephant *Loxodonta africana cyclotis* (En), Leopard *Panthera pardus* (Vu), Pigmy Hippopotamus *Hexaprodon liberiensis* (Vu), Water Chevrotain *Hyemanchus aquaticus* (NT), Maxwell Duiker *Cephalopus maxwelli* (NT) and Savanna Buffalo *Syncerus caffer* (NT), Jentink's Duiker *Cephalopus jentinki* (Vu), Black Duiker and *Cephalopus niger* (NT). The local people suspect the existence of lions, as they occasionally hear the roar of the animals, but this cannot be independently confirmed as there are myths surrounding the existence of the species.

The forest reserve is in one of the regions in Sierra Leone where the avian diversity has been widely studied. Granville (1961) recorded 60 species at Bintumani peak. Earlier, Bates (1930), Bannerman (1937) and Serle (1948) made surveys in the area. Atkinson *et. al.* (1992) recorded a total of 245 species of which five are globally threatened Lesser Kestrel (Vu), Rufous Fishing Owl (En), Yellow and Sierra Leone Prinia (Vu). The Rufous fishing Owl (Vu) and the Sierra Leone Prinia (Vu) occur in the gallery forests on the plateau and the White-necked Rockfowl (Vu) are found in this reserve.

Flora: The vegetation shows altitudinal variation in the species composition and vegetation types. The vegetation consists of montane evergreen forest up to 1680m, with montane grassland and gallery forest at the plateau and wooded savanna at lower altitudes. Plant life on the mountain is rich with several endemic species (Jaegar, 1983). A total of 1,576 plant species has been identified and includes 757 plant species and 135 families. Nine plant species are endemic and include *Afrotrilepis jaegeri*, *Digitaria phaeotricha* var. *patens*, *Dissotis sessilis*, *Gladiolus leonensis*, *Ledermanniella jaegeri*, *loudetia jaegeriana*, *Laxodera strigosa*, *Schizachyrium minutum* (*S. brevifolium*) and *Scleria monticola*. All four endemic plant families of Africa are also represented on the Loma Mountains. The endemic plant families with examples of representative species include *Triphyophyllum peltatum* (*Dioncophyllaceae*), *Octoknema borealis* (*Octoknemataceae*) *Bersama abyssinica* (*Melianthaceae*) and *Napoleona leonensis* and *Napoleona vogelii* (*Lechythidaceae*) *Eleve* (110 paleo-endemics including *Borreria macrantha*, *cyanotis lourensis*, *Droogmansia scaettaiana*, *Eriosema parviflorum*,

Eugenia pobegguinii, *hypolytrum cacuminum*, *Kotschya lutea*, *Mesanthemum aurantum*, *Rhytachne glabra*, *Vernonia nimbaensis* and *Xyris festucifolia* are known to occur (Cole, 1974)

Four plant associations have been identified on the Loma Mountains and include closed forest and Guinea savanna, sub-montane gallery forest, and montane grassland. The closed forest and Guinea savanna occur between 460-915m altitude and the commonest trees include *Uapaca togoensis*, *Cola latertia* var. *maclaudii*, *Parnari excelsa*, *Piptadeneastrum africanum* and *Canarium schweinfurthii*. Tree species such as *Guarea cedrata*, *Heritiera utilis* and *Triplochyton scleroxylon* are noted as growing out of their normal range (Jaeger, 1965). The understorey is dominated by species such as *Ochna membranacea*, *Caloncoba echinata* and *morus mesozygia*. The fire prone savanna is dominated by fire tolerant tree species such as *Lophira laceolata*, *Parkia biglobosa* and *Pterocarpus erinaceus*, which are interspersed with grass species such as *Anadelphia leptocoma*, *Andropogon tectorum* and *Hyparrhenia diplandra*.

The sub-montane shrub savanna occurs between 915-1700 m altitudes and is dominated by *Syzygium* sp., *kotschya ochreatea* var. *ochreatea*, *monechma depauperatum*, *Dissotis elliotii*, and *Dissotis fruticosa*. Two tree ferns, *Cyathea manniana* and *Cyathea dregei* are common in the gallery forest (Cole, 1968; Morton, 1986). The herbaceous and grass communities comprise *Ctenium newtonii*, *Loudetia kagerensis*, *Wedelia Africana* and pure stands of *Hyparrhenia chrysargyra* and *Rhytachne rottboelliodes*. Above the 1375m altitude, the shrub layer is made up of *Syzygium guineense* var. *macrocarpum*, *Tetracera alnifolia*, *canthium henriquesianum* and *Hibiscus noldeae* (Cole, 1968). Two secondary forest trees, *Harungana madagascariensis* and *Trema guineensis* together with *Samanea* sp. *Eupatorium africanum*, *vernonia purpurea* and *Hypolytrum cacuminum* occur on the summit of the mountains.

The montane grassland vegetation occurs at 1700m and is dominated by bulbs, rhizomes, tubers and succulent plants such as *Gladiolus* sp., *Solenostemum monostachyus* subspecies *latericola*, *Cyanotis longiflora*, *Vernonia jaegeri* and *Thesium tenuissimum* (Cole, 1968). At 1650m, *Scirpus briziformis*, *Panicum lindleyanum*, *Swertia manni*, *Neurotheca loeseloides*, *Bulbostylis* sp., *Polystachya bequaertii* and *Neurophila gentianoides*, *Pycneis reductus*, *Erioculon* sp., and *Xyris* sp are tiny herbs and sedges and occur on 3 –6m deep soils of the Bintumani peak. Mosses and lichen as well as the endemic orophyte, *Afrotrilepis jaegeri* colonise the bare rock surfaces of the steep slopes (Cole 1968; Jaeger, 1983).

The sub-montane gallery forests occur at 1700 m altitude. The dominant tree is *Parinari excelsa*. Other trees such as *Anthonotha macrophylla*, *pseudospondias microcarpa*, *Amphimas pterocarpoides*, *Daniella thurifera*, *Ficus congoensis*, *Terminalia ivorensis*, *Allanblackia floribunda* and *Musanga cerropiodes* are found. The tree ferns, *Cyathea camerooniana* and *Marattia fraxinea*, and bamboo, *Oxythenanthera abyssinica* occur at this altitude. The ground flora of the sub-montane gallery forest includes *Whitfieldia lateritia*, *Clematis grandifolia*, *sopubia ramose*, *Anisopappus africanum*, *Lonchitis* and *Ouratea squamosa*.

Management and Conservation Status: Government gazetted the area a forest reserve in 1930 and the status was upgraded to a non-hunting forest reserve in 1973. There is a plan by the FD to declare the reserve a national park, and this is supported by a wider proposal put forward to GEF, through the UNDP for the protection of biodiversity in Sierra Leone. There is no management plan for the reserve. The reserve lacks appropriate law enforcement as a result of poor access, low staffing and low staff morale. No clear-cut reserve boundary currently exists.

Levels and Causes of Degradation: Rotational bush fallow cultivation (mainly slash and burn) is carried out around the reserve and this causes serious damage and changes to the vegetation structure. The area mostly affected is around the Neya Chiefdom in the east of the reserve, especially hill slopes near to Sukurela, which is the closest village to the reserve. Few farms occur in gentler hill slopes on the western portions of the reserve.

Woodcutting is done on a moderate scale, mainly for domestic use and subsistent income, but may be intensified and cause long-term destruction if not controlled. However no commercial timber extraction is known to occur in the area. The main reason for the low level of logging and woodcutting is the inaccessibility of the area due to poor road network.

Hunting pressure is high around the reserve boundaries but hunters rarely penetrate far into the reserve. People based in forest edge communities do most of the hunting and there is evidence that the pressure is regulated through traditional controls. Primates are not usually hunted because of religious and cultural reasons; the trend appears to be changing now that there is increased religious and cultural diversity in the area.

The area attracts small numbers of local and foreign tourists, mainly to climb Mount Bintimani and to see wildlife within the reserve. Tourism presents a big opportunity for community development and alternative income generation for the local communities. There is a wealth of human resources in the young people of the villages surrounding the reserve and these could be tapped to service the tourist industry in the area.

Community Participation: The region where Loma Mountains is found use to be a remote and sparsely populated area. However, despite of the poor road network and poor social amenities, the population is now on the increase. There is evidence that the local community regulates local pressure on resources. There are also sustainable community land management practices in areas adjacent to the reserve, which include, for example, fire control and measures to encourage regrowth of fallow vegetation when temporary farms are abandoned. At the same time people aspire to improved roads and access to markets, health facilities and education. There is considerable potential for the biodiversity of the reserve to be protected, with the cooperation of local people and, at the same time, to enhance both local and government incomes through ecotourism. The responsibility for these actions falls initially on the WCB. Unfortunately though, no wildlife officer is currently posted to the area and therefore no official enforcement of the regulations of the forest reserve is being enforced.

Existing Conservation Initiatives: No existing conservation initiative for Loma Mountain forest reserve, except for the local and traditional method of control of resource exploitation. No management plan exists for the reserve.

Recommendations

- (vii) The Loma Mountain forest reserve offers one of the biggest potential for conservation through community participation and ecotourism development in northeast Sierra Leone. Therefore, a management plan for the reserve and surrounding areas needs to be developed, in consultation with, and taking account of the needs of local communities.
- (viii) The absence of forestry and wildlife officers in the area increases the chances for encroachment by farmers and hunters. Therefore as a matter of urgency, the FD and WCB should consider posting field staff to the area. These staff should be trained and provided with the requisite material resources for effective monitoring and patrolling.
- (ix) The reserve boundary needs to be negotiated with the local traditional leader and clearly demarcated to resolve the confusion over reserve boundaries.
- (x) The forest reserve has areas with unique vegetation types and impressive wildlife, especially on the montane regions of the reserve. Government should consider the proposal to upgrade the status of the entire reserve or these unique portions to a national park in the context of options to be identified by the management plan.

2.4 Tingi Hills

General Site Description: Tingi Hills Forest Reserve is located close to Sierra Leone's eastern border with the Republic of Guinea. It occurs between the Nieya Chiefdom, Koinadugu District, Northern Province and the Sando and Lei Chiefdoms in the Kono District, Eastern Province, about 470 km east of Freetown.

The Tingi Hills is the easternmost mountain range in Sierra Leone. The forest reserve includes areas encompassing the Sankan Birriwa massif, which has two peaks separated by a narrow gorge. Both peaks stand over 1800m, but the northernmost which is 1850m high, is the second highest in Sierra Leone. The terrain is generally rocky, with numerous streams, which have their sources from the massif. These streams are the tributaries of two major rivers in the country; the Mano River, which runs along the border with the Republic of Liberia and Sewa River.

Annual rainfall ranges from 2032mm – 2464 mm, although the period between January and March is normally dry. Mean daily temperatures are 30-35 °C during the dry season

and 14-20 °C during the rainy season. Relative humidity at 1500h runs between 35% and 90% annually. The Tingi Hills mountain range is founded on Precambrian-Birimian granite that underlies half of the country. There are also a few outcrops of metamorphic rocks and inselbergs.

Access and Facilities: The Tingi Hills Forest Reserve can be reached only by a motorable, unsurfaced road and track from Sefadu through Senehun, Yengadu and Kenewa, the nearest villages. Sefadu and Koidu, which are the nearest towns are 60 km and 70 km to the southwest respectively. The Sankan Birriwa can be seen from Nekoro, a village on the southern end of the reserve. The Loma Mountains forest reserve is within 40 km to the northwest of the Tingi. The scenery in the reserve can be described as breathtaking undulating mountain range. Pipe-borne water is not available, but a number of wells and streams provide water throughout the year. Campsites exist at ideal locations along the hill range into Sankan-Birriwa. There are a few tracks within the forest reserve normally used by local people and small mammals like antelopes.

Biodiversity of the Area

Fauna: The forest reserve is home to a variety of mammals including the following threatened primates: Western chimpanzee (En), Red Colobus Monkey (Vu), Black and White Colobus Monkey (NT) and Sooty Mangabay (NT). Other threatened mammals known from this site include a small population of Western Elephant (En), Pigmy Hippopotamus (Vu), and Savanna Buffalo (NT). Tingi Hills Forest Reserve has a fairly good diversity of both forest and savanna dependent species. Field (1974) recorded over 200 species of birds of birds, including two globally threatened species, the White-necked Picathartes (Vu) and Sierra Leone Prinia (Vu), and three near-threatened and one data dependent species. One of the globally threatened species, the Sierra Leone Prinia has a very restricted distribution even within its restricted range in the Upper Guinea Forest. The vulnerable White-necked Picathartes has been recorded in the remnants of the closed forest in the reserve. Tingi hills forest reserve is the only site where the data dependent Baumann's Greenbul has been recorded so far in Sierra Leone. The reserve accounts for 44.3% of the Guinea-Congo Biome restricted species recorded in Sierra Leone.

Flora: The vegetation of Tingi Hills is similar to that of the Loma Mountains. The vegetation is montane. At 309 – 915m it was predominantly moist semi-deciduous forest, but much of it has been reduced to derived savanna by fire and destructive farming practices. A mixture of shrubs and trees savanna occurs on the 915 – 1680 m plateau, which gradually changes into grass savanna above 1680m. Epiphytes are abundant in the sub-montane gallery forest up to 1700 m. Sedge flora interspersed by bear rocky outcast is found at the summit. Some of the common tree species are *Lophira alata*, *Lophira lanceolata*, *Heriteria utilis*, *Uapaca guineensis*, *Daniella thurifera*, *Terminalia ivorensis*, *T. supeba*, *Parinari excelsa*, *Bridelia grandis*, *Treulia africana* and *Pycnanthus angolensis*.

Management and Conservation Status: The Tingi Hills forest reserve was constituted in 1947 and gazetted a non-hunting forest reserve in 1973. Administrative responsibility is in the hands of the District Forestry Officer in Kono and the Game Superintendent,

WBC. However, because of the poor road links and the unavailability of vehicle for forestry/wildlife staff, there is apparently no government influence in the area. Regulation on resource exploitation is primarily dependent on traditional bye-laws and pronouncements from chiefs and community leaders.

Level and Causes of Degradation: There are few fertile areas in the Tingi Hills reserve and environs. Farming is done on lower altitudes and close to rivers and streams, mostly around the margins of the reserve, close to Kenewa and surrounding areas. Shifting cultivation is the most common farming method.

Woodcutting is carried out on a subsistent basis and wood gathering is prevalent and the surrounding communities use most of the wood. Commercial logging is absent mainly because of the poor accessibility.

There was high hunting pressure, especially for monkeys and duikers, prior to the war. Migrant Liberian game hunters contributed to the pressure, but cross-border activities ceased during the civil war. Currently hunting pressure is low and done only on a subsistent basis with snares, as shot guns are being collected from communities in the country-wide arms collection drive.

Visits to the area for scientific interest, adventure (mountain climbing) and relaxation was fairly frequent before the civil war. Several campsites exist in ideal locations on the hills and in the gallery forest about two to three kilometres from the foot of the Sankan Birriwa. The area is potentially viable for ecotourism, if properly developed and managed.

Vegetation is burnt every year on the grassland, the plateau and the foot of the hill, by the local communities for grazing and hunting, and sometimes by visitors. This occasionally causes serious fires that considerably damage the forest cover. Thus large parts of the gallery forest on the plateau and the valleys are degraded.

Community Participation: The communities regulate activities on the reserve and surrounding community forests. No job facilities exist in the area, except for the few youths who migrate to Koidu town and environs to involve in diamond mining. Thus, a majority of the people of the Tingi Hills surrounding depend on the forest resources for their subsistence, medicine and food.

Existing Conservation Initiatives: No existing conservation initiative for Tingi Hills forest reserve, except for the local and traditional method of control of resource exploitation. No management plan exists for the reserve.

Recommendations

- (i) Tingi Hills Forest Reserve is the only other forest reserve with montane vegetation. Therefore it should be upgraded to a national park to improve protection for its variety of habitats and game. A management

plan should be developed, which should incorporate options for a participatory approach in the conservation of its biodiversity and alternative livelihoods for surrounding communities.

- (ii) Conduct a re-assessment of the biodiversity, especially for the birds and mammals of the reserve, to establish reliable data for future studies and management planning.
- (iii) Improve facilities in and around the reserve and access to the reserve to encourage ecotourism. The activities of visitors to the areas must be monitored and regulated in order to reduce incidences of bushfire, because some community members reported that such fire incidences are sometimes caused by visitors.
- (iv) Develop and operationalise a system to control bush fires and hunting activities, which are the most urgent threats to the reserve's biodiversity.
- (v) Forestry and wildlife officers should be posted to the area to reintroduce government control and enforce regulations governing the establishment of the forest reserve. Resuscitate the Game Guard Outpost at Kenewa and provide logistic support to staff posted to the area in order to improve monitoring and law enforcement.

2.5 Outamba-Kilimi National Park

General Site Description: OKNP is found in the extreme north, about 296 km north of Freetown. It lies adjacent to the border with the Republic of Guinea, in the Tambakha Chiefdom, Bombali District, Northern Province. The two areas, Outamba (74,100 ha) and Kilimi (36,800 ha), that constitute the park are separated by a stretch of land 1000 km² in size. The vegetation is characterised by a mosaic of grassland, closed woodland and gallery forest. Whereas, Outamba has a predominance of tall grasses and woodland, and patches of closed canopy forest, Kilimi has more grassland and more open woodland. There are traces of *Raffia* swamp vegetation and riverine grassland in both areas. Outamba has a perennial lake, Lake Idrissa. The land in general is agriculturally poor.

The region is drained by several streams, which flow into large rivers of national importance such as the Mongo and Little Scarcies at Outamba and the Great Scarcies at Kilimi. Annual rainfall in the region averages 2032mm. Temperature varies between 13-35 °C in the dry season and 18-32 °C in the rainy season. Average relative humidity at 1500h for the two areas ranges from about 40% to 80%. Outamba is found on Precambrian-Birimian granite whilst Kilimi occurs on Precambrian unfossiliferous sandy and clayey sedimentary rocks known as the Rokel River series.

Access and Facilities: The two areas occur along Sierra Leone's northern border with the Republic of Guinea. Kamakwie, 15km to the south, is the nearest town. The main

highways into the region cross the Little Scarcies river by two old ferries which occasionally break down, halting traffic for days, especially during the rainy season. The park currently has no electricity or tap water system, but there is a well-organised camp with rudimentary, but decent facilities for visitors, including tented accommodation, cooking facilities and a visitor centre. Wildlife Conservation Branch staff can organise guided tours, including canoe trips. Trails are marked and labelled and there is one viewing platform. Rebels invaded the park during the civil war and destroyed facilities, but these are being rehabilitated.

Biodiversity of the Area

Fauna: There are nine species of primates in the area including four threatened species; Western chimpanzee (En), Red Colobus Monkey (Vu) is Black and White Colobus (NT) and Sooty Mangabey (NT). Large mammals include Western Elephant (En), Leopard (Vu), Pigmy Hippopotamus (Vu), Water Chevrotain (NT), Maxwell Duiker (NT) and Savanna Buffalo *Syncerus caffer* (NT).

The total number of birds recorded in the park is 220 of which 158 and 175 species respectively occur in at the Otamba and Kilimi areas. The various species recorded included 11 (40%) of the species considered dependent on the Guinea-Sudan savanna that occurs in Sierra Leone. OKNP holds four near-threatened species and which are of global conservation concern. One of these species is Pallid Harrier is a rare migrant. The Lake Idrissa and river courses seasonally support a good population of wintering plovers, sandpipers, herons and egrets.

Flora: The vegetation is characterised by a mosaic of grassland, closed woodland and gallery forest. There are traces of *Raphia* swamp vegetation riverine grassland. The dominant vegetation type is savanna and common plant community is moist savanna woodlands (south Guinea savanna) (Cole, 1968). The South Guinea Savanna can form different plant communities depending on the water regime and soil condition, including moist savanna (in wet areas), tree savanna (in dry areas) or shrub/grass savanna (on hilly terrain). The dominant plant community in the park is moist savanna, with trees that are fire resistant with gnarled bark and flat-topped canopy. The tree canopy can be dense or open. The dominant trees species include *Lophira lanceolata* *Daniella obliveri*, *Borassus aethiopicum*, *Pterocarpus erinaceus*, *Parkia biglobosa*, *Cassia sieberiana*, *Vitex cuneata*, *Terminalia albida* and *Crossopteryx febrifuga* (Martin, 1938). Grasses are also common and comprise *Chasmopodium caudatum*, *Hyparrhenia rufa*, *Andropogon gabonensis* and *Pennisetum purpureum*, which can attain a height of 3-7m (Cole, 1968).

Management and Conservation Status: Outamba-Kilimi is the only extensive area of savanna woodland and grass under any protection in Sierra Leone. It was gazetted a National Park in Sierra Leone in 1995, following gazetted notices of 1974 and 1986. However, activities on the ground go back, long before these notices. Previous management by WWF, under the directorship of Dr. Geza Teleki and Peace Corp volunteers was in place in the 1970s until 1992. Current management is by the Wildlife Conservation Branch of the Forestry Division. A project funded by the European Union to develop and implement an integrated management plan for the area, was disrupted by

the civil war. A number of wildlife officers are currently posted to the area, but are few in number and poorly equipped to man the entire park.

Levels and Causes of Degradation: Several small settlements occur as enclaves within the park and are posing serious future potential problems in the management of the park. Discussions with them revealed that they are not willing to vacate the areas they occupy mainly because of unfulfilled obligations by the government during negotiation for the establishment of the park. They depend entirely on the resources of the park for their survival.

Fertile areas are limited, and small portions of land within enclaves in the park are used for agriculture. Most areas within buffer zones are used by adjacent communities for farming. Bush fires result from land clearance for agriculture and from honey gathering, affect community land and occasionally spread into park boundaries, especially on the Kilimi end of the park.

There is evidence of woodcutting in some areas although the pressure is not high, simply because the wood is used for domestic purposes and the populations of surrounding communities are low. Logging is mainly done for the construction of dug-out canoes.

There was high hunting pressure especially for large mammals like elephants and monkeys in the Kilimi area before the war. Poaching levels during the war are unknown, but thought to be very high. Hunting was indiscriminate and widespread in areas that were occupied by rebels who targeted hippos, elephants and all species of monkeys. Some of the hunters are thought to come from Guinea. Before the civil war an anti-poaching programme, sponsored by the European Union, was supporting patrols and community education around the park boundaries.

Fishing pressure is high. The methods used are destructive and include small mesh nets and poisonous herbs, which may create ecological imbalances within the aquatic system and render the water unsuitable for human and wildlife consumption.

Community Participation: Except for a few settlements, population densities in villages in the Outamba-Kilimi area are generally sparse. There is understanding among communities about the establishment of the park, but there is very little involvement of community members in the management of the park and there is indication that they are not satisfied with the current situation. The communities used to have representations in the Park's management Committee, but this committee has not met for years raising suspicion that they, the communities might have been sidelined.

There is high dependence of the communities on the natural vegetation for medicine and food. Because of the distance to nearest town, the local people have to rely heavily on medicines prepared by traditional healers. Most common diseases and ailments like malaria, dysentery, fever, headache, fractures etc., are treated locally. .

Alternative livelihood and income generation options are very limited, thus the main means of livelihood is agriculture.

Existing Conservation Initiatives: Two main conservation initiatives exist for the park. One is a national chimpanzee status sensitisation programme funded by USAID through the Jane Goodall Institute in the USA and implemented by a partnership between CSSL and Chimpanzee Rehabilitation Programme. The programme, which includes OKNP as one of its main areas of focus, seeks to raise awareness among communities about the status and threats to chimpanzees in Sierra Leone. The other initiative is an elephant population and status survey at the OKNP, also funded by USAID and is implemented by WCB of the Forestry Division.

Recommendations

- i. Development and implementation of a management plan for the area.
 - (i) Enforcement of regulations of national park and natural resource management and use.
 - (ii) Improvement, promotion and regulation of community-based alternative income generating mechanism including bee-keeping, animal husbandry by organising training programmes for local communities.
 - (iii) Institute cross-border management of elephants as flagships for biodiversity conservation in the area, in collaboration with the Guinean authorities.
 - (iv) Increase support for the Wildlife Conservation Branch, including means of mobility and some form of defence implements (shot guns) for effective monitoring, patrolling and management of the park.
 - (v) Undertake post-war assessment of biodiversity status, for birds, primates and other large mammals. This is an issue requiring urgent action so as to establish current status of wildlife in the park.

Based on availability of additional cofinancing the following four (4) Protected Areas identified under the NBSAP will be considered for support.

2.6 Yawri Bay

General Site Description: Yawri Bay is found on the southwestern coast of Sierra Leone; this bay is about 60km southeast of Freetown. It is bounded by the Ribbi, Bumpe and Kagboro Chiefdoms of the Moyamba District, Southern Province and the southern coast of the Western Area Peninsula. The Yawri Bay is a shallow coastal wetland with a 9,100 ha expanse of intertidal mudflats that extends along 60 km of foreshore. The mudflats are backed primarily by mangrove swamp interlaced with a network of creeks stretching to 24,505 ha. It accounts for 14.3% of the total mangrove swamp in Sierra Leone (Chong, 1987).

Three rivers, Ribbi, Bumpe and Kagboro, each with its own estuary, flow into the Yawri Bay. The bay's topography and location shelters it from the force of river flow and strong marine currents. It is therefore a suitable spawning and nursery ground for fish, which is one of the county's most important marine resources. Mean annual rainfall is about 3,554mm. Temperature varies little with season; the mean daily range is 22-31⁰C in the dry season and 23-27⁰C in the rainy season. Relative humidity at 1500h runs between 60% and 80% annually. The bay occurs on nearly horizontal marine and estuarine sediments known as the Bullom series. The sequence consists of Eocene lignite-bearing clays overlain uncomfortably with quaternary gravel, sand and clay.

The rich tidal mudflats and mangroves make the bay a suitable site for thousands of birds for which it is home for a third of the year. The bay also supports a major local fishing industry. The site is unprotected and the mangroves have suffered from cutting for fish smoking.

Access and Facilities: The northern end of the bay is easily accessible through a newly constructed highway from Freetown. Rotifunk and Moyamba, 40 km and 60 km to the east respectively are the nearest big towns. The bay has relatively prosperous fishing companies especially at Tombo and Shenge, which supply most of the fish consumed in Freetown and even in the regions. There is also a viable local salt industry in the area. These activities provide employment opportunities for the local inhabitants. The bay also has great potential for ecotourism if carefully developed and managed.

Biodiversity of the Area

Fauna: No survey on mammals has so far been carried out but there is evidence of the presence of the threatened African Manatee (Schwarz 1992). Three species of game mammals inhabit the coastal forest including Maxwell Duiker (NT). Forty-six species of Palearctic migrant birds are known to occur in the bay. The near-threatened Damara tern (*Sterna balaenarum*) was first recorded for Sierra Leone at this site, and is also the westernmost record of the species in Africa. This has increased the conservation value of the site. Recent waterbird surveys discovered four new species including the Greater Flamingo, *Phoenicopterus minor* (NT) and Great White Pelican *Pelicanus onurotalis*. Tye and Tye (1987) and Thompson and Wood (1992) estimated that the bay holds over 20,000 waders. The site also supports nine bird species with wintering numbers exceeding 1% of their biogeographic population. Also five species of marine turtles that occur in Sierra Leone, exist in the bay.

Management and Conservation Status: Yawri Bay currently has no legal protection status and no government land use policy for the area exists. A small area at the northern end of the bay, around Bumpe Creek has been proposed as a Game Reserve (Phillipson 1978). Kagboro Creek has also been proposed as a protected area. Large fishing trawlers are not given access into the waters of the bay, due to the international marine regulation of a 20 mile exclusion zone. Fishing and woodcutting are controlled by traditional by-laws imposed by Chieftdom authorities in the area, but this has not been very effective.

Levels and Causes of Degradation: The main method of farming is slash and burn and this is practiced mainly in areas around Kagboro Creek although no assessment of its extent has been made. Because of the long period of farming in these areas, the naturally fragile soil structure is now very vulnerable to erosion during heavy rains, thus a potential for siltation to occur in some parts of the bay.

There is high intensity of woodcutting in some of the mangrove areas bounded by the Western Area Peninsula, especially around Tombo (a fishing village) where most of the wood is used for smoking fish. Logging is done mainly for the construction of housing, dug-out canoes and small boats.

Fishing is the main occupation of most of the bay's inhabitants and therefore there is extremely high fishing intensity. The fishing intensity has been exacerbated by the development of small artisanal fishing projects in many communities around the bay, funded by various agencies, especially UNDP and AFRICARE. There is legislation against large fishing trawlers and on the size of net mesh used by artisanal fishermen, in order to prevent depletion of the fish resources, but enforcement is weak. The smallest sizes of fishing nets are used by artisanal fishermen and offtakes include fingerlings of a variety of fish species and even the eggs. Fishing within exclusion zones by large vessels is reported to be having serious effects on the artisanal industry.

No mining is currently going on, but a concession was given to a South African company, de Beers, for an offshore mining operation, which is yet to materialise. Heavy metal poisoning from large-scale mining operations upstream by Sierronco and Sierra Rutile Mining Companies was suggested to have caused fish kills within the bay. This needs to be investigated to ascertain the effect of the long-term mining activities on fish stocks, migratory bird numbers and the general ecology of the bay.

Community Participation: The most populated settlements in the Yawri Bay are found at Tombo and Katta/Shenge areas on the extreme northern and southern ends of the bay respectively. The population in these communities are estimated in the excess of 100,000 people, and over 80 % depend on fishing and fishing related activities for their livelihood. Since the bay has no legal protection status, most of the threats to its conservation are regulated either by traditional byelaws or international legislations affecting all countries along the coast.

Thus fishing and woodcutting, which constitute the most important economic activities in the area, are controlled by traditional bye-laws imposed by Chieftdom authorities, but enforcement has not been very effective.

A mangrove reforestation programme has been tried at Tissana close to Tombo, with the involvement of the local inhabitants, but this had not been very successful as there are reports that fish feed on the young seedlings or foliage. It was suggested that the time of replanting of the seedling should be reviewed and adjusted to evade the fish.

Existing Conservation Initiatives: The only existing conservation initiatives are the traditional bye laws and implementation of a 20-mile exclusive zone. However, the CSSL submitted a proposal to the Government of SL to designate the site as a Ramsar. The CSSL also conducts regular annual waterbird census as a means of monitoring population status and trends of migrant waterbirds that visit the bay.

Recommendations

- (i) A monitoring system should be put in place to control offshore mining operations. Mandatory environmental impact assessment (EIAs) should be conducted before the recommencement of any mining operations. EIAs already available on existing operations should be reviewed to include strategies that would be effective in mitigating any undesirable environmental effects on the bay and on the livelihood of surrounding communities.
- (ii) Revision and implementation of a draft management plan and options for development of the bay.
- (iii) More research on the ecology of the bay needs to be done.
- (iv) Designation of the site as a Ramsar site due to its excellent bird diversity (including threatened species), the presence of the globally threatened West African manatee and the fact that it is one of the most important sites for wetland biodiversity in the country. .
- (v) Revitalization of the tree-planting programme supported by PLAN International.
- (vi) Improvement of road network to areas of interest in and around Yawri Bay and vicinity to encourage tourism and access to local industries in the area.
- (vii) Institution of controlled exploitation of oysters to improve the income base of the local communities and reduce the pressure on fish. Large stocks of oysters exist within inaccessible mangrove areas and there is need for a systematic and sustainable mechanism of oyster farming and harvesting to be developed.

2.7 Kangari Hills

General Site Description: This reserve is located in the Kunike and Bonkolenken Chiefdoms in the Tonkolili District, Northern Province and the Valunia Chiefdom in the Bo District, Southern Province. It occurs about 210 km east of Freetown. The forest at Kangari is part of a range of hills, the highest being Kang-ari, which is outside the reserve. The hills are drained by a number of rivers and the valleys support swamps suitable for agriculture. The forest of Kangari Hills is home to an important forest wildlife community and protects the watersheds of many rivers supplying towns and

villages in central southern Sierra Leone. The region is the source of two main rivers passing through the centre of the country, the Pampana River to the northeast and the Moa River to the southwest.

The predominant vegetation type is moist rainforest. Annual rainfall ranges from 3048-3556 mm. Temperature variation is seasonal with a range of 19-36⁰C in the dry season and 22-36⁰C in the wet season. Relative humidity ranges from 55% to 80% annually. The reserve is founded on Precambian-Kambui schist that underlies the hill ranges in the eastern part of the country.

Access and Facilities: Makali in the northeast and Baomahun in the south are sizeable towns within 10 km of the reserve. The Tama-Tonkolili forest reserve (proposed IBA) and the Mamunta-Mayoso Wildlife Sanctuary, are within 40 km to the northwest and northeast respectively. The reserve is accessible from Kono (50 km to the east) via the highway leading to Makali and from Bo (60 km to the south) via the highway leading to Boamahun. There was a hydroelectric power station at Makali, which was functional during the wet season and part of the dry season. Pipe-borne water is available. A gara dyeing training centre is located at Makali and can house visitors when not in use. The reserve is accessible through a number of footpaths linking illegal settlements within the reserve and the villages outside.

Biodiversity of the Area

Fauna: There are a good number of primates and other large mammal species in the reserve. Threatened primate species are Western chimpanzee (En), Red Colobus Monkey (Vu), Black and White Colobus Monkey (NT) and Diana monkey (Vu). Other threatened mammals are Leopard (Vu), Water Chevrotain (NT), Blach Duikay (NT), Maxwell Duiker, Forest Elephant (En), and Forest Buffalo *Syncerus caffer* (NT).

Over 115 species of birds, representing 34 families, have been recorded in the reserve (Okoni-Williams et al., 2005). The list includes three globally threatened species namely, the White-necked Rockfowl *Picathartes picathartes gymnocephalus* (Vu), Black-faced Stream Warbler (Vu), and Green-tailed Bristlebill (Vu), and three near-threatened species.

Flora: Three plant communities can be distinguished in the Kangari Hills Forest Reserve namely, farm bush and thicket on the lower slopes; inland freshwater swamp forest and young to mature secondary moist forest on the slopes and summits (Cole, 1968).

Farm bush covers the lower slopes. This plant community consists of thick, almost impenetrable undergrowth interspersed with a few large trees. The common species in the farm bush are crop trees such as *Elaeis guineensis*, *Mangifera indica*, *Cola nitida* and timber trees including *Chlorophora exelsa*, *Musanga cecropioides*, *Ceiba pentandra*, *sterculia tragacantha*. Among the shrubs and herbs (mainly climbers, stragglers and scramblers) are *Brillantasia nitens*, *Alchornea cordifolia*, *Sellaginella myosurus*, *Lycopodium cernuum*, *Scleria barberi*, *Vernonia Biafrae*, *Mussaenda afzelii*, *Ageratum conyzoides*, *Solanum torvum*, *Combretum grandiflorum* and *Cissus producta*. The

inland freshwater swamp forest common tree species include *Terrietia utilis*, *Ochthocosmos Africana*, *Macaranga barteri*, *Uapaca guineensis*, *Chrysophyllum africanum*, *Myrianthus arboreus*, *Carapa proicera*, *Terminalia ivorensis*, *Cynometra leonensis*, *Mitragyna stipulosa* *Brachystegia leonensis*, *Nauclea diderrichii* and *Raphia vinifera*.

The secondary forest community intergrades from farm bush and thicket as well as from inland freshwater swamp forest. Trees of the matured secondary forest include *Bridelia grandis* *Bridelia Micrantha*, *Chrysophyllum pruniforme*, *Parkia bicolor*, *Parinari excelsa*, *Albizia zygia*, *Berlinia confuse*, *Erythrophleum ivorense*, *Daniella thurifera* *Dialium dinklagii*, *Amphimas pterocarpoides*, *Garcinia afzelii*, *Pycnanthus agolensis*, *Lophira alata*, *Piptadeastrum africanum*, *Chlophora regia*, *Ongokea gore*, *Strombosia glaucescens*, var *lurida*, *Afzelia Africana*, *Pentadesma butyracea*, *Pentaclethra macrophylla*, *Spathodea campanulata*, *Detarium senegalense*, *Vitex micrantha*, *Entandrophragma utile* and *Chrysophyllum africanum*. The ground flora is dominated by *Geophila obvalata*, *Bertiera spicata*, *heinsia pulchella*, *Cuviera acutifolia*, *Ixora radiata*, *Pavetta Smythei*, *Randia maculate*, *Gardenia nitida*, *Whitfieldia laterita*, *Phayloopsis parviflora*, *Olox mannii*, *Ochna afzelii*, *Ouratea flava*, *Alchornea cordiflora*, *Selagenalla myosurus* and *Costus affer*. Young secondary Forest trees are also found. These include *Spondias mombin*, *Carapa procera*, *Musanga cercropioidea*, *Trema guineensis*, *Anthocleista nobilis*, *Morinda germinate*, *Trichilia heudelottii* and *Canthium*.

Management and Conservation Status: The Kangari reserve was gazetted a forest reserve in 1955 and upgraded to non-hunting forest reserve in 1973. No immediate development plans exist and management is in the hands of wildlife staff from the Government Forestry Division.

Levels and Causes of Degradation: Agriculture is the main economic activity of the communities surrounding the Kangari Forest reserve. Slash and burn farming is widespread in the area, accounting for most of the degradation around the forest reserve. This is especially evident in the Makali side of the reserve. No previous settlements existed, except that rebel camps were created within the forest reserve during the civil war. Illegal miners also created a number of small settlements.

Several large gold mining companies use to operate in the area, but prospecting stopped during the rebel war. However, mining activities have restarted in a rather smaller scale mainly by individuals and small groups of people. Logging was done at a small scale, mainly for building poles before the war, but now has increased due to the moratorium on logging at the Gola forest.

Hunting pressure, which used to be moderate (rural communities mainly set snares) increased dramatically during the war in Liberia from raids by Liberian hunters and their local accomplices. This affected the local populations of all species of monkeys and duikers, which were the main target of the bush meat trade between Sierra Leone and Liberia. Hunting has reduced considerably as a result of the disarmament and arms collection programmes after the civil war in Sierra Leone and numbers of most of the

target game species are increasing. There is indication that elephant population may also be increasing, as evidenced by the number of complaints of elephant raids and destruction of crops and villages in the southern sections of the forest reserve.

Community Participation: The communities around Kangari Hills forest reserve have relatively sizeable population densities compared to areas in the northeast of the country. However, the location of the reserve means that it is accessible from all areas of the country. Regulation of human activities is supposed to be undertaken by forest and wildlife guards, but only a handful are posted to the area and these are poorly equipped. The local community leaders institute byelaws to control resource exploitation and to some extent regulate mining activity.

Community members do not seem to know the boundary between community land and forest reserve. All exploitative activities including hunting, woodcutting and mining done in community forest areas are also done within some forest reserve zones. There is heavy reliance on plant extracts for medical purposes and extraction of such plant species is done in all communities around the reserve. Most common ailments such as malaria, stomach ache, dysentery, diarrhoea and cuts are treated with locally prepared herbs and concoction obtained from these plants.

Existing Conservation Initiatives: No conservation initiative exists in the reserve, except for the traditional pro-conservation practices done by the local communities.

Recommendations

- (i) As a matter of urgency, more wildlife and forestry staff should be sent to the area to institute monitoring and patrolling activities as a means of curtailing the potential increase in illegal activities in the area.
- (ii) Boundary redemarcation should be undertaken and boundaries marked to help the communities recognise the reserve boundaries. Buffer zones around the reserve should be established to reduce encroachment. Enforce legislation against illegal mining activities, which threatens the land and rivers.
- (iii) A restoration programme for degraded areas especially with the use of indigenous plant species needs to be undertaken with involvement of the local communities. There is ample community land, which can be developed for fuelwood and timber plantations to reduce dependence on the natural vegetation.
- (iv) Improve facilities in and access to the reserve especially for the convenience of wildlife staff and visitors. Effective patrolling and monitoring can only be effective if there is basic facilities for wildlife staff including rest houses, boots and vehicles (cycles).

2.8 Mamunta-Mayosso Wildlife Sanctuary

General Site Description: Mamunta–Mayoso is a wildlife sanctuary. This sanctuary is situated in Kholifa and Mabang Chiefdoms, Tonkolili district, Northern Province, about 180 km east of Freetown, almost at the centre of the country. The sanctuary supports a wide range of vegetation types. The predominant vegetation is boliland (seasonally flooded grassland) with occasional occurrence of swamps, savanna, secondary forest and two perennial lakes. Water depths in swamps rise to over 1.5 m during flooding. The sanctuary is also one of the few areas in Sierra Leone holding the threatened Dwarf Crocodile.

Mean annual rainfall ranges from 3048 to 3556 mm. Mean daily temperatures vary from 26-32⁰C in the dry season, and 20-30⁰C in the wet season. Relative humidity at 1500h varies between 50% and 80% annually. The area is founded on Precambrian-Bintumani granite rocks.

Access and Facilities: Mamunta village occurs in close proximity to the Magbas Sugar Industry, near Magburaka. This industry provides job opportunity for the people of Mamunta and surrounding communities. Mayosso is along a motorable but untarred road that runs between Magburaka (30 km to the northeast) and Yonibana (35 km to the southwest). Yonibana (Mile 91) is on the Bo - Freetown highway. A dilapidated and disused visitors' centre, which needs urgent rehabilitation, is situated on the Mayosso road. The communities within the vicinity of the reserve operate a raffia-produce manufacturing group that deals in high quality raffia products like handbags, baskets, hand fans etc. Makeni, which is the headquarter town in the Northern Province is within 50 km to the north.

Biodiversity of the Area

Fauna: Eight species of primates have been recoded in this sanctuary, in addition to other big game such as the bushbuck, bushpig and duikers. The threatened primates are the Western Chimpanzee (En) and Red Colobus Monkey (Vu). Other threatened fauna are Pigmy Hippotamus (NT). The sanctuary is home to three species of crocodiles (the Nile, the slender-snorted and the dwarf) and the Nile monitor lizard (*Varanus*). It should be noted that the Dwarf Crocodile is found only in this area.

Field (1979) and Tye and Tye (1987) produced bird lists, which were updated by Ormsby (1991). These surveys listed a total of 252 species of birds belonging to 51 families. These include two near-threatened species – Turati's Boubou and Rufous-winged Illadopsis. A Waterfowl census conducted in 1994 gave a total of 1280 birds representing 18 species and includes a large count of the White-faced Whistling Duck.

Flora: The predominant vegetation is boliland (seasonally flooded grassland) with occasional swamps, savanna, secondary forest and a perennial lake in close proximity. Four different plant associations have been identified in the sanctuary and the surrounding landscape. These include *Anadelphia/Rhytachne*, *Nauclea/Chasmopodium*, and *Lophira/Chasmopodium* associations, and Riverain forest which is a sacred bush

(Bakshi, 1963). The *Anadelphia/Rhytachne* association occurs in the seasonally flooded areas, and is dominated by *Anadelphia leptocoma* but is intolerant to prolonged waterlogged conditions. *Rhytachne rottboeliodes* occurs in association with *A. leptocoma* and can withstand prolonged waterlogged conditions. Other species typical of this association include *Panicum congoense*, *Anadelphia erecta*, *Cyperus pustulatus*, *Mesanthemum radicans*, *Neurotheca loeselicedes*, *Saccolipsis auriculata*, *Alectra sp.*, *Eragrostis chalarothysos*, *Scelria mitella* and *Sopubia parviflora*.

The areas that do not become flooded during the rains comprise the *Chasmopodium/Nauclea* association, with *Chasmopodium caudatum* being the dominant plant. Typical plant composition in the *Chasmopodium/Nauclea* association include *Thaumatococcus daniellii*, *Andropogon gabonensis*, *Abrus precitirius*, *Amphiblemma mildbraedii*, *Lophira lanceolata*, *loudetia arundinaceae*, *Pennisetum purpureum*, *Pennisetum subangustrum*, *Sauvagesia erecta*, *Smilax kraussiana* and *Urginea indica*.

The *Lophira/Chasmopodium* association is the most conspicuous plant association in the bolilands. Other trees are generally not found but the ground cover could include species such as *Amorphophallus aphyllus*, *A. elliotii*, *amphiblemma milbraedii*, *Dioscorea hirtiflora*, *Dissotis sp.*, *Elinurus pseudapricus*, *Eragrostis plurigluma*, *Smilax kraussiana* and the fern *Nephrolepis undula* (Bakshi, 1963).

The fourth plant association is the riverain forest or sacred bush, frequently encountered along creeks, streams and rivers. These bushes are protected by the local communities because of their socio-cultural values. Typical plant species include *Morinda geminate*, *Bersama abyssinica*, *Cassia sieberiana*, *Dialium guineense*, *Xylophia quintasii*, *X. aethiopica*, *Voacanga obtuse*, *Trichilia heudelotii*, *Anisophylla laurina*, *Craterispermum laurinum*, *Holarrhena Africana*, *Pterocarpus santalnoides*, *Mareya micrantha*, *Diospyros sp.*, *Ficus mucosa*, *Napoleona heudelotii*, *Pycnanthus angolensis*, *Craterispermum laurinum*, *Holarrhena Africana*, *Dichrostachys glomerata*, *Funtumia elastica* and *Caloncoba echinata*. The grass *Guaduella oblonga* occurs as ground cover.

Management and Conservation Status: No management plans exist for the area. The uncompromising attitude of landowners due to unfulfilled promises by the government is the major problem affecting the sanctuary's management. At present, PA management is handled by a single staff from the WCB is so badly under-resourced to police the sanctuary. What has helped regulate the exploitation of the resources in the sanctuary has been the recognition by communities of traditional bye-laws and practices.

Levels and Causes of Degradation: Historically, little or no farming was done within the boundaries of the sanctuary, however, as a result of breakdown of law enforcement and absence of management planning, more and more are encroaching on the land. The original size of the sanctuary has been reduced lately when government decided to back land to the communities for farming. Rice cultivation is widespread and occurs even within the boundaries of the sanctuary. Siltation resulting from rice cultivation around the shores of the lakes is a potential threat to the ecology of these lakes. Cattle grazing is

another source of threat, especially now when herdsmen, who fled to Guinea during the war are returning to the area.

The two wetlands of Dakraffi and Robierra provide fish for the local inhabitants who annually celebrate a fishing festival. The pressure is especially high on the Robierra swamps during the dry season and this may deplete fish resources, if not controlled. Pressure through hunting is low to moderate and this is probably a result of the control exerted by the game guards. There is usually an increased incidence of hunting of the threatened Dwarf Crocodile during festive ceremonies at Ronietta. Spur-winged Geese and other ducks become victims when big game becomes scarce. Wild bush fires are frequent during the dry season, causing degradation to the remnants of forest in the sanctuary.

The rate of degradation of the biological resources is approaching alarming proportions. This is evident in the low encounter rates and the degraded status of the different vegetation types.

However, the sanctuary provides a great potential for ecotourism development, if its biodiversity could be properly managed.

Community Participation: The population of the main villages in the Mamunta-Mayosso area could be estimated at between 1000 to 2000 people. There are between 15 and 20 villages in the area, thus a total population of between 10,000 and 20,000 inhabitants, with a relatively low population density. Ideally, the pressure on the resources of the sanctuary should be moderate. The establishment of the sanctuary resulted from an agreement between past traditional leaders, most of whom are now deceased. The current leaders appear to know about the agreement, but are dissatisfied with the failure of government to fulfil its obligations and the apparent lack of contact and consultation between government and the communities.

Existing Conservation Initiatives: Except for the traditional bye-laws and myths that control the exploitation of resources in the sanctuary, no conservation initiatives exist in the area.

Recommendations

- (i) Particularly traditional leaders (but also the village people) need to be informed, educated and sensitized about the agreement that helped set up the sanctuary.
- (ii) Reinforcing human capacity at the site level.
- (iii) Re-demarcation of reserve boundaries.
- (iv) Development of a participatory management plan for the area.

2.9 Lakes Mabesi and Mape

General Site Description: The Lake is located in the Kemo Pukumu-Krim, Kpaka and Mono Sa-Krim Chiefdoms, Pujehun District, Southern Province, about 60km south of Pujehun Town. The altitude is 97m asl. Central coordinate 7° 45'N and 110 4°W. Numerous villages are found along the shores and most of the inhabitants are fishermen and farmers. The lake is generally shallow with dept of less than 3 m during the dry seasons. During the rainy season, dept increases to over 6 m and some villages become flooded at the peak of the rains.

Lake Mape is located in the Mono Sa-Krim Chiefdom, Pujehun District, Southern Province of Sierra Leone, about 20km south of Lake Mabesi. Several settlements occur along the shores of the lake, mainly as a result of fishing and farming activities around the lake. The lake is very shallow in most areas, which makes navigation difficult especially during the dry season. The extensive shoreline is flat and suitable for agriculture, but may become flooded during the peak of the rainy season. Several small Islands occur in the lake particularly close to the entrance leading from the Wanje River.

Access and Facilities: Lake Mabesi can be reached by boat through Gbomukoh village on the northern shores the lake. Mabesi. Lake Mape can be accessed by boat through the Malen river which leads into the western portions of the lake. Mano Nbojema is an organised settlement on the eastern extremities of the Lake Mape, from where Lake Mabesi can also be accessed by a footpath through a 3-mile stretch of forest patch leading to a village, Njala, on the southern edge of Lake Mabesi.

Biodiversity of the Area

Fauna: Most information on mammals was obtained from local inhabitants. Threatened mammals are African Manatees and Black-and-white Colobus Monkey. The African Manatee is the most important species of concern in the area. Some species of monkey, including the Black and White Colobus (NT) and Sooty Mangabey are known to occur in the riverine forest around the lake. A total of 3406 waterbirds of 32 species have been recorded at Lake Mabesi with coverage of 10% of the site. Bird concentrations occur on the southern shore of the lake mainly around the Njala village. The most common species are White-faced Tree Duck, African Jacana and Great White Egret. This site is one of the few areas where the African Spoonbills occur in significant numbers as compare to other sites in the country. See table for list of species.

A total of 678 birds of 12 species were recorded in Lake Mape with coverage of 25% of the site. Information from local inhabitants indicate that lake support large numbers of Long-tailed Shag and White-faced Treeduck, especially at the peak of the migratory season for agro-tropical migrants. Two sighting were made of the African Finfoot, which occur in very small numbers in few sites in Sierra Leone. Local people at one of the villages around the lake captured two juvenile Pel's Fishing Owls.

Flora: Detail study of the floral composition of the vegetation of Lakes Mabesi and Mape has not been done. The vegetation at Lake Mabesi is mainly shrub and seasonally flooded grassland savannah backed primarily by gallery forest. Farmlands for swamp rice production are found on several locations around the lake. At Lake Mape, the vegetation is mainly extensive flooded grassland interrupted occasionally by riverine forest. Mangrove vegetation occurs at some places at the mouth of the lake and some Islands.

Management and Conservation Status: The lakes have no legal status, but human activities especially fishing are regulated by traditional bye-laws, which may vary from chiefdom to chiefdom and from village to village.

Levels and Causes of Degradation: The Lake has no legal status, but human activities especially fishing are regulated by traditional byelaws, which may vary from chiefdom to chiefdom and from village to village. The main threat to the lake's biodiversity is hunting for birds. All species of large birds including the Egrets and Spur-winged Goose, and the African Spoonbill are targeted. Other species are hunted if they become pest to crops. All species of mammals are hunted.

Farming, mainly by shifting cultivation is done in almost all areas around the lakes and in some of the Islands within Lake Mape. Huge areas have been cut or burn down to create farmlands. Fishing is regulated by traditional by-laws and so restricted to certain months of the year in some villages around the lake. Fishing and farming constitute the main preoccupations of the inhabitants of these villages. Hunting of monkeys is widespread but done at a moderate scale. Manatees and birds are also hunted, but at a minimal scale.

Community Participation: Control of resources is entire in the hands of the communities that surround the lake. Fortunately, with the exception of a few settlements like Mano Nbojaema, the population densities in these villages are low and so the pressure on the resources is not high. There is very high dependency on the fish resources in the lake for survival and most inhabitants depend on traditional treatments using herbs from the forest for a variety of diseases and ailments

Existing Conservation Initiatives: Except for the traditional bye-laws and myths that control the exploitation of resources in the sanctuary, no conservation initiatives exist in the area.

Recommendations

- (i) Government should consider giving some form of legal protection to these lakes as they are the two biggest inland water bodies in the country. Mabesi has potential for Ramsar designation due to its high migrant bird diversity.
- (ii) Traditional bye-laws of the various communities around the lakes should be standardised and regularized to ensure consistency in law enforcement and resource exploitation in all adjacent communities.

- (iii) Access to the lakes should be improved to enhance the potential for ecotourism, which would provide an option for job creation. s

**APPENDIX 1: PROTECTED AREAS, INCLUDING FOREST RESERVES AND PROPOSED
CONSERVATION AREAS IN SIERRA LEONE.**

Protected Area	Area (ha)	Category	Ecosystem Type	Proposed or Existing Status
Sacred Groves	?	Secret societies	Diverse ecosystem	
Loma Mountains Forest Reserve	33,201	National park	Montane	National Park
Tingi Hills Forest Reserve	10,519	Game reserve	Montane	Game Reserve
Gola Forest (North, East & West)	76,100	Forest reserve	Rainforest	Strict Nature Reserve
Kambui Hills	21,228	Forest reserve	Rainforest	
Kangari Hills*	8,573	Game reserve	Rainforest	
Tiwai Island	1,200	Game Sanctuary	Rainforest	
Western Area	17,688	National park	Rainforest	National Park
Nimini South Forest Reserve		Forest Reserve	Rainforest	
Dodo Hills Forest Reserve		Forest Reserve	Rainforest	
Bo Plains	2600	Game Sanctuary	Savanna	Game Sanctuary
Kuru Hills Forest Reserve		Game reserve	Savanna	
Outamba-Kilimi	110,900	National Park	Savanna	National Park
Bagru-Moteva Creek		Game reserve	Wetland	Game Reserve
Bonthe Mangrove Swamp	10,100	Strict nature reserve	Wetland	
Bumpe Mangrove Swamp	4900	Game Sanctuary	Wetland	Game Sanctuary
Kpaka (Pujehun)	2500	Game reserve	Wetland	National Park
Lake Mabesi*	7500	National park	Wetland	National Park
Lake Mape*	7500	National park	Wetland	National Park
Lake Sonfon	8,072	National park	Wetland	
Mamunta-Mayoso*	1,000	Game Sanctuary	Wetland	Strict Nature Reserve
Sewa-Waanje	10,000	Game Reserve	Wetland	Game Reserve
Sulima Mangrove Swamp	2600	Strict nature reserve	Wetland	Strict Nature Reserve
Yawri Bay*	33,605	Game reserve	Wetland	Game Reserve
Nimini North Forest Reserve		Forest Reserve	Rainforest	
Gboi Hills Forest Reserve #1		Forest Reserve	Rainforest	

Protected Area	Area (ha)	Category	Ecosystem Type	Proposed or Existing Status
Gboi Hills Forest Reserve #2		Forest Reserve	Rainforest	
Lalay Forest Reserve		Forest Reserve	Rainforest	
Gori Hills Forest Reserve		Forest Reserve	Rainforest	
Tonkolili Forest Reserve		Forest Reserve	Rainforest	
Tama Forest Reserve		Forest Reserve	Rainforest	
Farangbaia Forest Reserve		Forest Reserve	Rainforest	
Wara Wara Hills Forest Reserve		Forest Reserve	Rainforest	
Malal Hills Forest Reserve		Forest Reserve	Rainforest	
Kasewe Forest Reserve		Forest Reserve	Rainforest	
Bojene Hills Forest Reserve		Forest Reserve	Rainforest	
South Kambui Forest Reserve		Forest Reserve	Rainforest	
Moyamba Forest Reserve		Forest Reserve	Rainforest	
Waterloo Forest Reserve		Forest Reserve	Rainforest	
Singamba Forest Reserve		Forest Reserve	Rainforest	
Port Loko Forest Reserve		Forest Reserve	Rainforest	
Occra Hills Forest Reserve		Forest Reserve	Rainforest	
Mongheri Forest Reserve		Forest Reserve	Rainforest	
Taba Forest Reserve		Forest Reserve	Rainforest	
Yelibuya Island	3900	Strict Nature Reserve	Wetland	Strict Nature Reserve
Sierra Leone River Estuary	259,000	Important Bird Area	Wetland	

* Based on availability of additional cofinancing these four (4) additional Protected Areas identified under the NBSAP will be considered for support.

ANNEX 21: ROOT CAUSES TO BIODIVERSITY LOSS

Sierra Leone Wildlife Protection and Biodiversity Conservation Project

Root causes of biodiversity loss	COMPONENT 1 Strengthening Policy, Legislation and Institutional Framework for Ecosystem and Protected Area Management and Conservation of Wildlife and Biodiversity	COMPONENT 2 Improving Management of Selected Protected Areas
<p>Systemic weakness in conservation policies, legislation and institutional frameworks</p> <p>Although comprehensive in substance most frameworks lack strength because they are out of tune with current best practices and approaches to natural resource management and sustainable use. Natural resource management guidelines and prescriptions are therefore flouted with impunity because of weak governance and accountability structures and systems.</p>	<ul style="list-style-type: none"> ▪ Need for a participatory review and reforms of institutional frameworks governing the management and protection of PAs, and the conservation and sustainable use of wildlife and biodiversity resources. ▪ Identification of gaps in policy planning and conservation legislation ▪ Design, repealing and amending existing policies and legislation ▪ Involvement of key players in policy development process and in clarification of responsibilities ▪ Promulgation of law legally establishing the NaCEF 	<ul style="list-style-type: none"> ▪ Design and implement strategic (co-management, collaboration, etc) and operational tools (management plans, harvesting regulations, etc) and experiences to improve management effectiveness. ▪ Formalize the status of old and new PAs by legislation ▪ Develop and implement collaborative and participatory mechanisms ▪ Establish management committees at the PA level ▪ Training of district councils, local authorities, regional-level bodies and line ministries on biodiversity conservation and natural resource management
<p>Weak institutions at national and local levels.</p> <p>Until recently responsibility for forestry, wildlife and environment matters resided with the Forestry and Environment Departments of the Ministries of Agriculture, Food Security and Lands and Country Planning. The 2 Departments were marginally supported with resources and this has resulted in their poor performance. Their inability to enforce regulations and monitor the sector has resulted in serious deterioration and degradation of natural resource base in SL. GoSL has established a new body, the National Commission on Environment and Forestry, but with little or no resources to perform its programme of work. NaCEF will provide policy advice, priority setting and regulation of the natural resources sector. Also, roles and mandates at the national, regional and local levels in terms of PA management and biodiversity conservation are not clearly defined in the context of the ongoing decentralization process.</p>	<ul style="list-style-type: none"> ▪ Identification of gaps in planning and conservation legislation ▪ Involvement of key NRM players in policy development process and in clarification of responsibilities ▪ Legalization of NaCEF 	<ul style="list-style-type: none"> ▪ Institutional capacity building of district councils, local authorities, regional-level bodies and line ministries, specifically in terms of environmental planning and management and building of partnerships for these purposes. ▪ Build and strengthen capacities of key stakeholder groups at the national, district and local levels in mainstreaming PA management and biodiversity conservation into development planning. ▪ Enhanced integration between the different ministries and between them and regional and local governments

<p>Lack of effective partnerships for PA management and conservation of biodiversity</p> <p>In the past, public sector institutions charged with the responsibility for NRM, PA management and biodiversity conservation alienated other stakeholders by adopting command-and-control approaches to providing stewardship. Since resource flow from GoSL was woefully inadequate management and enforcement of regulations by public sector agencies was weak and encroachment and disregard for standards became the order of the day. Off-reserve areas became free-for-all and open access.</p>	<ul style="list-style-type: none"> ▪ Formulation of policy and legislation on co-management and sharing of “accruing” benefits from NRM. ▪ Enhance consultation and participation. ▪ Implementation of the government’s decentralization policy and devolution of NRM to the sub-regional and local levels. 	<ul style="list-style-type: none"> ▪ Design and implement frameworks for participation and consultation ▪ Design and implement incentive and reward frameworks for effective stakeholder involvement in NRM and PA management ▪ Improve skills at the national, regional and local level for PA management and sustainable use of biodiversity resources
<p>Insufficient and unsustainable sources of funding for protection and conservation</p> <p>Government spending in this sector has covered personnel emoluments and recurrent costs. Non-reliability and insecurity of long-term financing mechanisms is hampering PA management, conservation and sustainable use of biodiversity. It’s unlikely that public expenditures will grow in the near future.</p>	<ul style="list-style-type: none"> ▪ Design, manage and implement a comprehensive policy and legal framework for long-term sustainable financing mechanism for PA network in SL. 	<ul style="list-style-type: none"> ▪ Build capacities at all administrative levels for ensuring effectiveness in the utilization of funds ▪ Build strong monitoring and fiduciary capacities at all levels
<p>Insufficient public awareness and low perceptions of the value of protection, conservation and sustainable use</p> <p>The role of PAs, wildlife and biodiversity in development, people’s life and health is yet to be fully appreciated by the people of SL. The lack of understanding has resulted in indiscriminate exploitation and destruction of PAs, wildlife and biodiversity.</p>	<ul style="list-style-type: none"> ▪ Design and implement programs for environmental education and awareness creation at the national and sub-regional levels. ▪ Mainstream environment education into national education programmes and into district level planning processes. 	<ul style="list-style-type: none"> ▪ Develop and implement programmes to raise awareness and increase know-how of key stakeholders ▪ Design and implement incentive and reward frameworks for effective stakeholder involvement in NRM and PA management ▪ Train district councils on how to mainstream PA management into local level development planning
<p>High level poverty, unemployment and absence of livelihood improvement opportunities at the community level</p> <p>The majority of people in SL depend on natural resource for subsistence or gain. Unemployment is high among the youth and women in SL –based. The population is also growing fast at about 2% per annum. These factors affect levels and status of natural resource use and protection. A high percentage of SL live on less than US\$1 a day.</p>	<ul style="list-style-type: none"> ▪ Design and implement the government’s policies on economic growth, population stabilization and poverty reduction. ▪ Ensure sectoral policies on protected area management and biodiversity conservation promote equitable opportunities to the wider population ▪ Investigate and strengthen mechanisms and incentives for natural resource use and conservation in and outside protected areas. 	<ul style="list-style-type: none"> ▪ Enhanced integration between biodiversity conservation objectives and district development vision. ▪ Align conservation objectives with the government’s PRSP. ▪ Implement action plans formulated under the various policies related to poverty reduction, population stabilization and reduction of unemployment.

