5.2 National Biodiversity Action Plan

GOAL 1: To take appropriate measures to protect critical ecosystems against harmful effects or destructive practices for conservation of biological diversity.

5.2.1 Priority short-term, medium-term and long-term actions, costs and implementers

Goal-Objective-Action-Expected Result	**INDICATORS**	**IMPLEMENTERS**	**COST US$**	**(I) 2004-2008**	**(II) 2009-2015**
G1O1- A1 Protecting nesting grounds for marine turtles E1: Project management staff hired E2: Equipment acquired and installed E3: A protection program for marine turtles nesting grounds put in place E4: More than 85% of the marine turtles nesting grounds identified E5: A marine turtles management committee established	A protection program for marine turtles nesting grounds designed by 2005 More than 40% of the coastline of Liberia checked for marine turtles nesting grounds by 2006 More than 85% of the coastline of Liberia checked for marine turtles nesting grounds by 2007 A 27- member National Marine Turtles committee selected by	SAMFU, SAED, UL, MOA	200,000	X	

E6: Marine turtles nesting grounds fully protected	2008				
G1O1- A2 Strengthening the Liberian coast guard to deter marine poaching E1: Project management staff hired E2: Two naval boats acquired and operationalized E4: Instructional materials produced E5: Coast guards capacity improved E6: Liberia's territorial waters fully protected from poachers	Regular patrols by the Liberian coast guards commenced by 2005 350 training manuals developed by 2005 400 information brochures developed by 2005 125 coast guards trained by 2005 250 coast guards trained by 2007	MOD, BOMA, MOA, MOJ	2,000,000	X	
G1O1-A3 Constructing storage facilities for the conservation of local crop genetic materials	Five suitable sites selected in each of the five Agricultural regions by 2005	LWS/WF, CARI, MOA, LPMC	510,000	X	

E1: Project management staff hired E2: Equipment acquired and installed E3: Local genetic materials collected and characterized E4: Storage facilities properly managed E5: Seventy-five storage facilities operationalized E6: Viable agricultural local genetic materials stored E7: Local genetic materials adequately stored in the five Agriculture Regions	Eight storage facilities constructed in each Agricultural region by 2006 120 personnel trained in storage procedures and techniques by 2006 Forty storage facilities in all Agricultural regions operationalized by 2007 Thirty-five additional storage facilities constructed in the remaining 7 counties by 2007 225 personnel trained in storage procedures and techniques by 2007				
G1O1-A4 Providing local crop genetic materials for	750 farmers and their respective planting	LWS/WF, CRS, CARI, UMCAP, CDA, MOA	830,000	X	

use by local communities E1: Project management staff employed E2: Equipment acquired and installed E3: Farmers and their respective planting materials needs met for each county E4: Livelihood activities of farm households in all 15 county raised E5: Farmers sensitized on the concept of revolving planting materials	materials needs identified for each county by 2004 Crop genetic materials distributed to communities identified by 2008				
G1O1-A5 Rehabilitating wetlands and mangroves E1: Project management staff hired E2: Equipment acquired and set up E3: A rehabilitation program of degraded	A rehabilitation program of degraded wetlands and mangroves in each county designed by 2004 Recruitment of personnel by 2005	EPA, BOMA, MOA, MOH, FDA	200,000	X	

wetlands and mangroves in each county established E4: Personnel for project operations employed E5: Productivity of wetlands and Mangroves of Liberia improved					
G1O1-A6 Developing Action Plans for bird species of global conservation concern E1-Information on the ecology and reproduction of the birds made available E2-The public fully informed about the birds E3- Laws to protect the birds available	Programmes to study the ecology and reproduction initiated by 2005 Appropriate awareness designed by 2005 Awareness programme annunciated in the 15 vernaculars of Liberia by 2006 Legislation to protect the birds enacted by 2007	FDA, SCNL	150,000		

G1O1A7 – Establishing and supporting local site support groups (SSGs) at hotspot to help in site protection	Establishing a profile of local SSGs by 2005 Conduct workshops for awareness by 2005	SCNL, FDA, Birdlife Intl/Liberia	200,000	X	
G1O1A8 – Encouraging research in all seasons crop production	Awareness, Legislation and Monitoring conducted by 2005	UL,CARI, FDA, MOA	50,000	X	
G1O1A9 – Remediation of abandoned mines in natural heritage sites	East Nimba Heritage Site assessed for possible tourist attraction by 2004 Existing facilities including the railway rehabilitated by 2006 Old mines reclaimed by 2007	MICAT,EPA, MLME LIMINCO	1,500,000		

G1O1A10 – Protecting of breeding colonies of bird species of global conservation concern E1-The public fully informed about the birds The birds fullu protected	Studies of the period of migration conducted by 2005 Intensive protection campaign executed during period of migration from 2005 to 2008	Birdlife International, SCNL		X	
G101-A11: Initiating integrated conservation and development for threatened Important Bird Areas (IBAs) E1-Important Bird Areas of the country identified E2- Important bird Areas of the country protected	National survey to identify Important Bird Areas of the country conducted by 2005 Integrated ecosystem management approached adopted for the areas by 2006	Birdlife International, SCNL			
G1O2-A1 Gathering baseline information on the taxonomy of plants and animals in proposed protected areas E1: Project management staff employed E2: Equipment acquired	Recruitment of botanists, biometricians, zoologists, foresters and taxonomists by 2004 Taxonomical survey of each proposed protected area conducted by 2005	FDA, UL, CUC, SOLF	250,000	X	

and put in use E3: Botanists, biometricians, zoologists, foresters and taxonomists hired E4: Taxonomical data of each proposed protected area catalogued					
G1O2-A2 Gathering socioeconomic data of proposed protected areas E1: Project management staff employed E2: Equipment acquired and put in use E3: Social foresters, agricultural extensionists, forest and agricultural economists, sociologists and statisticians employed E4: Socio-economics data of each proposed protected area compiled and catalogued	Recruitment of social foresters, agricultural extensionists, forest and agricultural economists, sociologists and statisticians by 2004 Socio-economics survey of each proposed protected area conducted by 2005	SCNL, FDA, UL, CUC, CI, FFI	90,000	X	

G1O2-A3 Supporting creation of Lake Piso, Cestos-Senkwehn, Wologizi, Lofa-Mano and Wenegizi as protected areas E1: Project management staff hired E2: Equipment acquired and put in use E3: Project operations personnel employed E3: Baseline ecological data of Lake Piso, Cestos-Senkwehn, Wologizi, Lofa-Mano and Wenegizi gathered and catalogued E4: Lake Piso, Cestos-Senkwehn, Wologizi, Lofa- Mano and Wenegizi gazetted as protected	Recruitment of personnel by 2004 Preliminary survey of Lake Piso, Cestos-Senkwehn, Wologizi, Lofa-Mano and Wenegizi conducted by 2004 – 2006 Survey result published by 2007 A legislation to gazette Lake Piso, Cestos-Senkwehn, Wologizi, Lofa-Mano and Wenegizi as protected areas enacted by 2008	FDA, SCNL, CI, FFI	400,000	X	

G1O2-A4 Supporting the creation of new protected areas to cover all the country's ecosystems E1: Project management staff set up E2: Equipment acquired and operationalized E3: Personnel for inventories hired E4: Inventories result catalogue and accessible E5: Suitable gazetted as ecosystem types as protected areas	Recruitment of personnel for inventories by 2004 3 regional inventories conducted to determine the various ecosystem types in the country by 2004 - 2006 Inventories result published by 2007 A legislation enacted to gazette the suitable ecosystem types as protected areas enacted by 2008	FDA, UL, EPA, SOLF	112,600	X	
G1O2-A5 Establishing/Demarcating boundaries of new and existing protected areas E1: Project management staff employed	A surveying team assembled for each protected area by 2005 Boundary lines demarcation of each protected area commenced by 2005	FDA, EPA, SOLF, MLME, CI	1,000,000	X	X

E2: Equipment acquired and operationalized E3: Survey team hired E4: Boundary lines of each protected area established	25% boundary lines of the protected areas demarcated by 2006 50% boundary lines of the protected areas demarcated by 2007 75% boundary lines of the protected areas demarcated by 2008 100% boundary lines of the protected areas demarcated by 2009				
G1O2-A6 Preparing management plans for protected areas E1: Project management staff employed E2: Equipment acquired and operationalized E3: Stakeholders especially local communities ideals and opinions incorporated.	3 participatory/consultative workshops of stakeholders, especially local communities conducted to consider the plans by 2006 A management plan for each protected area designed by 2007	FDA, MPEA, CI, EPA	50, 000	X	

E4: Each protected area comes under appropriate Management regime					
G1O2-A7 Formulating appropriate legislation for protected areas E1: Existing legislation reviewed E2: Results of review process made public E3: New legislation formulated to cope with present realities	Consultative workshop to review existing legislation on protected area management held in 2005 Drafting committee set up to formulate a revised legislation in 2005 A new protected area law enacted in 2006	FDA, EPA, MOJ, Green Advocates	50,000	X	
G102-A8: Establishing four botanic gardens in Southeastern, Northwestern and Central Liberia and within the Monrovia area	Committee set up to select suitable Sites identified by survey engineers and botanists 10 acres earmarked for each of the sites plant specimens	POCAL, UL, FDA, MOA	400,000		X

	collected from botanically rich areas in the country Botanic gardens established in Bong (Central), Maryland (Southeastern) and Grand Cape Mount (Northwestern) Counties				
G1O3-A1 Reactivation and strengthening the capacities of biodiversity institutions E1: Project management staff employed E2: Equipment acquired and operationalized E3: Colleges of Science and Agriculture & Forestry, University of Liberia re-capacitated operationalized E4: Science departments and Faculty of Agriculture & Integrated Rural	University of Liberia, Colleges of Science and Agriculture & Forestry renovated by 2005 Cuttington University College, Science departments and Faculty of Agriculture & Integrated Rural Development renovated by 2006 Mano River Union School of Forestry and the Marine Training Institute reactivated by 2006 Curricula of the various	UL, CUC, MOE, MOA, FDA	1,200,000	X	

Development, Cuttington University College re-capacitated & operationalized E5: Mano River Union Forestry Training Institute and Marine Training Institute re-capacitated operationalized E6: Curricula of the various institutions upgraded	institutions revision completed by 2006				
G1O3-A2: Holding in-service workshops and seminars to update knowledge of personnel in forestry and protected areas management E1: Project management staff employed E2: Equipment acquired and operationalized E3: Training needs and level of biodiversity institutions met	Training needs and level of biodiversity institutions identified by 2004 3 regional training workshops in forestry and protected areas management conducted by 2004 6 regional workshops in forestry and protected areas management conducted by 2005	UL, CUC, EPA, FDA, SOLF	25,000	X	

E4: Capacity of personnel in forestry and protected areas management built and improved					
G1O3-A3: Building human capacities in EIA in related biodiversity disciplines E1: Present cadet of EIA technicians reviewed E2: Roaster of EIA technicians set up E3: EIA training conducted at all levels	Training of trainers workshop held for EIA technicians 2004 Training workshop on EIA techniques conducted in 2004 50 EIA technicians certificated in 2005 10 college graduates trained in environmental risk assessment by 2006	EPA, FDA, MOA, MLME	50,000	X	
G1O4-A1 Revision of, as appropriate, existing legislations in forestry and protected areas management E1: Project management staff employed	Legislation enacted to ensure 10% of the benefit accrued by logging companies be remitted to the local communities in which they operate by 2005 Suitable mechanisms	EPA, MPEA, FDA, MIA,MOJ, Green Advocates	85, 000	X	

E2: Equipment acquired and operationalized E3: Legislation enacted to ensure 10% of the benefit accrued by logging companies be remitted to the local communities in which they operate by 2005 E4: Suitable mechanisms designed for the implementation of protected areas management laws by 2006 E5: Appropriate legislations enacted for forestry and protected areas management by 2006	designed for the implementation of protected areas management laws by 2006 Appropriate legislations enacted for forestry and protected areas management by 2006				
G1O4-A2 Assessing existing institutional capacities to determine gaps for the creation of new institutions as appropriate in forestry, marine and protected areas management	Capacity gaps identified in existing biodiversity institutions by 2004 Existing biodiversity institutions curricula revised by 2005 Institute of	UL, CUC, MOE, MOA, FDA, EPA	82,000	X	

E1: Project staff employed E2: Equipment acquired and put in use E3: Existing biodiversity institutions capacitated and upgraded E5: Institute of Environmental Resources Management operationalized	Environmental Resources Management established by 2006				
G105-A1: Conducting social, economic, cultural and environmental impact assessment of protected areas and ecological corridors	Impacts on customary use of biological resources established Impacts on the respect, preservation, protection and maintenance of traditional knowledge established Impacts on sacred sites and associated ritual ceremonial activities established Codes of Ethics and protocols for cultural privacy developed	SCNL, FDA, FFI, CI	175,000	X	X

	Baseline studies conducted to include the following elements: a) species inventories b) identification of endangered species and species at risk c) identification of particular significant habitats d) identification of areas of particular economic significance e) identification of particular significant physical features f) identification of sites of religious, spiritual, ceremonial and sacred significance g) demographic factors				

	economic parameters such as housing and accommodation, health status, income level, infrastructure and asset distribution, traditional systems of production and gender roles and relations, traditional non-monetary systems, responsibilities and concepts of equity in society, and traditional systems of resources allocation, including resources that have been hunted, collected or harvested				
G1O6A1: Developing regulations covering the introduction of exotic genetic resources E1-The UN Treaty on Genetic Resources ratified E2- Legislations on the Introduction of genetic reforms reviewed	The FAO convention on Genetic Resources acceded to or ratified by 2004 Consultative meetings with stakeholders to review existing policies on exotic genetic resources held by 2005 UN Treaty on Genetic	UL,EPA, FDA, MIA, MOJ, MPEA, MOA	200,000	X	

E3-Guidelines and Regulations on the introduction of genetic resources into Liberia prepared E4-Leislation enacted on the introduction of genetic resources	Reform adopted by 2005 Legislations on exotic genetic resources reviewed by 2005 Recommendations on the introduction of genetic resources made to the Legislature for enactment into law				
G1O6A2: Conducting workshops on the importance of genetic resources E1: Resource persons/experts on genetic resources identified for consultation E2: Stakeholders identified E3: Public awareness materials on the importance of genetic resources prepared and the information disseminated through the media	Survey carried out to identify resource persons/experts in genetic resources conservation and roster of experts prepared Relevant institutions for genetic resources identified and informed on the conduct of workshop Print materials such as leaflets, brochures on the importance of genetic resources prepared and distributed to public and	MIA,MOA, FDA	75,000	X	

	stakeholders Use of dramas, talk shows, interviews, to inform stakeholders and the general public on the importance of genetic resources				
G107A1: Developing regulations for logging and plantation development on enclaves on higher elevations and waterways	Workshop for creating awareness on the reservation of enclaves on high elevations within industrial plantations and along waterways conducted by 2005	MIA,MOA, FDA,MICAT, SOLF, Firestone, LAC	25,000	X	
G107A2: Creating awareness on the importance of providing/leaving enclaves on higher elevations and waterways E1-cross-section of the public fully informed E2-Farming and the development of plantations on high elevations and along waterways reduced	Consultative meetings with the management of large-scale plantations held by 2005 Consultative meetings with local government officials in the countries held by 2005 Village drama groups organized by 2006	FDA,MOA, EPA, SAMFU, SOLF		X	

G109A1: Designing appropriate artisanal fishing gears	Selected net mesh tried by 2004 Construction of ponds by 2004	LWS/WF,UMCAP,MIA,MOA	250,000	X	
G109A2: Establishing fishing regiments/seasons E1- National fish statistics obtained E2- Fishing monitored and regulated	A monthly survey to determine species, size and quantity of fish harvest conducted by 2005 A monthly quota of fish harvest determined by 2006 Regulations on fish harvesting developed by 2006 Mechanism to monitor fish harvesting quota put in place by 2006	MOA, EPA		X	
G109A3: Reinforcing existing laws on the use of explosives and chemicals E1-Unlawful use of explosive reduced significantly	Awareness workshop conducted by 2004 Existing laws on explosives and chemicals reinforced between 2004-2008	MIA, MOJ, FDA	20,000	X	

G1011A1: Reinforcing quarantine laws E1- The entry of pathogens and undesired alien species of plants and animals reduced by 90% E2: Quarantine laws widely known	Existing laws reviewed, strengthened and enforced between 2005 Public education and awareness on quarantine laws conducted nation wide 2005 Relevant Ministries and Agencies employ enough quarantine officers by 2006	MOA, MOJ, MOF	45,000	X	
G1012A1: Establishing monitoring systems for the introduction of Alien species E1- Airports and Seaports controlled for the importation of alien species E2: Customs officers know about alien species	Monitoring capacity of EPA strengthened by 2005 Customs officers trained in tracking down alien species by 2005 Environmental inspectors and customs officers set up a joint monitoring team by 2006 A national monitoring put in place and operational by 2007	MOA,MOJ, FDA, EPA	30,000	X	

G1O13-A1 Supporting law enforcement in the conservation of each ecosystem E1: Project management staff hired E2: Equipment acquired and put in place E3: 660 training manuals produced for protected areas law enforcement E4: 1,400 information brochures produced for protected areas law enforcement E5: General public awareness on the importance of ecosystems conservation appreciated E6: Protected areas personnel capacity improved	660 training manuals designed for protected areas law enforcement by 2004 1,400 information brochures designed/ developed for protected areas law enforcement by 2004 6 awareness campaigns on the importance of ecosystems conservation for the general public conducted by 2005 250 protected areas personnel trained by 2006 500 protected areas personnel trained by 2007	SCNL, ERADRO, UL, CEEP,SOLF, FDA, LNP	58,000	X	

G1014A1: Designing incentives package for graduates of biological and environmental sciences E1: Salary structure of graduates reviewed E2: Housing scheme set for college graduates	A survey of students in the areas of environment sciences is conducted by 2004 A scholarship programme initiated by 2005 Habitat programme initiated for graduates in 2006 Graduates in biological sciences provided housing by 2008	MPEA, MOL, MOE	185,000	X	
G1O15-A1 Supporting prevention of coastal erosion by putting in place break waters and planting of coconut trees along the coast line E1: Project management staff employed E2: Equipment acquired and operationalized E3: 95% of affected coastline areas and those	45% of affected coastline areas and those pruned to erosion checked by 2005 95% of affected coastline areas and those pruned to erosion checked by 2006 Break waters constructed along 50% of the coastline areas and areas pruned to erosion by 2007 Break waters constructed	EPA, MPW, MLME, FDA, NPA	350,000	X	

proned to erosion identified E4: Beaches and other areas pruned to erosion prevented from erosion E5: Sand mining along beaches controlled	along 95% of the coastline areas and areas pruned to erosion by 2008 Coconut trees planted along beaches by 2008 Control measures instituted to regulate sand mining along beaches 2008				
G1015A2: Enforcing existing laws on beach mining E1-The National Coast Guard conduct regular petrol along the beaches E2- Beach mining reduced by 75%	The National Coast Guards empowered by 2005 Alternative to coastal sand found by 2005	MOD, MIA, MPW, NPA	4,000,000	X	
G1016A1: Supporting training in Risk Assessment and management for Biotechnology E1- Trained personnel available to conduct risk assessment	10 Graduates in biological sciences and/or chemistry selected by 2005 The graduate trained at the postgraduate levels in risk assessment by 2008	EPA, UL, CUC, MOA	200,000		

E2-Personnel capacitated to conduct risk assessment	The graduate integrated and empowered				
G1016-A2: Supporting adherence to international regulations governing the use and release of LMOs to the environment E2 -Bio-safety policy formulated E3- The use and release of LMOs legislated E4-Monitoring and enforcement of legislation on LMOs carried out E5- Public awareness on the issues of Bio-safety carried out on the issue of biosafety	Necessary administrative system set up at the EPA by Biosafety activities coordinated and come in collaboration with relevant national institutions /UNEP-GEF National vision on biosafety identified Draft NBF prepared following series of consultations Finalizing NBF and submission to UNEP-GEF	EPA, Green Advocates, MFA, MOA	85,000	X	

GOAL 2: To create biodiversity awareness among sectors of the society and promote international cooperation

G2O1-A1 Conducting awareness campaign for the conservation of wetlands and mangroves. E1 – Project staff employed E2- Project equipment procured and installed E3 - More information brochures produced for conservation of wetlands and mangroves in Liberia E4 – Awareness campaigns on conservation of wetlands and mangroves executed appropriately E5 – National Wetlands and Mangroves Committee established E6– National Wetlands and Mangroves Policy formulated	5 project staff recruited for awareness campaign on wetlands and mangroves by 2004 Project equipment purchased and installed equipment by 2004 150 information brochures designed on wetlands and mangroves by 2004 Awareness campaigns on wetlands and mangroves in conducted in 4 counties in Region #1(Montserrado, Margibi, Bomi and Grand Cape Mount counties) for agricultural extension workers by 2004 Awareness campaigns on wetlands and mangroves in conducted in 4 counties in Region #2 (Lofa, Nimba, Gbapolu and	EPA, FDA, SAED, FACE, MOA	200,000	X	

	Bong counties) for agriculture extension workers by 2004 Awareness campaigns on wetlands and mangroves in conducted in Region #3 in Grand Bassa, Rivercess, Sinoe and Grand Kru counties) for agriculture extension workers by 2005 Awareness campaigns on wetlands and mangroves conducted in Region # 4(Grand Gedeh, River Gee and Maryland counties) for agriculture extension workers by 2005 Two members selected from each of the fifteen counties for the National wetlands and mangroves committee by 2006 National wetlands and mangroves policy formulated by 2006				

G2O1A2 – Conducting Training for technicians in the handling of LMOs E1 – Project Management Staff employed E2 – Project equipment secured E3 – Information brochures on LMOs produced E4 – More LMOs technicians trained E5 – Directory of LMOs technicians established	5 project staff recruited by 2004 project equipment procured and installed by 2004 75 Technicians identified and trained in the handling of LMOs by 2005 75 training brochures prepared for technicians by 2004	EPA, MOA, MFA	25,000	X	
G2O2A1 – Conducting survey of traditional, knowledge, practices and innovations at relate to biodiversity conservation E1 – Project management staff employed E2 – Project equipment and materials procured	Survey team recruited to conduct survey of traditional knowledge/practices that relate to biodiversity conservation by 2004 Survey of traditional knowledge/practices that	EPA, SAMFU, LIFE	50,000	X	

E3 – Human resources mobilized E4 - Survey conducted on traditional knowledge/practices that relate to biodiversity conservation E5 – Traditional knowledge/practices that relate to biodiversity conservation catalogued E6 – Traditional healers association organized and empowered	relate to biodiversity conservation conducted in all 15 counties by 2005				
G2O2A2 – Establishing a technical committee comprising representatives of traditional people and researchers to conduct a survey of traditional knowledge, practices and innovations that relate to biodiversity conservation E1 – Project Management Staff employed E2 – Project equipment and materials procured E3– Technical committee on	Representatives of Traditional people and interest groups from the 15 counties selected to document traditional knowledge/practices by 2005 Workshop conducted for traditional people and interest groups from the 15 counties to documents traditional knowledge/practices by 2005	LIFE, AFELL, LWI, MIA, EPA	75,000	X	

Traditional Knowledge/practices that relate to biodiversity conservation established E4 – Members of the Technical Committee trained E5 – Traditional people and researchers involved in biodiversity conservation					
G2O2A3 – Providing incentives for the harnessing and usage of traditional knowledge, practices and innovations E1 – Project Management Staff employed E2 – Project equipment and materials procured E3 – Incentives beneficiaries selected for the harnessing and usage of traditional knowledge practices E4 – Traditional knowledge/practices information made available	50 beneficiaries identified by 2004 Workshop conducted for beneficiaries by 2004	FFI, LIFE, AFELL, FACE	150,000	X	

E5 – Traditional knowledge/practices acknowledged					
G202 –A4: Conducting a composite study on the protection of traditional knowledge	A questionnaire on legal protection of traditional knowledge developed A nation wide survey on the need for values of traditional knowledge carried out Different cultural practices in Liberia reviewed and documented Recommendations on the how to protect and enhance traditional knowledge compiled	LIFE, AFELL, LWI	40,000	X	X
G2O3A1 – Supporting survey of endangered plants and animals E1 – Project Management staff employed E2 – Project equipment and materials procured	4 taxonomists trained by 2005 Survey of endangered plants and animals conducted by 2006 Manual of endangered plants and animals produced and published	FDA, UL, SCNL, FFI, CI	100,000	X	

E3 – Taxonomists employed E4 – Taxonomists catalogued report E5 – Endangered plants and animals documented in Liberia	by 2006				
G2O3A2 – Establishing database of endangered species E1 – Project management staff employed E2 – Project equipment and materials procured E3 – Database designed and installed E4 – Database experts employed and trained in handling database of endangered species E5- Website developed and launched for endangered species of Liberia	Database developed for endangered species by 2006 Workforce recruited and trained to manage database of endangered species by 2006 Website development and operational by 2006	FDA, EPA, UL, CUC	50,000	X	

G2O4-A1 Supporting the establishment of the departments of Aquaculture & Fisheries and Wildlife Management within the College of Agriculture & Forestry, University of Liberia E1 – Project Management Staff employed E2 – School of Aquaculture, Fisheries and Wildlife Set up E3 – Curricula developed for aquaculture and fisheries and wildlife	10 persons trained in Aquaculture, 10 persons trained in fisheries and 10 persons trained in wildlife by 2008	UL, MOE, MPEA	1,500,000	X	X
G2O4A2 – Accessing international support for short and long term fellowship in biodiversity education/awareness E1: Employment of project staff E2: More persons trained in the areas of biodiversity conservation	100 beneficiaries identified and trained by 2006 at varying levels	MPEA, MFA, MOE, EPA, MOA	12,000	X	X
G204-A3: Supporting establishment of nature	Nature conservation campaigns conducted in	CEEP, LIFE, SCNL, POCAL	25,000	X	X

conservation and environmental clubs	all 15 counties 4 local communities in each country and 5 high schools in each county selected as d headqua rters of nature clubs Local communities knowledge of nature conservation enhanced Students widely involved in nature conservation campaigns				
G2O5A1 – Conducting inventory of biodiversity institutions and create forum for cooperation E1 – Project Management Staff employed E2 – Project equipment and materials procured E3 – Biodiversity institutions listing compiled	Project equipment and materials procured by 2004 Biodiversity institutions inventorized by 2004	EPA, MPEA		X	
G205-A2: Supporting establishment of a national committee of	Inter-agency team set up Roster of experts	EPA, MOA, MFA, MOJ	10,000	X	

interdisciplinary experts for biosafety, plant genetic resources and access to genetic resources	compiled Competent authorities named on the basis of expertise available in the agencies				
G2O6A1 – Creating media strategy for biodiversity conservation E1-Realignment of national budget in favor of biodiversity conservation adapted	Biodiversity conservation awareness raised at high political level by 2005	EPA, MICAT, PUL, GECOMSA, UL	50,000	X	X
G2O6A2 – Conducting training for environmental journalists in biodiversity conservation conducted E1 – Project Management Staff employed E2 – Project equipment and materials procured E3 – Training manuals produced E4 – Environmental journalists trained E5 – Environmental	Training of Trainers Workshop for journalists conducted by 2004 75 training manuals circulated by 2004 50 Environmental journalists identified and trained by 2005	UL, PUL, GECOMSA			

reportings improved					
G207-A1: Developing national regulations for the collection of germplasm	Public awareness campaign conducted nation wide First National workshop held to discuss elements of the regulation 4 provincial workshops conducted in selected places in Liberia Proceedings from the five workshops widely circulated for comments Second National Workshop conducted to incorporated views of the public Regulations for germplasm collection promulgated	MOA, MOJ, UL	50,000	X	X
G207-A2: Supporting research to identify cultural links between bird species and local people E1-The cultural-bird species	Consultative meetings with local people in the 15 counties held by 2005 Birds of cultural significance identified by	Birdlife International, SCNL, SOLF	25,000	X	

linkage of the 15 counties catalogued	2005				
G207-A3: Supporting the setting up of a herbarium at the University of Liberia E1-herbarial facilities made avaialabe E2-plant speciments collected and mounted Plant speciments catalogued	Infrastructure constructed/or procured by 2004 Essential equipment and logistics procured by 2005 Botanist and plant taxonomist employed by 2005 15 Field expeditions carried out by 2006	UL, EPA,FDA	250,000	X	
G2O8-A1 Supporting the use of transferred and appropriate technology to local users and conditions. E1- Project Management Staff employed E2 - Purchased and installed equipment E3 -Ttraining brochures produced on the adaptation of technology transferred to local users and conditions for	7 project staff recruited by 2004 Purchased and installed equipment by 2004 1500 training brochures for farmers in adapting transferred technology to local users and conditions by 2004 Progarmme for the transferred of technology in agricultural production	MOA, EPA, MOJ, NBA, MFA	75,000		

farmers E4 – Local users trained in adapting technology transferred	for 100 farmers in Nimba, Lofa and Bong counties designed and implemented by 2004 Pogramme for the transferred of technology in agricultural production for 100 farmers in Grand Bassa, River Gee, Grand Gedeh and Sinoe counties designed and implemented by 2004 Pogramme for the transferred of technology in agricultural production for 100 farmers in Montserrado, Bomi and Grand Capemount counties by 2005 Pogramme for the transferred of technology in agricultural production for 100 farmers in Grand Kru, Sinoe and Maryland counties 2005 10 farmers identified in each county for				

	experimenting with adaptation of technology transferred 2006				
G209 – A1: Supporting the inclusion of environmental education into school curricula E1: Project staff employed E2: Selected capacitated to teach environmental sciences E3: Students minds are molded to environmental education and awareness	Schools to participate in the programme identified by 2005 Syllabus of the selected schools developed by 2005 Teachers trained in the presentation of environmental sciences by 2006 Text books and teaching materials on environmental sciences procured by 2006	MOE, UL, Don Bosco	85,000	X	
G2010-A1: Ratifying the International Treaty on Plant Genetic Resources for Food and Agriculture	Treaty published in the media for public consumption Awareness workshop conducted for legislature and decision makers Importance of the Treaty	MOA, MFA	15,000		

	well understood Liberia ratifies the International Treaty on Plant Genetic Resources for Food and Agriculture				
G2010-A2: Developing a sub-regional legal instrument for trans-boundary conservation of genetic resources within the Mano River Basin E1-legislation enacted by the countries of Mano River Basin countries to conserve genetic resources	The need for a sub-regional legal framework for trans-boundary conservation initiated by Liberia Three tri-national meetings held in Guinea, Sierra Leone and Liberia Legal instrument drafted by a team of experts A sub-regional law on the trans-boundary conservation of genetic resources in the Mano River Union basin enacted by the three parliamentary bodies of Guinea, Sierra Leone and Liberia	MOJ, MFA, EPA, FFI, FDA	85,000	X	X
G2010-A3: Developing sub-regional mechanisms for the	Hold 2 consultative meetings	FDA, Birdlife International, SAMFU,	2,500,000	X	X

monitoring of trade in wildlife in the Upper Guinea Forest Ecosystem E1-Wildlife trade within the Upper Guinea Forest Esystem documented E2- Illegal trade in wildlife reduced by 75%	Conduct two sub-regional workshops on the modalities for the mechanisms Identify ports with records of frequent trade in wildlife Set up monitoring offices in Liberia, Guinea, Sierra Leone, Ghana, Cote d'Ivoire and Togo	CI			
G2010-A4: Supporting trans-boundary conservation initiatives to target Mount Nimba, Gola Forest and Tai-Grebo Corridors for the identification of Important Bird Areas (IBAs) E1- Working programme developed E2-The three of concern characterized E3-Plans of action developed	Consultative meetings of conservation institutions of the sub-region including Cote d'Ivoire, Liberia, sierra leone and Guinea held by 2005 Field expeditions carried out	FFI, EPA, Birdlife International, FDA, CI	50,000	X	
G2011 – A1: Supporting bio-prospecting for the promotion	Participatory rural appraisal conducted in	SOLF, MOH&SW, MIA, FDA, SOLF, UL	1,500,000		X

and development of complementary medicine	areas of biodiversity significance in Liberia Local community awareness increased A cadet of traditional healers and professional hunters identified in the 15 counters 15 Training workshops conducted for the traditional healers and hunters animals of medicinal values and medic inal plants surveyed A database of medicinal plants and animals of medicinal values established Use and application of traditional/complementary medicine introduced and functioning in hospitals and health centers				

G2O11-A2: Conducting training in appropriate method of extraction of medicinal plants E1- Individuals trained in each county on improved method of extraction of medicinal plants	Seminar conducted to trained 32 persons in improved methods of medicinal plants extraction	MOH, UL, MIA, MOA		X	
G2O12-A1 Disseminating biodiversity conservation information using local vernaculars E1 – Project Management Staff employed E2 - Project equipment and materials procured E3 - Local languages used for the dissemination of Biodiversity conservation E4 – Information brochure produced for the dissemination of biodiversity conservation information	Language answers organized and empowered by 2004 15 local languages used for the dissemination of biodiversity conservation information on radio and television by 2004	GECOMSA, CI, SCNL, LIFE, FACE	150,000	X	

G2O15-A1 Undertaking public awareness campaign about compliance on POP regulations E1 – Project Management Staff employed E2 – Project equipment and materials procured E3 – Training manuals produced about public awareness campaign on POPs regulations E4 - Personnel trained to undertake public awareness campaign about compliance on POPs regulations E5 – Information compliance on POPs regulations disseminated widely	500 training manuals produced on public awareness campaign for POP compliance regulations by 2007 25 persons recruited and trained for public awareness on POP compliance regulations by 2005 majority of the people are aware about the effects of 2007	EPA, MCI, MOF, MOA, MICAT	50,000	X	

G2O15-A2 Training of agro-chemical users on appropriate applications of agro-chemicals E1 – Project Management Staff employed E2 – Project equipment and materials procured E3 –Agro-chemical users selected on appropriate applications of agrochemicals E4– Agro-chemical users trained on appropriate applications of agrochemicals E5 – Agro-chemical applications done professionally	150 agro-chemical users identified by 2005 150 Training manual produced on appropriate applications of agrochemicals by 2006 Workshops on appropriate use of agro-chemicals conducted by 2005	MOA, WVL, LWF/WS, CRS, AGHRA, SDP	150,000	X	

GOAL 3: To commit the people to the sound and sustainable use of biological diversity to bring about socio-economic development

G3O1-A1. Development	Saw dust, eco-stoves	MRD, LEC, EPA	500,0000	X	X

and dissemination of alternative sources of energy and energy saving mechanisms E1- project office operationalized E2- alternative sources of energy developed E3 - Human capacity developed for the generation of alternative sources of energy E4 – 95% of towns in Rivercess has alternative sources of energy	developed and distributed to 500 families in densely populated towns by 2004 - 2005 Solar cookers developed and distributed to 500 families in densely populated towns between 2004 -2005 Ten technicians trained in the construction of solar panels by 2006 Solar panels constructed by 2007-2008 Solar panels distributed to targeted communities by 2009	MLME, FDA			
G3O1A2 – Supporting Rehabilitation and Reconstruction of Mt. Coffee Hydro Power Plant E1 – Rehabilitation and	The status of the hydro plant assessed by 2005 Engineering equipments mobilized by 2005	LEC, MPW, MRD	2,000,000	X	

reconstruction equipment procured E2 –Personnel trained to operate the facilities E3 – Mt. Coffee Hydro Power Plant rehabilitated E4 – In-service Training conducted for the maintenance of the plant E5 – Mt. Coffee Hydro Plant produced electricity on a regular basic	Rehabilitation and reconstruction of the plant actualized by 2007 5Workshops on the maintenance of the hydro electric plant conducted by 2006 Technicians trained in operation of the plant by 2007				
G3O1A3 –Supporting construction of mini Hydro Power facilities in northwest and southeast Liberia E1 – Project Office operationalized E2 – Engineering Contractural firms selected E3 – Generation of electricity from the two hydro plants commenced E4- Personnel train for	10 Liberians trained externally in hydro electricity technology by 2008 Local training workshops conducted in Northwest and Southeast Liberia by 2009 4 hydro plants in northwest Liberia and 4 hydro plants in southeast Liberia operational by 2011	MPW, MLME, LEC	8,000,000	X	X

the maintenance of the plants E5 – Regular supply of electricity to Lofa, Grand Capemount, Rivercess and Sinoe and some parts of Nimba counties					
G3O1A4 – Supporting biomass production as alternative source of energy E1 – Project management staff operationalized E2 – Raw materials identified and procured E3 – Human resources employed E4 – Biomass facilities constructed and commissioned E5 – Alternative source of energy is available	30 Liberians trained in the generation of alternative source of energy using biomass by 2006 Facilities for the generation of energy using biomass constructed by 2008 Biomass is widely used in Liberia by 2013	FDA,MOA, EPA, LEC		X	X
G3O2A1 – Raising public awareness in local	Dramatists and programmers engaged by	MIA, MICAT, GECOMSA, CEEP. FDA	50,000	X	

communities for capacity building in biodiversity conservation E1- Public and private institutions sensitized to need for training of their personnel E2-Institutions training their personnel E3- Institutions improving their capacities	2005 Sketches and scripts produced by 2005 Dramas and articles carried in the local media from 2005 to 2008				
G3O2A2 – Supporting involvement of relevant stakeholders in biodiversity conservation E1-Training programme of personnel developed E2-Scholarship made available for study in biodiversity	Consultative meetings of stakeholders on the need for human and institutional capacity for sustainable use of biodiversity by 2005 Plan of actions developed for capacity building by 2005	FDA, MICAT ,EPA,MRD,UL	25,000	X	
G3O3-A1- Establishment of community forests in Sinoe, Gbapolu, Nimba, Lofa, River Gee and Grand Bassa counties E1- Project management	Five communities in each of the six counties identified for the establishment of community forest programmes by 2004 Consultative meetings with	LIFE, CRS, SCNL, FDA MIA, SOLF	500,000	X	

staff engaged E2: eighteen communities engaged in community forestry programme E3: Communities trained to manage the community forest block E4: E5: Community forests established by 2008 E5 - Community members have improved source of income	the target communities conducted by 2004 30 community forests in place by 2005				
G3O4A1 – Establishment of a Unit for the Implementation of Environmental Related conventions E1- Effective mechanism for integration and streamlining of resources initiated	A center for the maintenance of synergies among national projects supporting key environmental convention set up by 2005	EPA	60,000	X	

G3O5-A1 Promoting utilization of wood wastage from timber operations through the use of charcoal kilns E1- Project management staff established E2: Potential charcoal producers identified and their capacity build E3: Charcoal Production Management Structure developed in each community E4: Wood waste from wood processing plants in all FDA regions are being converted to charcoal	All wood processing plants in each FDA region identified by 2004 20 potential charcoal producers per community near wood processing plants in each FDA region identified and sensitized by 2004 8 workshops to train 160 potential charcoal producers conducted by 2004 8 kilns built near wood processing plants in four FDA regions by 2005 8 kilns built near wood processing plants in four FDA regions by 2006 Management structure of community charcoal production for 16 communities in four FDA	FDA, LIFE, MIA	400,000	X	

	regions established by 2006				
G3O5-A2 Supporting community fish pond programs in areas of high hunting pressure E1- Office set up to support fish farming programme E2: Communities in western and southeastern Liberia with high hunting pressure identified E3: Communities in western and southeastern Liberia with high hunting pressure capacity build in fish farming E4: Fish farming programme operationalized	40 communities in southeast and 20 communities in northwest Liberia of high hunting pressure identified by 2004 Training Workshops for selected fish pond communities conducted by 2005 Tools for the construction of fish ponds procured and distributed by 2005 Fish ponds constructed and fingerlings supplied to targeted communities by 2006 Sufficient fish products on the market by 2006	MOA, MRD,LWF/WS, MIA,FDA	250,000	X	
G3O6-A1 Preparation of soil suitability maps	Essential equipments, logistic and materials for soil survey procured by	MOA,MLME, MRD, UL, MPEA	1,000, 000	X	X

E1- Office for the Project set up E2: National Soil Survey conducted E3: National Soil Maps produced	2004 Soil survey crews recruited and trained by 2006 National soil surveys commenced by 2007 National soil maps produced by 2009				
G3O6-A2 Supporting Land-Use Planning in Grand Gedeh, River Gee, Sinoe, Rivercess and Nimba Counties for sustainable use of biodiversity hotspots E1- Land –Use-Planning Office for set up for biodiversity hotspots E2 –Land –Use-Plans for counties in biodiversity hotspots produced E3- workshops on land use plans held in Grand Gedeh, River Gee, Sinoe,	Vegetation and soil maps of Grand Gedeh, River Gee, Sinoe, Rivercess and Nimba Counties procured by 2007 Consultative workshops on land use conducted by 2007/2008 Land use plans for counties within the biodiversity hotspots drawn by 2008	MOA, MPEA, MRD, MLME, FDA, EPA	40,000	X	X

Rivercess and Nimba Counties					
G3O7-A1 Supporting community agroforestry program in River Gee County E1 –Project office set up E2 – Communities in River Gee trained in agroforestry technologies E3 – Agroforestry technologies adapted in farming system in River Gee E4 – Food security improved and shifting cultivation reduced	50 communities in River Gee identified for agroforestry programmes by 2004 Workshops on agroforestry technologies conducted by 2005 Tools and implements distributed to the 50 communities in River Gee supplied by 2006 Agro-forestry farms established in River Gee by 2007	MOA,MRD, FDA, MIA, SOLF	250,000	X	
G3O8-A1 Supporting public awareness campaign for biodiversity conservation in mining settlements E1-Office for the project set up	Dramatists, script writers and theater artists recruited by 2004 120 dramas depicting measures for the conservation of biodiversity	MICAT, SOLF, MLME	50,000	X	

E2 –Dramas and theatrical pieces produced for mining settlements E3 – Dramas and theatrical pieces depicting measures for the conservation of biodiversity carried on television, radios and in the dailies	Organized and performed by 2005 – 2008 Radio, television, newspapers and magazines employed in the dissemination of information on biodiversity conservation by				
G3O8-A2 Implementing Reclamation of mine pits for biodiversity as post harvest strategy for conservation of biodiversity E1-Project office set up E2-Goldmine pits reclaimed in Western Liberia E3 –Gold and diamond mine pits reclaimed in Southeast Liberia	Locations of mining pits identified by 2009 Workshops conducted in mining areas on the need to reclaim mining pits by 2009 Reclamation of 250 gold mine pits in Bong, NImba, Grand Gedeh, Grand Bassa, and River Cess Counties supported between 2008 and 2010 for biodiversity conservation Reclamation of 500	MLME, MPW, EPA, LIMINCO,FDA,MOA,	3,000,000		X

	diamond mine pits in western and southeastern Liberia supported for biodiversity conservation between 2010 to 2011				
G3O8-A3 Supporting regulation of the use of toxic and hazardous substances in mining areas for biodiversity conservation E1 –Project office set up E2 - Existing regulations on the usage of toxic and hazardous substances in mining operations improved E3 –Compliance with regulation on the use of toxic and hazardous substances become more effective	Workshops held in mining areas on the danger of toxic and hazardous substances by 2006 Existing regulations on the usage of toxic and hazardous substances in mining operations reviewed by 2006 Environmental monitors employed to ensure compliance with regulations on the use of toxic and hazardous substances in mining operations by 2005	EPA, MLME, MOHSW, MOA,MOJ	25,000	X	
G3O9-A1 Inducing voluntary compliance to biodiversity laws.	Consultative meetings	LIFE, GECOMSA, CEEP, ERADRO, MICAT	20,000	X	

E1-Project office set up E2-- Consultative meetings organized for people residing within biodiversity important areas well attended E3- National awareness workshop organized for urban area well attended E4 – – Compliance to biodiversity laws improved	organized for people residing within biodiversity important areas by 2005 National awareness workshop organized for urban areas by 2005 Many Liberians comply with biodiversity laws voluntarily				
G3010 – A1: Developing Plant/Animal taxonomy centers E1: Setting up project staff E2: Developing of project staff to identify locations E3: Infrastructural developed in the four sites	Four taxonomic sites identified according to biodiversity significance by 2004 Infrastructural development carried on in the four sites by 2005 Equipment and materials procured 2006 Centers operationalized by 2006	UL, CUC, MOA, FDA	175,000	X	

E4: Plant and animal specimens preserved					
G3O11-A1: Conducting Research on phenology and propagation of indigenous species E1-Project office set up E2- Information on the time of flowering of 15 indigenous species obtained E3 – Information on the time fruiting obtained E4 – Information on the time of fruiting of the fifteen indigenous species storage ability of the seeds of fifteen indigenous species E5 – Propagation of fifteen indigenous species developed	Materials for conduction of research in the propagation of 15 indigenous species procured by 2004 Research on the floral biology of 15 indigenous species conducted between 2005 to 2008 Research in the propagation of 15 indigenous species between conducted 2005 to 2008	UL, CUC, LIFE, FDA, SOLF	150,000	X	X

G3O11-A2 Conducting periodic population assessment of large mammals within the proposed and existing national parks E1-Materials and equipment for the conduct of the assessment obtained E2- data on the population of large mammals of the national parks obtained	Organizational arrangement concluded by 2004 Community-based hunters selected from the communities within the vicinity of the parks by 2005 Actual assessment of large mammals of the parks conducted from 2005-2015	FDA,SOLF, SCNL, GECOMSA, CEEB	500,000	X	X
G3012 – A1: Supporting the adoption of appropriate agricultural practices E1: Project management staff employed E2: Centers for agro-services established E3: Appropriate agricultural practices appreciated by the	Fifteen project sites identified by 2005 Rural communities sensitized by 2007 Farming tools and implements distributed to rural communities by 2008 Training workshops for community members by 2009	MOA, CEEB, SOLF ERADRO	150,000	X	

communities E4: Improved food security and balanced ecosystem					

GOAL 4: To promote rational utilization and conservation of biological diversity

G4O1-A1 Re-activation of the Central Agricultural Research Institute. E1- The requirement for the renovation of CARI documented E2– Infrastructure and facilities at CARI made suitable for habitation and the conduct of research E3 – CARI restaffed with local scientists and administrative support E4 – Exchange of research fellows between CARI and other agricultural research	The state of the Central Agricultural Research Institute assessed by 2004 10 Liberians trained externally in relevant disciplines by 2007 All Infrastructures of the Central Agricultural Research Institute renovated and/or reconstructed 2009 50 local scientist recruited by 2008 300 support staff recruited by 2006 International contacts with other research institutions established by 2007	MOA, UL, FDA	5,000,000	X	

institutes resume	CARI begins to share research results by 2011				
G4O1-A2 Reconstruction and reactivation of the Forest Products Research Laboratory at the University of Liberia. E1- The requirement for the reconstruction of FPRL documented E2 – Infrastructure and facilities at FPRL made suitable for habitation and the conduct of research E3- FPRL re-staffed with local scientists and administrative support E4 – Exchange of research fellows between FPRL and other agricultural research institutes resume	The state of the Forest Products Research Laboratory assessed by 2004 5 Liberians trained externally in wood science & technology by 2007 International contacts with other research institutions established by 2007 All Infrastructures of the Forest Products Research Laboratory renovated and/or reconstructed 2009 FPRL begins to share research results by 2011	UL,FDA, LTA, LLA	1,000,000	X	
G4O1-A3 Building	600 high school graduates	UL, CUC, MOA	1,025,000	X	

human capacities in genetic conservation with specific emphasis on local crop genetic materials. E1- Project staff set up E2- Human capacity build at varying levels In genetic conservation E3 – Adequate and trained personnel deplored within the institutions concern with conservation of local crop genetics	trained in general agriculture and agronomy between 2005 and 2015 30 college graduates in the biological sciences trained at the post graduate levels in agronomy by 2008 15Liberians trained at the post graduate levels (M.Sc) and Ph.D by 2015				
G401-A4: Building capacities for biodiversity conservation in IBA communities E1-Personnel trained and equiped to educate communities about birds E2-Communities have	15 persons trained in ornithology at the diplomat level by 2006 Equipment and logistics procured by 2006 Alternative protein sources for the communities identified by 2007	Birdlife International, SCNL, SAED	150,000	X	

alternative sources of income and protein	Income generating activities for the communities initiated by 2007				
G403-A1: Strengthening the Alliance for Conservation in Liberia	Compile a list of Local environmental NGOs Hold a meeting with the NGOs Obtain the profile of each NGO and document previous works done by each Assist in sourcing funding for proposed projects	CI	25,000	X	
G4O4 – A1 Rehabilitating degraded lands Nationwide E1 – Recruit and set up a management team E2 – conduct a nation wide survey of degraded	Participatory Rural Appraisal and community sensitization meetings held in affected areas by 2004 Many local people are sensitive to the need for community woodlots and to save their forests by 2005	FDA, MOA, MLME, SOLF, MRD	$1,650,000	X	X

sites, including those caused by displaced people and refugees E3 – Replant degraded areas with plantations and woodlots for community use	Degraded lands in Montserrado, Lofa, Margibi, Nimba, Bomi, Grand Cape Mount, Bong, Maryland and Grand Bassa Counties rehabilitated by 2006 Local building materials and fuelwood products in large supplies by 2007 Pressure on high forest for local building materials and fuel wood significantly reduced by 2008				
G4O4-A2:Supporting the	Training workshops held on	FDA, UL, CI, LTA, SAMFU,	50,000	X	X

timber Certification scheme based on proven record of sustainable forest management E1-FDA personnel understand the certification scheme E2- Stakeholders appreciate the certification scheme E3-Timber harvest is based on sustainable use of the forests	the method of certification for FDA personnel by 2005 Consultative meetings held with stakeholders on the New forestry Law and the existing Regulations by 2005 Training workshops held on the construction of logging roads and timber harvesting methods by 2005	SCNL			
G4O6-A1: Supporting the implementation of the model forest management plan E1-Stakeholders appreciate the model forest management plan E2-conditions for adequate adherence to the model forest management obtained E3- The adherence to the	Consultative meetings held with stakeholders on the model forest management plan by 2005 , Logistics provided for field officers of FDA Housing and adequate accommodation provide for field officer of FDA Field excursions held to verify the implementation of the model forest	FDA, CI, SAMFU, LIFE	25,000	X	

model forest management plan verified	management plan by 2005				
G4O7-A1:Supporting the regulation of the harvesting of non-timber forest products E1-Quantitative and qualitative information on the non-timber forest product of the five agricultural regions available E2- Stakeholders of the five agricultural regions informed of the quality and quantity of non-timber forest products of their regions E3-- Stakeholders of the five agricultural regions informed of Legislation on the harvesting of non-timber forest products	Consultative meetings held with stakeholders in the five agricultural regions by 2005 non-timber forest product of the five agricultural regions assessed by 2006 Legislation on the harvesting of non-timber forest products enacted by 2006 Awareness campaign on the appropriate harvesting of non-timber forest products carried out in the five agricultural regions by 2006	FDA, EPA, MRD, LLA	250,000	X	X
G4O8-A1:Supporting the adherence to ITTO guidelines on logging	Consultative meetings with stakeholders on ITTO guideline held by 2004	FDA, EPA, SOLF	25,000	X	

along waterways E1-Stakeholders appreciate ITTO guidelines on logging along waterways E2-Logging companies complied with ITTO guidelines E3-Rivers and creeks in logging concession remain clean andwithout sedimentation	Regulation on ITTO guidelines on logging along waterways promulgated by 2004 Regular field inspections carried out in logging concession from 2005-2008				
G4O9-A1:Supporting the regulation and coordination of pit sawing E1-Pit sawyers in the forestry regions documented E2- Pit sawyers in the forestry regions licensed E3-Pit sawyers each in forestry region	Consultative meetings with pit sawyers in the four forestry regions held by 2004 Pit sawyers in each forestry region enlisted by 2004 Air of operation for pit sawyer stipulated in each forestry region by 2004 FDA regulation on pit sawing promulgated by	FDA, MRD, EPA,SOLF	75.000	X	

learned the diameter limit scheme	2004 Workshops on timber harvesting regulations held for pit sawyers in each forestry region				
G4O10-A1:Supporting the development of a participatory reforestation/afforestation programme E1- Regions for reforestation/afforestation earmarked E2- Organizations for implementation of the projects obtained	Consultative meetings of NGO ,CBO ,PVO ,and FDA held by 2004 Vegetation maps of Liberia procured by 2004 Areas needing reforestation identified by 2004 Project for each area identified prepared by 2005 Bating for the implementation of projects conducted by 2005	FDA,MOA, EPA,SOLF,LIFE	2,500,000	X	X
G4O11-A1: Revision of, as appropriate, legislation to enforce bushmeat trade regulations E1- Project office set up	Committee to review legislations on bushmeat trade formed by 2004 Revised document on bushmeat trade submitted for enactment by the	FDA, MOJ, SCNL, UL, CUC, GECOMSA, CEEB	25, 000	X	

E2 – Revised legislation on bush meat trade documented E3 – Revised documentation on bushmeat trade enacted into law	legislature in 2006 Trade in bushmeat regulated by law by 2007				
G4O11-A2 Supporting public awareness campaign on the negative impacts of snares (traps) E1 - Project office set up E2 – Script and drama produced for radio and television E3 – Script and dramas televised and carried on radio in the dailies and periodicals E4 – Snare as hunting method reduced by 75%	Participatory rural appraisal conducted in areas of high hunting pressure by 2005 Drama groups and youth clubs organized to preach the message of the dangers of snares by 2005 National Public Awareness Campaign designed on the negative impacts of snares by 2005 Television, radio, newspapers and magazines carry ads on the danger of snares by 2005	FDA,MICA,SCNL,LIFE, GECOMSA	25,000	X	

G4 011-A3: Supporting public awareness campaign to restrain hunting during breeding season E1 – Project office set up E2 – The whole spectrum of the Liberian public informed on the need to restrain from hunting during animal breeding season E3 – Hunting during breeding season is reduced nationwide by 80%	Traditional knowledge accesed and synchronized with scientific knowledge on the breeding patterns of game species by 2004 Dramatists, scriptwriters, radio and television programmers employed by 2004	SCNL, LIFE, CEEP, ERADRO, GECOMSA,	18, 000	X	

GOAL 5: To promote equitable sharing of benefits arising from biological resources

G501 – A1: Supporting national legislative framework on access to and sharing of benefits from use of genetic resources	Consultative meeting with stakeholders to discuss access to genetic resources and benefit-sharing held Proceedings of meetings widely circulated Law on Access to genetic resources and benefit-sharing developed and discussed at a national forum A national legislation is enacted on access to genetic resources and benefit-sharing	NBA, MOJ, EPA, FDA	45,000	X	X
G5O2-A1 Promoting eco-tourism in Liberia. E1 – Project Management Staff employed E2 – Project equipment and materials procured E3 – Tourist sites identified and surveyed nationwide	Brochures on tourist sites produced by 2005 Awareness campaign conducted to promote eco-tourism in the four agricultural regions of Liberia by 2004 35 eco-tourism management personnel	MICAT, EPA, FDA	150,000		

E4 - National awareness campaigns to promote ecotourism in the four agricultural regions conducted E4 – Potential tourists sites surveyed in the four agriculture regions of Liberia E5– Eco-tourism management personnel trained to promote eco-tourism by 2005 E6 – Information brochure on tourism and the ecosystem role produced for tourists and other target groups by 2005	trained to promote by 2006 Tourism management committee established by 2007				

GOAL 6: To contribute to the fulfillment of the millennium development goals (MDGs) about poverty alleviation, food security and gender empowerment in biodiversity by 2015.

G6O1-A1: Creating awareness on MDG 2015 E1 – National awareness campaign designed E2- MDG awareness campaign publicized E3 – Public and private sectors aware about MDG	Project Management Staff employed 2005 Project equipment and materials procured by 2005 Media consultant employed by 2005 MDG awareness translated into the vernaculars	MICAT, MPEA	20,000	X	
G6O1-A2: Empowering women through micro project activities E1: Workshops conducted for beneficiaries E2: Handbooks produced E3: Women productivity enhanced	Awareness materials produced on micro-projects 2005 15 Awareness workshops on micro-credit conducted in each county by 2006 Women groups and individual women engaged in micro-credit projects by 2006	MOA, EPA, ACDB, NIC, MGD,	500,000	X	

G6O2-A1: Supporting the production of food crops such as vegetables, root tubers and leguminous crops as alternative source of food for the poorest segments of society. E1 – Project Management Staff employed E2 –Farm families selected E3 - Seeds committee established E4 – Variety of seeds, planting stocks and other implements procured and distributed to farm families E5 – Food security improved	500 Farm families identified by 2004 Seeds committee established to determine viability by 2005 Variety of seeds and planting stocks procured and distributed by 2005 Farming implements procured and distributed by 2005 Many people involved in farming and local produce is abundant by 2008	MOA, LWF/WS, Mercy Corps	200,000	X	
G6O2 –A2: Introducing fruit trees along roads and in settlements. E1 – Project Management	500 settlements identified for the introduction of fruit trees by 2005	MOA, MRD, LIFE, SOLF	150,000	X	X

Staff employed E2 – Planting materials procured E3 - Seedlings of fruit tress produced and distributed E4 – Settlements benefit from the introduction of fruit trees E5 – 90 % roads and settlements grew fruit trees E6 – Food security improved	Planting materials procured by 2006 500,000 seedlings of fruit trees produced and distributed by 2009 50% roads and settlements assessed by 2007 95% roads and settlements assessed by 2008				
G6O2 –A3: Supporting household farming systems in lowland and low income areas E1 – Project Management Staff employed E2 – More farmers of low income status engaged in lowland farming E3- More farmers of low income status supplied with farming tools and implements	Sites identified for lowland farming by 2006 150 farmers supplied with farming tools and implements by 2006 150 farmers fully engage in lowland farming by 2008 Income levels and	MOA, AGHRA, WVL, LWF/WS	US$275,000	X	X

E4 – Food security improved	earnings of local farmers improved significantly by 2009				
G6O2-A4: Improving long-term needed roads, health and education facilities in logging areas E1 – Project Management Staff employed E2 – Inter-agency committee established to ensure project execution E3 – Roads, health and educational facilities selected for rehabilitation E4 – Roads, health, and educational facilities improved	Inter-agency committee set-up to facilitate the improvement of road network, health and education facilities in logging areas by 2004 Identification of health and educational facilities needs assessed by 2005 20 logging companies roads network assessed by 2005 Inter-agency committee and project staff ensure the implementation of the project by 2008	M PW, MH&SW, MOE, MRD, FDA, LTA	2,500,000	X	X
G6O2 –A5: Establishing mini agricultural industries(cassava processing	40 centers for processing of cassava and rice established in Southeast,	MOA, LWF/WS, Mercy Corps	500,000	X	X

plants and rice mills) E1- Project Management Staff employed E2 –Cassava and rice mill processing centres established E3 – Processing factories of cassava and rice constructed E4 – Cassava and Rice Processing Staff and Management structure developed E5 –Processing facilities for Cassava and Rice available to farmers	Southwest, Central and Northern Liberia by 2005 Management structure for the centers developed by 2005 Centers operational by 2005				
G6O2-A6: Establishing farmers' cooperatives in each clan in Liberia. E1 – Project staff employed E2 – Farmers/farming groups selected to be part of the farmers' cooperative E3 – Workshops organized for farmers/farming groups	Farmers/farming groups identified to be part of the farmers' cooperative by 2005 Workshops organized for farmers/farming groups by 2006 rules and regulations governing the cooperative by 2006	MOA,CDA, ACDB	1,500,000	X	X

E4 – Farmers' cooperative rules and regulations stipulated E5 – More Farmers' cooperative established in the country					
G6O2-A7: Establishment of micro-credit schemes to enhance agricultural productivity. E1 –Project Management Staff employed E2- Micro-credit hand book produced E3 – More Farmers benefited from micro-credit schemes to enhance agricultural productivity by E4 – Workshop conducted for beneficiaries of the micro-credit scheme E5 - More farmers purchasing power increased	Awareness materials produced on micro-credit schemes to enhance agricultural productivity by 2004 350 beneficiaries identified for micro-credit scheme to enhance agricultural productivity by 2005 Workshop conducted for beneficiaries of the micro-credit scheme by 2005 Micro-credit scheme executed by 2005 Impact of micro-credit scheme assessed 2007	MOA, WVL, MERCY CORPS, ACDB	500,000	X	X

G6O3-A1: Empowering women, elderly and youth in the design and implementation of biodiversity projects E1 – Project Management Staff employed E2 – Project equipment and materials procured E3 – Women, elderly and youth trained in the design and implementation of biodiversity projects E4 – Women, elderly and youth empowered E5 – More women, elderly and youth are knowledgeable about the design and implementation of biodiversity projects	Knowledge of many women, elderly and youth enhanced about the importance of biodiversity projects by 2008 Women, youth and the elderly involved in the designed and implementation of biodiversity projects by 2010	MOE, MYS, MGD, EPA		X	X
G6O4-A1 Supporting livestock production as alternative sources of protein in areas of high hunting pressure. E1 – Project Management	500 Training manuals produced for livestock farmers by 2006 500 livestock farmers identified in the fifteen counties by 2006	MOA, LWF/WS, MERCY CORPS	200,000	X	

Staff employed E2 -Training manuals produced for livestock farmers E3 – Workshop conducted for livestock farmers E4 –Veterinary services provided for livestock farmers E5 – Livestock production increased	Workshops conducted for 500 livestock farmers in the 15 counties by 2007 Veterinary services provided for 500 Livestock farmers by 2009				

G6O4-A2: Establishment of cane rat multiplication farms for alternative source of protein and income generation E1 –Project Management Staff employed E2 – Cane rat multiplication programme designed E3 - Training manual produced for cane rat breeding E4 – Cane rat multiplication sites identified and constructed E5 – More cane rat breeders trained E6 – Domestic Cane rats are being bred	10 Liberians trained externally in cane rat farming by 2007 45 Liberians trained locally in cane rat breeding by 2008 Cane rat multiplication Farms established by 2009 Cane rats produced and sold on the market for consumption by 2010	FDA, MOA, LIFE and UL	500,000	X	X
G6O4-A3: Supporting multiplication of ducks, rabbits, guinea pigs, chickens and snails as alternative source of protein and income generation E1 – Project Management Staff	500 Training manuals produced for livestock farmers by 2006 500 livestock farmers identified in the fifteen counties by 2005 Workshop conducted for 500 livestock farmers in	MOA, LWF/WS, MERCY CORPS, CRS, FDA	250,000	X	X

E2 - Training manuals produced for livestock farmers E3 –Livestock farmers identified in the fifteen counties E4 - Workshop conducted for livestock farmers E5 – More ducks, rabbits, guinea pigs, chickens and snails produced	the 15 counties by 2006 500 Livestock farmers and veterinary medicine purchased for distribution to livestock farmers by 2007 chickens, ducks, rabbits, guinea pits and snails available on the local markets at affordable prices by 2009				

G6O5-A1: Supporting the construction of sanitary facilities along beaches, shore lands, and large settlements. E1 – Project Management Staff employed E2 – 90 % construction sites established E3 – Construction equipment procured E4 – Workforce employed E5 – 90% construction work completed	Survey conducted for the identification of sites to construct sanitary facilities by 2007 Sanitary sites available in major settlements by 2009 Sanitary sites available along beaches and shore lands by 2010	EPA, MPW, POCAL, MOHSW, MLME, NPA	200,000	X	X
G6O6-A1 Supporting establishment of plastic recycling plants E1 – Project Management Staff employed E2 – Plastic recycling plant sites identified and constructed	Awareness raising on the need to recycle plastics conducted fully by 2005 Workshops conducted in all fifteen counties to discuss the dangers plastic products pose for health by 2007	EPA, LIFZA, NIC, MCI	2,000,000	X	X

E3 – Plastic Recycling Management Staff employed E5 – Personnel employed E6 – 90% Plastic recycling plants operationalized	Fewer people in Liberia use plastics by 2008 Plastic recycling plants constructed in 3 locations in Liberia by 2012				

6. IMPLEMENTATION, MONITORING AND EVALUATION

Upon adoption of the biodiversity strategy and action plan by the Government of Liberia, it will need implementation by involving as much as possible all country biodiversity stakeholders. EPA, being the lead national agency in the formulation of BSAP, it will continue to review its implementation with the help of key implementers designated in the BSAP document for each objective and corresponding actions. To ensure successful implementation of the BSAP a mechanism geared around seven elements is essential; that is, (a) BSAP oversight by a stakeholders' committee; (b) creation of a BSAP Implementing Unit; (c) undertake fundraising for the BSAP; (d) initiate a public information and outreach campaign for the BSAP; (e) ensure participatory monitoring; (f) evaluate the impact of the strategy; and (g) ensure at appropriate times cyclical revisiting of the strategy and action plan to update it by putting it back on track whenever necessary.

6.1 NBSAP Implementation Oversight by a Stakeholders' Committee

Representatives of key stakeholders, coming from various agencies and interest groups, steered the formulation of the BSAP, which is implemented by EPA under the Guidance of the Ministry of Planning and Economic Affairs. It is wise to maintain similar oversight function by establishing a stakeholder committee to be drawn from relevant biodiversity institutions, NGOs, civil society and academic institutions. This committee will oversee the implementation of the BSAP and will involve all stakeholders and give them the sense of ownership of biodiversity.

6. 2 NBSAP Implementing Unit

EPA and the Stakeholders' Implementing Committee will use the services of a light Biodiversity Implementing Unit, composed of four (4) people a full time coordinating manager along with (3) part-time experts drawn from key strategy implementers in biodiversity conservation; its sustainable use; and the equitable sharing of benefits arising from its biodiversity and genetic use. This quartet will ensure coordination of efforts among implementers and across stakeholders to ensure efficient use of time, human efforts and other resources. This coordinating unit will also be in charge of fundraising for the strategy. Initially, the coordinating manager will be provided for by EPA as a civil servant; and the other three would be on the pay roll of their designating agencies that would be implementing part of the NBSAP. However in the meantime when funds would be raised for the strategy and action plan, the salaries of the quartet will originate from overall coordination of the NBSAP.

6.3 Fund-raising for the NBSAP

Fund-raising for the NBSAP will be spearheaded by implementers of each particular activity in coordination with the quartet of the BSAP Implementing Unit. Funding support for the BSAP will be sought from internal and external sources. Internal sources will be the Government of Liberia, private sector and civil society. The external sources will be the traditional bilateral and multilateral donors of Liberia including: (a) for bilateral assistance USA, the UK, The Netherlands, France, Germany; and the multilateral donors will include the World Bank, EU, GEF, UN Agencies, and International NGOs. The NBSAP implementers along with the quartet will draft

proposals to meet criteria from targeted donors. However, an overall donor round table will be first organized with a logical framework matrix of the strategy and action plan to arouse the interest of various donors and initiate a dialogue toward developing full fledged proposals.

6.4 Public Information and Outreach Campaign for the NBSAP

Not all NBSAP actions would need funds or fundraising. Rather people's thrust and ownership of the strategy is essential for NBSAP success, especially in changing behavior toward popular support for conservation, sustainable use of biological resources and adopting savvy behavior in the daily use of biodiversity and environmental resources. Also many people have traditional knowledge of biodiversity and customary values that can enhance conservation that need to be tapped during NBSAP implementation. Hence a public information and outreach campaign to accomplish this will be ongoing throughout the BSAP implementation stage. This campaign will start with the publication of the NBSAP document, in English and other vernacular languages as appropriate, especially through pamphlets and leaflets, cartoons, etc. Then this campaign will use radio, newspapers, and television to reach out and touch every individual in the society, to bring about the desired positive changes in biodiversity strategy translation into their daily deeds.

Another set of actions that do not necessarily require funds are enactment of new policy or laws. So the government will be kept informed or lobbied to complete legal revision whenever necessary to ensure a smooth implementation of NBSAP.

6.5 Participatory Monitoring of the NBSAP

Liberia's NBSAP will be entrusted to its people, as custodians and stewards of biodiversity and quality control of a transparent use and accounting for it, for every segment of society provided with biodiversity resource management for the good of all. The biodiversity vision of Liberia provides the road map with overall benchmark indicators by objectives to help the country meet by 2015 the millennium development goals. Specific indicators, corresponding to each goal and objective of the strategy, will help to monitor in a participatory fashion if the strategy is progressing as expected along the road to biodiversity Vision 2015 of the millennium development goals. Participatory monitoring will be undertaken through regular meetings with various stakeholders, and to be organized by implementers, to assess progress in implementation.

6.6 Evaluation of NBSAP and the Impact of the Strategy

At regular time interval, at least every five (5) years, formal evaluation of the progress made will be handled following each particular project and activity of the strategy and action plan. Each implementer will be required to provide in each one of its projects a monitoring and evaluation plan from the start and set aside monies in the project operating budget to undertake it, and along the project timeline collect benchmark data to document progress made along every indicator.

6.7 Recurrent Revisiting of the Strategy and Action Plan

The NBSAP is an adaptive and cyclical process that needs to be revisited often when there are changing constraints and opportunities along the implementation timeline. After monitoring or evaluation exercises show departure from original path of the road map, and whenever there is slow down in progress, it suggests that it is time to revisit the strategy or the action plan to overcome new constraints or to cease new opportunities. When this happens, EPA along with the Stakeholders' Implementing Committee should call on all stakeholders and organize workshops to revisit the strategy and action plan as needed.

7. REFERENCES

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7.	Pendora Banks	Pollution Control Association of Liberia
8.	Matthew Konai	Liberia Electricity Corporation
9.	Anyaa Vohiri	Fauna and Flora International
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11.	James Teaway	Liberia Water & Sewer Corporation
12.	James Coleman	Society for the Conservation of Nature of Liberia
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15.	Simeon Moribah	United Nations Development Programme
16.	George Tarn	Ministry of Rural Development
17.	Patrick Kiadii	Ministry of Agriculture
18.	John Nylander	Ministry of Lands, Mines and Energy
19.	Anthony Taplah	Forestry Development Authority
20.	Joseph Boiwu	FAO
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101. Joseph Charlie	Radio Veritas
102. William Selma	ELBC
103. Augustine Myers	ELBC
104. Joe A. Lawold	Liberia Transport Union
105. Alfred Togar	Grand Bassa County
106. Peter Garglan	Grand Bassa County
107. Kona Tapler	Bomi County
108. Daniel Toe	Bomi County
109. Jerry Dixon	Sinoe County
110 Hawa Sackor	Margibi County
111. Thomas Daisee	Margibi County
112. Moses Dorbor	Lofa County
113. Victor Wah	Sinoe County
114. Isaac Kplah	Cavalla Timber Company
115. Alexander Morris	Inland Logging Company
116. Daniel Clarke	LLWPC
117. Robert Kahn	MWPI
118. Thomas Wah	Mohammed Group of Companies
119. Andrew Dagbe	African United Methodist University College
120. Paul M. Urey	Federation of Trade Union of Liberia
121. Augustine Fahnbulleh	MoA
122. Arthur Suah	Bureau of maritime Affairs
123. Abraham Johnson	NPA
125. Robert Kelly	Ministry of Finance
126. Alexander Davies	Observer
127. David Mayongar	Firestone
128. Sando Kollie	AMEU
129. Varney Kanoweh	Monrovia, Breweries
130. Cephus Lelan	Liberia Timber Association
131. George Gardiner	LWSC
132. James Conneh	LEC
133. Yah Gonleh	MoFA
134. Paul Zorgar	LIBR
135. Kebbeh Weegie	LWI
136. Tamba Kollie	FLY
137. Paul Kofi	MICAT
138. Karufus Yangain	LTA
139. D. Maxwell Johnson	LBS
140. Sonoway Dolopei	CEEP
141. Kebbeh Moore	Observer
142.James Acquoi	LCDF
143.John Nylander	LME
144.Victor Dolo	FDA

145. Edward G. Smith	UL
146. Myer K. Jargba	FDA
147.Matthew Konai	LEC
148. Morris Kamara	SOLF
149.Sam Wollor	BIN Liberia Inc.
150. Eugene Caine	MCC

Rapporteurs

Name	Organization
1. Jonathan Davis	NECOLIB
2. Arthur Tucker	MoA

Organizers

Name	Organization
1. John C. Jeh	NECOLIB
2. Lemuel Browne	MPEA

APPENDICIES

Appendix I: Threatened Animal Species

A. Mammals

	Species	Common Name	Status
1.	*Micropotamogale lamottei*	Nimba Otter-Shrew	EN
2.	*Crocidura wimmeri*		EN
3.	*Epomops buettikoferi*	Buettikofer's Epauletted Fruit Bat	VU
4.	*Saccolaimus peli*		
5.	*Hipposideros Fuliginosus*		
6.	*Hipposideros marisae*		
7.	*Rhinolophus guineensis*		
8.	*Rhinolophus maclaudi*		
9.	*Eptesicus brunneus*		
10.	*Kerivoula smithi*		
11.	*Cercocebus atys*		
12.	*Sousa teuszii*	Atlantic Hump-backed Dolphin	EN
13.	*Physeter catodon*	Sperm Whale	
14.	*Trichechus senegalensis*	West African Manatee	
15.	*Loxodonta africana*	African elephant	
16.	*Hylochoerus meinertzhageni*	Western Forest Hog	
17.	*Choeropsis liberiensis*	Pygmy hippopotamus	
18.	*Hyemosches aquaticus*	Chevrotaeri	
19.	*Cephalophus dorsalis*	Bay duiker	
20.	*Cephalophus jentinki*	Jentink's Duiker	
21.	*Cephalophus maxwellii*	Maxwell's Duiker	
22.	*Cephalophus niger*	Black Duiker	
23.	*Cephalophus ogilbyi*	Ogilby's Duiker	
24.	*Cephalophus silvicultor*	Yellow-backed Duiler	
25.	*Cephalophus zebra*	Yellow-backed Duiker	
26.	*Neotragus pygmaeus*	Royal Antelope	
27.	*Syncerus caffer*	African Buffalo	
28.	*Tragelaphus eurycerus*	Bongo	
29.	*Tragelaphus eurycerus*	West Bongo	
30.	*Epixerus ebii*	Squirrel	
31.	*Anomalurus pelii*	Pel's Flying Squireel	EN
32.	*Idiurus macrotis*	Long Ear flying squirrel	
33.	*Hystrix cristata*	Crested porcupine	

B. REPTILES

1.	*Crocodylus cataphractus*	Long-snouted crocodile	
2.	*Osteolaemus tetraspis*	African Dwarf crocodile	EN

3.	*Chelonia mydas*	Green Turtle	EN
4.	*Dermochelys coriacea*	Leathegback	EN
5.	*Kinixys erosa*	Serrated Hige – back tortoise	EN
6.	*Kinixys homeana*	Hinged-backed Tortoise	

C. **AMPHIBIANS**

1.	*Nimba phrynoides occidentalis*	Mt. Nimba Viviparous toad	EN

D. **FISHES**

1. *Typhlosynbranchus boueti*

E. **ARTHROPODS**

1.	*Globonautes macropus*	Tree Hole Crab	EN
2.	*Papilio antimachus*	Africant Giant Swallowtail	EN
3.	*Archachatina knorri*		

F. **SNAILS**

1. *Bellamya liberiana*

G. Birds

No.	Scientific Names	English Names	Threat Status
1.	Agelastes meleagrides	White-breasted guinea fowl	Vu
2.	Scotopelia ussheri	Rufous fishing-owl	En
3.	Lobotos lobatus	Western Wattle cuckoo shine	Vu
4.	Phyllastrephus leucolepsis	Liberia greenbul	CR
5.	Bleda eximia	Green-tailed Bristlebill	Vu
6.	Criniger olivaceus	Yellow-bearded greenbull	Vu
7.	Illadopsis rufescens	Rofous-winged Illadopsis	NT
8.	Picathartes gymnocephalus	Yellow-heade Rockfowl	Vu
9.	Circus macrourus	Pallid Harrier	NT
10.	Falco naumanni	Lesser krestrel	VU
11.	Gallinago media	Great snipe	NT
12.	Bycanistes cylindricus	Brown-cheecked hornbill	NT
13.	Ceratogymna elata	Yellow-casjued Hornbill	NT
14.	Millignomon eisentrauti	Yellow-footed Honeyguide	DD
15.	Phyllastrephus baumanni	Baumann's Greenbul	NT
16.	Malaconotus lagdeni	Lagden's Bush-shrike	NT
17.	Malaenornis annamarulae	Nimba Flycatcher	Vu
18.	Schistolais leontica	White-eyed Prinia	Vu
19.	Malimbus ballmanni	Gola Malimbe	EN
20.	Lamprotornis cupreocauda	Copper-tailed Glossy Starting	NT

Appendix II: Threatened Plant Species

Family	Species	Threats
Annonaceae	*Monocyclanthus vignei*	*EN*
Sapotaceae	*Neolemonniera clitandrifolia*	*EN*
Sapindaceae	*Placodiscus pseudostipularis*	*EN*
Sapotaceae	*Tieghemella heckelii*	*EN*
Euphorbiaceae	*Amanoa bracteosa*	*VU*
Euphorbiaceae	*Amanoa strobilacea*	*VU*
Rhizophoraceae	*Anopyxis klaineana*	*VU*
Leguminosae	*Anthonotha vignei*	*VU*
Leguminosae	*Berlinia occidentalis*	*VU*
Leguminosae	*Copaifera salikounda*	*VU*
Boraginaceae	*Cordia platythyrsa*	*VU*
Leguminosae	*Cryptosepalum tetraphyllum*	*VU*
Euphorbiaceae	*Drypetes afzelii*	*VU*
Meliaceae	*Entandrophragma angolense*	*VU*
Meliaceae	*Entandrophragma candollei*	*VU*
Meliaceae	*Entandrophragma utile*	*VU*
Sterculiaceae	*Eribroma oblonga*	*VU*
Leguminosae	*Gilbertiodendron bilineatum*	*VU*
Meliaceae	*Guarea cedrata*	*VU*
Meliaceae	*Guarea thompsonii*	*VU*
Leguminosae	*Guibourtia ehie*	*VU*
Rubiaceae	*Hallea ledermannii*	*VU*
Leguminosae	*Haplormosia monophylla*	*VU*
Sterculiaceae	*Heritiera utilis*	*VU*
Flacourtiaceae	*Homalium smythei*	*VU*
Meliaceae	*Khaya anthotheca*	*VU*
Meliaceae	*Khaya ivorensis*	*VU*
Leguminosae	*Loesenera kalantha*	*VU*
Ochnaceae	*Lophira alata*	*VU*
Meliaceae	*Lovoa trichilioides*	*VU*
Moraceae	*Milicia regia*	*VU*
Leguminosae	*Millettia warneckei*	*VU*
Leguminosae	*Monopetalanthus compactus*	*VU*
Rubiaceae	*Nauclea diderrichii*	*VU*
Annonaceae	*Neostenanthera hamata*	*VU*
Sterculiaceae	*Nesogordonia papaverifera*	*VU*
Ochnaceae	*Ouratea amplectens*	*VU*
Rubiaceae	*Pausinystalia lane-poolei ssp. lane-poolei*	*VU*
Euphorbiaceae	*Phyllanthus profusus*	*VU*

Annonaceae	*Piptostigma fugax*	*VU*
Combretaceae	*Terminalia ivorensis*	*VU*
Leguminosae	*Tetraberlinia tubmaniana*	*VU*
Anacardiaceae	*Trichoscypha albiflora*	*VU*
Anacardiaceae	*Trichoscypha atropurpurea*	*VU*
Anacardiaceae	*Trichoscypha beguei*	*VU*
Anacardiaceae	*Trichoscypha cavalliensis*	*VU*
Annonaceae	*Uvariodendron occidentale*	*VU*
Flacourtiaceae	*Casearia barteri*	*VU*
Boraginaceae	*Cordia millenii*	*VU*
Leguminosae	*Pterocarpus santalinoides*	*VU*
Sterculiaceae	*Triplochiton scleroxylon*	*VU*
Leguminosae	*Didelotia idea*	*VU*

Appendix III: Endangered & Vulnerable Species

Endangered:

African elephant (*Loxodonta africana*).
Chimpanzee (*Pan troglodytes*).
*Diana Monkey (*Cercopithecus diana*). (Rated vulnerable in the 1996 Red List)
Liberian Mongoose (*Liberiictis kuhni*)
Nimba Otter Shres (*Micropotamogale lanottei*)
Red Colobus (*Procolobus badius*). (Rated Lower Risk: Near Threatened in the 1996 Red List)

Vulnerable:

Aellen Roundleaf bat (*Hipposideros marisae*)
Buettikofer's Epauletted Fruit Bat*(Epomops buettikoferi*)
Jentink's Duiker (*Cephalophus jentinki*)
Pygmy Hippopotamus *(Choeerropsis liberiensis*)
Sperm Whale (*Physester catodon*)
*Spotted-necked Otter (*Lutra maculicollis*). (Not listed in 1996)
West African Manatee (*Trichechus senegalensis*)
Zebra Duiker (*Cephalophus zebra)*

Appendix IV. LIST OF MARINE/BRACKISH FISHES OF LIBERIA

	Scientific Name	**Common Name**
1.	*Ablennes hians*	*Flat needlefish*
2.	*Abudefduf saxatilis*	*Sergeant major*
3.	*Abudefduf taurus*	*Niger sergeant*
4.	*Acanthurus monroviae*	*Monrovia doctor fish*
5.	*Aetobatus narinari*	*Spotted eagle ray*
6.	*Ahliesaurus berryi*	
7.	*Albula vulpes*	*Bonefish*
8.	*Alectis alexandrinus*	*African threadfish*
9.	*Alectis ciliaris*	*African pompano*

10.	*Alepocephalus rostratus*	*Risso's smooth-head*
11.	*Alopias vulpinus*	*Thintail thresher*
12.	*Aluterus schoepfi*	*Orange filefish*
13.	*Antennarius pardalis*	
14.	*Antennarius striatus*	*Striated frogfish*
15.	*Anthias anthias*	*Swallowtail seaperch*
16.	*Antigonia capros*	*Deepbody boarfish*
17.	*Apogon imerbis*	*Cardinal fish*
18.	*Apsilus fuscus*	*African forktail snapper*
19.	*Apterichtus monodi*	
20.	*Argyropelecus affinis*	*Pacific hatchet fish*
21.	*Argyropelecus gigas*	*Hatchetfish*
22.	*Argyropelecus hemigymnus*	*Half-naked hatchetfish*
23.	*Argyropelecus sladeni*	*Sladen'hatchet fish*
24.	*Argyrosomus regius*	*Meagre*
25.	*Ariomma bondi*	*Silver-rag driftfish*
26.	*Ariomma melanum*	*Brown driftfish*
27.	*Ariomma balearicum*	*Bandtooth conger*
28.	*Aristostomias xenostoma*	
29.	*Arius latiscutatus*	*Rough-head sea catfish*
30.	*Arnoglossus capensis*	*Cape scaldfish*
31.	*Arnoglossus imperialis*	*Imperial scaldfish*
32.	*Arnoglossus laterna*	*Scaldfish*
33.	*Asquamiceps caeruleus*	
34.	*Astronesthes caulophorus*	
35.	*Astronesthes gemmifer*	*Snaggletooth*
36.	*Astronesthes macropogon*	
37.	*Astronesthes micropogon*	
38.	*Astronesthes niger*	
39.	*Astronesthes richardsoni*	
40.	*Auxis rochei rochei*	*Bullet tuna*
41.	*Auxis thazard thazard*	*Frigate tuna*
42.	*Avocettina infans*	*Avocet snipe-eel*
43.	*Balistes punctatus*	*Bluespotted triggerfish*
44.	*Barbantus curvifrons*	*Palebelly searsid*
45.	*Bascanichthys ceciliae*	
46.	*Bathophilus brevis*	
47.	*Bathophilus nigerrimus*	*Scaleless dragonfish*
48.	*Bathygadus melanobranchus*	*Vaillant's grenadier*
49.	*Bathymicrops Regis*	
50.	*Bathypterois atricolor*	*Attenuated spider fish*
51.	*Bathypterois grallator*	*Tripodfish*
52.	*Bathypterois phenax*	*Blackfin spider*
52.	*Bathypterois quadrifilis*	
53.	*Bathypterois viridensis*	
54.	*Bathyraja hesperafricana*	*West African skate*
55.	*Bathysaurus mollis*	*Highfin lizardfish*
56.	*Bathytroctes microlepis*	*Smallscale smooth-head*
57.	*Bathytyphlops sewelli*	
58.	*Bathyuroconger vicinus*	*Large-toothed conger*

59.	*Batrachoides liberiensis*	*Hairy toadfish*
60.	*Bembrops greyi*	*Roundtail duckbill*
61.	*Bembrops heterurus*	*Squaretail duckbill*
62.	*Benthalbella infans*	*Zugmayer's pearleye*
63.	*Benthosema suborbitale*	*Smallfin laneternfish*
64.	*Bolinichthys photothorax*	
65.	*Bolinichthys supralateralis*	
66.	*Bonapartia pedaliota*	
67.	*Boops boops*	*Bogue*
68.	*Borostomias elucens*	
69.	*Borostomias mononema*	
70.	*Bothus podas*	*Wide-eyed flounder*
71.	*Bregmaceros atlanticus*	*Antenna codlet*
72.	*Bregmaceros nectabanus*	*smallscale codlet*
73.	*Brotula barbata*	*Bearded brotula*
74.	*Caelorinchus caelorhincus geronimo*	
75.	*Callechelys leucoptera*	
76.	*Caranx crysos*	*Blue runner*
77.	*Caranx hippos*	*Crevalle jack*
78.	*Caranx rhonchus*	*False scad*
79.	*Caranx senegallus*	*Senegal jack*
80.	*Carcharhinus altimus*	*Bignose shark*
81.	*Carcharhinus falciformis*	*Silky shark*
82.	*Carcharhinus leucas*	*Bull shark*
83.	*Carcharhinus limbatus*	*Blacktip shark*
84.	*Carcharhinus longimanus*	*Oceanic whitetip shark*
85.	*Carcharhinus signatus*	*Night shark*
86.	*Carcharias taurus*	*Sand tiger shark*
87.	*Carcharodon carcharias*	*Great white shark*
88.	*Cataetyx brunni*	
89.	*Cephalopholis taeniops*	*African hind*
90.	*Cepola pauciradiata*	
91.	*Ceratoscopelus warmingii*	*Warming's lantern fish*
92.	*Chauliodus schmidti*	
93.	*Cheilopogon cyanopterus*	*Margined flyingfish*
94.	*Cheilopogon melanurus*	*Atlantic flyingfish*
95.	*Cheilopogon milleri*	*Guinean flyingfish*
96.	*Cheilopogon nigricans*	*African flyingfish*
97.	*Cheilopogon pinnatibarbatus*	*Bennett's flyingfish*
98.	*Chelidonichthys lastoviza*	*Streaked gurnard*
99.	*Chlopsis olokun*	
100.	*Chlorophthalmus agassizi*	*Shortnose greeneye*
101.	*Chloroscombrus chysurus*	*Atlantic bumper*
102.	*Chromis chromis*	*Damselfish*
103.	*Chromis limbata*	*Azores chromis*
104.	*Coloconger cadenati*	
105.	*Coris atlantica*	
106.	*Coryphaena hippurus*	*Common dolphinfish*
107.	*Cyclothone alba*	*Bristlemouth*
108.	*Cyclothone braueri*	*Garrick*

109.	*Cyclothone livida*	
110.	*Cyclothone microdon*	*Veiled anglemouth*
111.	*Cyclothone obscura*	
112.	*Cyclothone pallida*	*Tan bristlemouth*
113.	*Cynoglossus browni*	*Nigerian tonguesole*
114.	*Cynoglossus cadenati*	*Ghanian tonguesole*
115.	*Cynoglossus canariensis*	*Canary tonguesole*
116.	*Cynoglossus monodi*	*Guninean tonguesole*
117.	*Cynoglossus senegalensis*	*Senegalese tonguesole*
118.	*Cynoponticus ferox*	*Guinea pike conger*
119.	*Cyttopsis rosea*	*Rosa dory*
120.	*Dalophis boulengeri*	
121.	*Dalophis cephalopeltis*	
122.	*Dasyatis centroura*	*Roughtail stingray*
123.	*Dasyatis chrysonota marmorata*	*Marbled stingray*
124.	*Dasyatis margaritella*	*Pearl stingray*
125.	*Dasyatis pastinaca*	*Common stingray*
126.	*Decapterus punctatus*	*Round scad*
127.	*Dentex angolensis*	*Angola dentex*
128.	*Dentex canariensis*	*Canary dentex*
129.	*Dentex congoensis*	*Congo dentex*
130.	*Dentex gibbosus*	*Pink dentex*
131.	*Dentex maroccanus*	*Morocco dentex*
132.	*Desmodema polystictum*	*Polka-dot ribbonfish*
133.	*Diaphus brachycephalus*	*Short-headed lantern fish*
134.	*Diaphus metopoclampus*	*Spothead lantern fish*
135.	*Diaphus mollis*	
136.	*Diaphus perspicillatus*	*Transparent lantern fish*
137.	*Diaphus splendidus*	
138.	*Diaphus taaningi*	
139.	*Dibranchus atlanticus*	*Atlantic batfish*
140.	*Diogenichthys atlanticus*	*Lonfin lantern fish*
141.	*Diplophos taenia*	*Pacific portholefish*
142.	*Dipturus doutrei*	*Violet skate*
143.	*Diretmoides pauciradiatus*	*Longwing spinyfin*
144.	*Diretmus argenteus*	*Silver spinyfin*
145.	*Dolichopteryx binocularis*	
146.	*Dolichosudis fuliginosa*	
147.	*Dysomma brevirostre*	*Pignosed arrowtooth eel*
148.	*Echelus myrus*	*Painted eel*
149.	*Echelus pachyrhynchus*	
150.	*Echidna peli*	*Pebbletooth moray*
151.	*Echiophis creutzbergi*	*Spoon-nose eel*
152.	*Einara macrolepis*	*Loosescale smooth-head*
153.	*Electrona risso*	*Chubby flashlightfish*
154.	*Elops lacerta*	*West African ladyfish*
155.	*Elops senegalensis*	*Senegalese ladyfish*
156.	*Enchelycore nigricans*	*Mulatto conger*
157.	*Engraulis encrasicolus*	*European anchovy*
158.	*Epinephelus aeneus*	*White grouper*

159.	*Epinephelus caninus*	*Dogtooth grouper*
160.	*Epinephelus costae*	*Goldblotch grouper*
161.	*Epinephelus goreensis*	*Dungat grouper*
162.	*Epinephelus itajara*	*Itajara*
163.	*Epinephelus marginatus*	*Dusky grouper*
164.	*Erythrocles monodi*	*Atlantic rubyfish*
165.	*Ethmalosa fimbriata*	*Bonga shad*
166.	*Etmopterus polli*	*Africanlanetrn fish*
167.	*Etmopterus pusillus*	*Smooth lanetern fish*
168.	*Eucinostomus melanopterus*	*Flagfin mojara*
169.	*Eustomias achirus*	
170.	*Eustomias dendriticus*	
171.	*Eustomias lipochirus*	
172.	*Eustomias melanoema*	
173.	*Euthynnus alletteratus*	*Little tunny*
174.	*Evermannella balbo*	*Balbo sabretooth*
175.	*Facciolella oxyrhyncha*	*Facciola's sorcerer*
176.	*Fistularia tabacaria*	*Cornet fish*
177.	*Flagellostomias boureei*	
178.	*Fodiator acutus*	*Sharpchin flyingfish*
179.	*Galeocerdo cuvier*	*Tiger shark*
180.	*Galeus polli*	*African sawtail catshark*
181.	*Gempylus serpens*	*Snake mackerel*
182.	*Gephyroberyx darwinii*	*Darwin's slimehead*
183.	*Ginglymostoma cirratum*	*Nurse shark*
184.	*Glossanodon polli*	
185.	*Gobius rubropunctatus*	
186.	*Gonichthys cocco*	
187.	*Gonostoma atlanticum*	*Atlantic fangjaw*
188.	*Gonostoma bathyphilum*	
189.	*Gonostoma denudatum*	
190.	*Gammicolepis brachiusculus*	*Thorny tisnelfish*
191.	*Guentherus altivelis*	*Highfin tadpole fish*
192.	*Gymnothorax afer*	*Dark moray*
193.	*Gymnothorax mareei*	*Spotjaw moray*
194.	*Gymnura altavela*	*Spinny butterfly ray*
195.	*Halobatrachus didactylus*	*Luistanian toadfish*
196.	*Halosaurus ovenii*	
197.	*Helicolenus dactylopterus dactylopterus*	*Blackbelly rosefish*
198.	*Hemerorhinus opici*	
199.	*Hemicaranx bicolor*	*Biocolor jack*
200.	*Hemiramphus brasiliensis*	*Ballyhoo*
201.	*Heptranchias perlo*	*Sharpnose sevengill shark*
202.	*Herwigia kreffti*	*Krefft's smooth head*
203.	*Heteromycteris proboscideus*	*True sole*
204.	*Heterophotus ophistoma*	
205.	*Hippocampus algiricus*	*West African seahorse*
206.	*Hippocampus hippocampus*	*Short-snouted seahorse*
207.	*Hirundichthys affinis*	*Fourwing flyingfish*
208.	*Holacanthus africanus*	*Guinean angelfish*

209.	*Holtbyrnia innensi*	*Teardrop tubeshoulder*
210.	*Holtbyrnia macrops*	*Bigeye searsid*
211.	*Hoplunnis punctatus*	
212.	*Hygophum reinhardtii*	*Reinhardt's lantern fish*
213.	*Hygophum taaningi*	
214.	*Hymenocephalus italicus*	*Glasshead grenadier*
215.	*Hyporhamphus picarti*	*African halfbeak*
216.	*Ijimaia loppei*	*Loppe's tadpole fish*
217.	*Ilisha Africana*	*West African ilisha*
218.	*Istiophorus albicans*	*Atlantic sailfish*
219.	*Isurus oxyrinchus*	*Shortfin mako*
220.	*Katsuwonus pelamis*	*Skipjack tuna*
221.	*Labrisomus muchipinnis*	*Hairy blenny*
222.	*Laemonema laureysi*	*Guniean codling*
223.	*Lampadena anomala*	
224.	*Lampadena chavesi*	
225.	*Lampadena luminosa*	
226.	*Lampanyctus lineatus*	
227.	*Lampanyctus nobilis*	*Noble lampfish*
228.	*Lampancytus tenuiformis*	
229.	*Lamprogrammus exutus*	*Legless cuskeel*
230.	*Lepidocybium flavobrunneum*	*Escolar*
231.	*Lepidophanes guentheri*	
232.	*Leptocharias smithii*	*Barbled houndshark*
233.	*Leptoderma macrops*	*Grenadier smooth-head*
234.	*Leptostomias gladiator*	
235.	*Lethrinus atlanticus*	*Atlantic emperor*
236.	*Leucoraja leucosticte*	*Whiedappled skate*
237.	*Lichia amia*	*Leerfish*
238.	*Lithognathus morymyrus*	*Striped seabream*
239.	*Liza falcipinnis*	*Sicklefin mullet*
240.	*Liza grandsquamis*	*Largescaled mullet*
241.	*Lobianchia dofleini*	
242.	*Lophiodes kempi*	*Longspine African angler*
243.	*Lophius vaillanti*	*Shortspine African angler*
244.	*Lutjanus agennes*	*African red snipper*
245.	*Lutjanus dentatus*	*African brown snapper*
246.	*Lutjanus fulgens*	*Golden African snapper*
247.	*Lutjanus goreensis*	*Gorean snapper*
248.	*Makaira indica*	*Black marlin*
249.	*Makaira nigricans*	*Atlantic blue marlin*
250.	*Malacocephalus laevis*	*Softhead grenadier*
251.	*Malacocephalus occidentalis*	*Western softhead grenadier*
251.	*Malacosteus niger*	*Stoplight loosejaw*
252.	*Maulisia mauli*	*Maul's searsid*
253.	*Megalops atlanticus*	*Tarpon*
254.	*Melamphaes leprus*	
255.	*Melanostomias tentaculatus*	
256.	*Merlucccius polli*	*Benguela hake*
257.	*Microchirus bosccanion*	*Lusitanian sole*

258.	*Microphis brachyurus aculeatus*	
259.	*Miracorvinia angolensis*	*Angola croaker*
260.	*Mola mola*	*Ocean sunfish*
261.	*Monochirus hispidus*	*Whiskered sole*
262.	*Monodactylus sebae*	*African moony*
263.	*Monomitopus metriostoma*	
264.	*Mugil bananensis*	*Banana mullet*
265.	*Mugil curema*	*White mullet*
266.	*Muraena melanotis*	*Honeycomb moray*
267.	*Muraena robusta*	*Stout moray*
268.	*Mustelus mustelus*	*Smooth-hound*
269.	*Mycteroperaca rubra*	*Mottled grouper*
270.	*Myctophum affine*	*Metallic lantern fish*
271.	*Myctophum asperum*	*Prickly lantern fish*
272.	*Myctophum nitidulum*	*Pearly lanternfish*
273.	*Myctophum obtusirostre*	
274.	*Myliobatis aquila*	*Common eagle ray*
275.	*Myrichthys pardalis*	*Leopard eel*
276.	*Myrophis plumbeus*	*Leaden worm eel*
277.	*Mystriophis crosnieri*	
278.	*Mystriophis rostellatus*	*African spoon-nose eel*
279.	*Naucrates ductor*	*Pilotfish*
280.	*Nealotus tripes*	*Black snake mackerel*
281.	*Nemichthys curvirostris*	*Boxer snipe eel*
282.	*Nemichtyhs scolopaceus*	*Slender snipe eel*
283.	*Neoharriotta pinnata*	*Sicklefin chimaera*
284.	*Nettastoma melanurum*	*Blackfin sorcerer*
285.	*Nezumia aequalis*	*Common Atlantic grenadier*
286.	*Nezumia africana*	
287.	*Nezumia duodecim*	*Twelve-rayed grenadier*
288.	*Nezumia micronychodon*	*Smalltooth grenadier*
289.	*Nezumia sclerorhynchus*	*Roughtip grenadier*
290.	*Normichthys operosus*	*Multipore searsid*
291.	*Notolychnus valdiviae*	*Topside lampfish*
292.	*Notoscopelus caudispinosus*	*Lobisomem*
293.	*Notoscopelus resplendens*	*Patchwork lampfish*
294.	*Oblada melanura*	*Saddled seabream*
295.	*Odontostomias micropogon*	
296.	*Odontostomops normalops*	*Undistinguished sabretooth*
297.	*Ophichthus ophis*	*Spotted snake eel*
298.	*Opichthus reguis*	*Ornate Snake eel*
299.	*Ophisurus serpens*	*Serpent eel*
300.	*Opisthoproctus soleatus*	*Barrel-eye*
301.	*Oxynotus centrina*	*Angular roughshark*
302.	*Oxyporhamphus micropterus similes*	*False halfback*
303.	*Pachystomias microdon*	
304.	*Pagellus bellottii belottii*	*Red Pandora*
305.	*Pagrus africanus*	*Southern common seabream*
306.	*Pagrus auriga*	*Redbanded seabream*
307.	*Pagrus caeruleostictus*	*Bluespotted seabream*

308.	*Parablennius verryckeni*	
309.	*Paraconger notialis*	*Guinean conger*
310.	*Paragaleus pectoralis*	*Atlantic weasel shark*
311.	*Parakuhlia macrophthalmus*	*Dara*
312.	*Parasudis fraserbrunneri*	
313.	*Parexocoetus brachypterus*	*Sailfin flyingfish*
314.	*Pegusa triophthalma*	*Cyclope sole*
315.	*Pentanemus quinquarius*	*Royal threadfin*
316.	*Pentheroscion mbizi*	*Blackmouth croaker*
317.	*Periophthalmus barbarus*	*Atlantic mudskipper*
318.	*Physiculus huloti*	
319.	*Pisodonophis semicinctus*	
320.	*Platytroctes apus*	*Legless searsid*
321.	*Pollichthys mauli*	*Stareye lightfish*
322.	*Polydactylus quadrifilis*	*Giant African threadfin*
323.	*Polyipnus polli*	
324.	*Polymetme corythaeola*	
325.	*Polyprion americanus*	*Wreckfish*
326.	*Pomadasys jubelini*	*Somput grunt*
327.	*Priacanthus arenatus*	*Atlantic bigeye*
328.	*Prionace glauca*	*Black shark*
329.	*Pristis microdon*	*Largetooth sawfish*
330.	*Pristis pectinata*	*Smalltooth sawfish*
331.	*Pristis pristis*	*Common sawfish*
332.	*Prognichthys gibbifrons*	*Bluntnose flying fish*
333.	*Promethichthys promethus*	*Roudi escolar*
334.	*Psettodes belcheri*	*Spottail spiny turbot*
335.	*Psettodes bennettii*	*Spiny turbot*
336.	*Pseudomyrophis atlanticus*	
337.	*Pseudotolithus elongatus*	*Bobo croaker*
338.	*Pseudotolithus epipercus*	*Guinea croaker*
339.	*Pseudotolithus moorii*	*Cameroon croaker*
340.	*Pseudotolithus senegalensis*	*Cassava croaker*
341.	*Pseudotolithus senegallus*	*Law croaker*
342.	*Pseudotolithus typus*	*Longneck croaker*
343.	*Pseudupeneus prayensis*	*West African goatfish*
343.	*Pteromylaeus bovinus*	*Bull ray*
344.	*Pteroscion peli*	*Boe drum*
345.	*Pterothrissus belloci*	*Longfin bonefish*
346.	*Pythonichthys macrurus*	
347.	*Pythonichthys microphthalmus*	
348.	*Radiicephalus elongates*	*Tapertail*
349.	*Raja clavata*	*Thornback ray*
350.	*Raja miraletus*	*Brown ray*
352.	*Raja rouxi*	
353.	*Raja straeleni*	*Biscuit skate*
354.	*Regalecus glesne*	*King of herrings*
355.	*Rhechias bertini*	
356.	*Rhincodon typus*	*Whale shark*

357.	*Rhinobatos blochii*	*Bluntnose guitar fish*
358.	*Rhinobatos cemiculus*	*Blackchin guitar fish*
359.	*Rhinobatos irvinei*	*Spineback guitar fish*
360.	*Rhinobatos rhinobatos*	*Common guitarfish*
361.	*Rhizopriondon actus*	*Milk shark*
362.	*Rhynchobatus luebberti*	*African wedgefish*
363.	*Rostroraja alba*	*Bottlenosed skate*
364.	*Rouleina maderensis*	*Maderian smooth-head*
365.	*Ruvettus pretiosus*	*Oilfish*
366.	*Rypticus saponaceus*	*Greater soapfish*
367.	*Rypticus subbifrenatus*	*Spotted soapfish*
368.	*Sagamichthys schnakenbecki*	*Schnakenbeck's searsid*
369.	*Sarda sarda*	*Atlantic bonito*
370.	*Sardinella aurita*	*Round sardinella*
371.	*Sardinella maderensis*	*Maderian sardinella*
372.	*Sardinella rouxi*	*Yellowtail sardinella*
373.	*Sargocentron melanotheron leonensis*	
374.	*Somber japonicus*	*Chub mackerel*
375.	*Scomberomorus tritor*	*West African Spanish mackerel*
376.	*Scopelarchus analis*	*Short fin pearleye*
377.	*Scopelengys tristis*	*Pacific blackchin*
378.	*Scopelosaurus argenteus*	*Waryfish*
379.	*Scorpaena laevis*	*Senegalese rockfish*
380.	*Scorpaena normani*	*Norman's rockfish*
381.	*Scorpaena stephanica*	*Spotted-fin rockfish*
382.	*Scyliorhinus cervigoni*	*West African catshark*
383.	*Searskia koefoedi*	*Koefoed's searsid*
384.	*Selar crumenophthalmus*	*Bigeye scad*
385.	*Selene dorsalis*	*African moonfish*
386.	*Seriola carpenteri*	*Guinean amberjack*
387.	*Serranus cabrilla*	*Comber*
388.	*Serrivomer beanni*	*Bean's sawtoothed eel*
389.	*Serrivomer schmidti*	
390.	*Snyderidia canina*	
391.	*Sphyraena afra*	*Guinean barracuda*
392.	*Sphyrna couardi*	*Whitefin hammerhead*
393.	*Sphyrna lewini*	*Scalloped hammerhead*
394.	*Spicara alta*	*Bigeye picarel*
395.	*Spondyliosoma cantharus*	*Black seabream*
396.	*Squalus blainville*	*Longnose spurdog*
397.	*Squatina aculeata*	*Sawback angelshark*
398.	*Squatina oculata*	*Smoothback angelshark*
399.	*Stegastes imbricatus*	*Cape Verde Gregory*
400.	*Sternoptyx pseudobscura*	*Highlight hatchetfish*
401.	*Stomias affinis*	*Gunther's boatfish*
402.	*Stomias ;ampropeltis*	
403.	*Stomias longibarbatus*	
404.	*Strongylura senegalensis*	*Senegal needlefish*
405.	*Syacium guineensis*	
406.	*Symphurus ligulatus*	*Elongate tonguesole*

407.	*Synagrops bellus*	*Blackmouth bass*
408.	*Synagrops microlepis*	*Thinlip splitfin*
409.	*Synaphobranchus affinis*	*Grey cutthroat*
410.	*Synaptura lusitanica*	*Portugese sole*
411.	*Synchiropus phaeton*	
412.	*Taeniura grabata*	*Round stingray*
413.	*Talismania antillarum*	*Antillean smooth-head*
414.	*Talismania homoptera*	*Hairfin smooth-head*
415.	*Talismania longifilis*	
416.	*Talismania mekistonema*	*Theadfin smooth-head*
417.	*Tetrapturus albidus*	*Atlantic white marlin*
418.	*Tetrapturus pfluegeri*	*Longbill spearfish*
419.	*Thunnus alalunga*	*Albacore*
420.	*Thunnus albacares*	*Yellowfin tuna*
421.	*Thunnus obesus*	*Bigeye tuna*
422.	*Torpedo mackayana*	*Ringed torped*
424.	*Torpedo nobiliana*	*Atlantic torpedo*
425.	*Torpedo torpedo*	*Common torpedo*
426.	*Trachinocephalus myops*	*Snakefish*
427.	*Trachinotus goreensis*	*Longfin pompano*
428.	*Trachinotus maxillosus*	*Guinean pompano*
429.	*Trachinotus ovatus*	*Derbio*
430.	*Trachinotus teraia*	*Shortfin pompano*
431.	*Trachpterus trachypterus*	*Ribbon fish*
432.	*Trachurus capensis*	*Cape horse mackerel*
433.	*Trachurus trecae*	*Cunene horse mackerel*
434.	*Trichiurus lepturus*	*Largehead hairtail*
435.	*Tylosurus acus rafale*	*Atlantic agujon needlefish*
436	*Tylosurus crocodiles crocodiles*	*Hound needlefish*
437.	*Umbrina canariensis*	*Canary drum*
438.	*Umbrina ronchus*	*Fusca drum*
439.	*Uraspis secunda*	*Cottonmouth jack*
440.	*Uroconger syringinus*	*Threadtail conger*
441.	*Valenciennellus tripunctulatus*	*Constellation fish*
442.	*Venefica proboscidea*	*whipsnout sorcerer*
443.	*Vinciguerria attenuata*	-------
444.	*Vinciguerria nimbaria*	*Oceanic lightfish*
445.	*Winteria telescopa*	--------
446.	*Xenodermichthys copei*	*Bluntsnout smooth-head*
447.	*Xiphias gladius*	*swordfish*
448.	*enodermichthys copei*	*Bluntsnout smooth-head*
447.	*Xiphias gladius*	*swordfish*
448.	*Yarrella blackfordi*	----------
449.	*Zanobatus schoenleinii*	*stripped panray*
450.	*Zenion longipinnis*	-------
451.	*Zenopsis conchifer*	*Silver John dory*
452.	*Zeus faber*	*John dory*

Appendix V: **LIST OF FRESHWATER FISHES OF LIBERIA**

	Scientific	FB Name
1.	*Aethiomastacembelus liberiensis*	
2.	*Amphilius atesuensis*	
3.	*Amphilius platychir*	*Mountain barbel*
4.	*Amphilius rheophilus*	
5.	*Anomalochromis thomasi*	
6.	*Aphyosemion bertholdi*	*Berthold's killi*
7.	*Aphyosemion brueningi*	*Bruening's killi*
8.	*Aphyosemion geryi*	*Gerys killi*
9.	*Aphyosemion guineense*	*Guinean killi*
10.	*Aphyosemion jeanpoli*	*Jeanpol's killi*
11.	*Aphyosemion liberiense*	
12.	*Aphyosemion maeseni*	
13.	*Aphyosemion monroviae*	
14.	*Aphyosemion occidentale*	*Golden pheasant panchax*
15.	*Aphyosemion roloffi*	
16.	*Aphyosemion schmitti*	
17.	*Aphyosemion viride*	
18.	*Aplocheilichthys nimbaensis*	*Mt. Nimba lampeye*
19.	*Aplocheilichthys normani*	*Norman's lampeye*
20.	*Aplocheilichthys rancureli*	*Rancurel's lampeye*
21.	*Aplocheilichthys schioetzi*	*Schitz' lampeye*
22.	*Aplocheilichthys spilauchen*	*Banded lampeye*
23.	*Arius latiscutatus*	*Rough-head sea catfish*
24.	*Awaous lateristriga*	*West African freshwater goby*
25.	*Barbus ablabes*	
26.	*Barbus carcharhinoides*	
27.	*Barbus eburneensis*	
28.	*Barbus huguenyi*	
29.	*Barbus inaequalis*	
30.	*Barbus lauzannei*	
31.	*Barbus leonensis*	
32.	*Barbus liberiensis*	
33.	*Barbus macrops*	*Blackstripe barb*
34.	*Barbus melanotaenia*	
35.	*Barbus parawaldroni*	
36.	*Barbus sacratus*	
37.	*Barbus trispiloides*	
38.	*Barbus trispilos*	
39.	*Barbus wurtzi*	
40.	*Brienomyrus brachyistius*	
41.	*Brycinus imberi*	*Spot-tail*
42.	*Brycinus longipinnis*	*longfin tetra*
43.	*Brycinus macrolepidotus*	*True big-scale tetra*
44.	*Brycinus nurse*	*Nurse tetra*
45.	*Carcharhinus leucas*	*Bull shark*
46.	*Chiloglanis occidentalis*	

47.	*Chromidotilapia guentheri guentheri*	*Guenther's Mouthbrooder*
48.	*Chrysicthys filamentous*	
49.	*Chrysicthys furcatus*	
50.	*Chrysicthys johnelsi*	
51.	*Chrysicthys maurus*	
52.	*Chrysicthys nigrodigitatus*	*Bagrid catfish*
53.	*Chrysichthys teugelsi*	
54.	*Clarias buettikoferi*	
55.	*Clarias gariepinus*	*North African catfish*
56.	*Clarias laeviceps laeviceps*	*Catfish*
57.	*Clarias salae*	
58.	*Clarias kingsleyae*	*Tailspot ctenpoma*
59.	*Cynotthrissa ansorgii*	
60.	*Dalophis boulengeri*	
61.	*Dalophis cephaloopeltis*	
62.	*Distichodous rostratus*	
63.	*Doumea chappuisi*	
64.	*Eleotris daganensis*	
65.	*Eleotris vittata*	
66.	*Elops senegalensis*	*Senegalese ladyfish*
67.	*Enneacampus kaupi*	
68.	*Epiplatys annulatus*	
69.	*Epiplatys barmoiensis*	
70.	*Epiplatys coccinatus*	
71.	*Epiplatys dageti dageti*	*Redchin panchax*
72.	*Epiplatys fasciolatus*	
73.	*Epiplatys lamottei*	*Redspotted panchax*
74.	*Epiplatys olbrechtsi*	
75.	*Epiplatys roloffi*	
76.	*Epiplatys ruhkopfi*	
77.	*Ethmalosa fimbriata*	*Bonga shad Bonga*
78.	*Hemichromis bimaculatus*	*Jewelfish*
79.	*Hemichromis fasciatus*	*Banded jewelfish*
80.	*Hepsetus odoe*	*Kafue pike*
81.	*Heterobranchus isopterus*	
82.	*Heterobranchus longifilis*	*Vundu*
83.	*Hippopotamyrus paugyi*	
84.	*Hydrocynus vittatus*	*Tiger fish*
85.	*Isichthys henyri*	
86.	*Kribia kribensis*	
87.	*Kribia nana*	
88.	*Labeo alluaudi*	
89.	*Labeo currieri*	
90.	*Labeo parvus*	
91.	*Ladigesia roloffi*	*Jelly bean tetra*
92.	*Laeviscutella dekimpei*	*Roundbelly pellonuline*
93.	*Lates niloticus*	*Nile perch*
94.	*Lepidarchus adonis*	*Jelly bean tetra*
95.	*Lutjanus dentatus*	*African brown snapper*
96.	*Malapterurus cavalliensis*	

97.	*Malapterurus electricus*	*Electric catfish*
98.	*Marcusenius mento*	
99.	*Marcusenius thomasi*	
100.	*Marcusenius ussheri*	
101.	*Megalops atlanticus*	*Tarpon*
102.	*Micralestes occidentalis*	
103.	*Microphis brachyurus aculeatus*	
104.	*Microsynodontis polli*	
105.	*Monopterus boueti*	*Liberian swamp eel*
106.	*Mormyrops anguilloides*	*Cornish jack*
107.	*Mormyrops breviceps*	
108.	*Mormyrus goheeni*	
109.	*Mormyrus rume rume*	*Mormyrids*
110.	*Mormyrus tapirus*	
111.	*Nannocharax seyboldi*	
112.	*Nannocharax fasciatus*	
113.	*Neolebias unifasciatus*	
114.	*Ophisternon afrum*	*Guinea swamp eel*
115.	*Oreochromis macrochir macrochir*	*Longfin tilapia*
116.	*Oreochromis niloticus niloticus*	*Nile tilapia*
117.	*Papyrocranus afer*	*Reticulate knifefish*
118.	*Parachanna obscura*	*Snake-head*
119.	*Paramphilius firestonei*	
120.	*Paramphilius trichomycteroides*	
121.	*Pellonula leonensis*	*Smalltoothed pellonula*
122.	*Pellonula vorax*	*Bigtoothed pellonula*
123.	*Pelmatochromis humilis*	
124.	*Pelmatochromis roloffi*	
125.	*Periophthalmus barbarus*	*Atlantic mudskipper*
126.	*Petrocephalus levequei*	
127.	*Petrocephalus pellegrini*	
128.	*Petrocephalus simus*	
129.	*Petrocephalus tenuicauda*	
130.	*Polypterus palmas palmas*	*Shortfin bichir*
131.	*Polypterus retropinnis*	*West African bichir*
132.	*Pomadasys jubelini*	*Sompat grunt*
133.	*Pristis microdon*	*Largetooth sawfish*
134.	*Raiamas steindachneri*	
135.	*Rhabdalestes septentrionalis*	
136.	*Sarotherodon caudomarginatus*	
137.	*Sarotherodon melanotheron melanotheron*	*Blackchin tilapia*
138.	*Sarotherodon occidentalis*	
139.	*Sarotherodon tournieri liberiensis*	
140.	*Sarotherodon tournieri tournieri*	
141.	*Schilbe mandibularis*	
142.	*Schilbe mystus*	*African butter catfish*
143.	*Sierrathrissa leonensis*	*West African pygmy herring*
144.	*Synodontis schall*	*Wahrindi*
145.	*Synodontis waterloti*	
146.	*Tilapia brevimanus*	

147. *Tilapia buttikoferi*
148. *Tilapia cessiana*
149. *Tilapia coffea*
150. *Tilapia guineensis*
151. *Tilapia joka*
152. *Tilapia louka*
153. *Tilapia walteri*
154. *Tilapia zillii* — *Redbelly tilapia*
155. *Trachinotus teraia* — *Shortfin pompano*
156. *Tylochromis intermedius*
157. *Tylochromis jentinki*
158. *Tylochromis leonensis*
159. *Xenomystus nigri* — *African knifefish*

Appendix VII: LIST OF TIMBER SPECIES OF LIBERIA

Scientific Name:	**Common Name**:	**Trade Name:**
Pachypodanthium staudtii	*Gola-duo*	
Alstonia boonei	*Emien*	*Awun*
Ceiba pentandra	*Cotton tree*	*Ceiba*
Rhodognaphalon brevicuspe	*Alone*	
Canarium schweinfurthii	*White mahogany*	*Bush Candle Tree*
Dacyrodes klaineana	*Monkey plum*	*Adjouaba*
Terminalia ivorensis	*Framire*	*Framire*
Terminalia superba	*Limba*	
Brifelia grandis	*Doaandoh*	
Oldfieldia africana	*Africa oak*	*Dantoue*
Uapaca guineensis	*Rikio*	*Red Cedar*
Uapaca carbisieri		
Mammea africana	*Oboto*	*Passec*
Pentadesma butyracea	*Kiasoso*	*Lami*
Sacoglottis gabonensis	*Ozouga*	*Tala*
Beilschmiedia mannii	*Kanda*	
Combretodendron macrocarpum	*Abale*	*Wulo*
Afzelia bracteata		
Afzelia bella	*Afzelia, Doussie*	*Papao*
Amphimas pterocarpoides	*Bokanga*	
Anthonotha fragrans	*Kibakoko*	
Berlinia confusa	*Ebiara*	*Berlinia*
Brachystegia leonensis	*Naga*	*Naga*
Bussea occidentalis	*Samanta*	*Nomotcho*
Copaifera salikounda	*Etimoe*	
Crudia gabonensis		
Cryptosepalum tetraphyllum	*Pantou*	*Pantou*
Cynometra ananta	*Apome*	*Apome*
Cynometra leonensis		
Daniellia ogea	*Faro*	*Daniella*
Daniellia thurifera	*Copal Tree*	
Dialium aubrevillei	*Kropio*	*Kropio*

Dialium guineense		
Dialium dinklagei		
Didelotia idea	*Bondu*	*Broutou*
Distemonanthus benthamianus	*Movingui*	*Yellow Satinwood*
Erythrophleum ivorensis	*Tali*	*Tali*
Gilbertiodendron preessii	*Limbali*	*Red Oak*
Guibourtia ehie	*Bubinga*	*Amazakoue*
Monopetalanthus compactus	*Fian*	
Monopetalanthus pteridophyllus		
Stachyothyrsus stapfiana	*Red Pine*	*Kaoue*
Tetraberlinia tubmaniana	*Sekon*	*Liberian Pine*
Albizzia ferruginea	*Musase*	*Pampena*
Aubrevillea platycarp		
Calpocalyx aubrevillei		
Newtonia aubrevillei		
Newtonia duparquetiana		
Parkia bicolor	*Locust Bean*	
Pentaclethra macrophylla	*Oil Bean Tree*	*Mubala*
Piptadeniastrum africana	*Dabema*	*Ekhimi*
Haplormosia monophylla	*Black Gum*	*Black Gum*
Entandrophragma angolense	*Tiama*	*Tiama*
Entandrophragma utile	*Sipo*	*Sipo*
Entandrophragma candollei	*Kosipo*	*Kosipo*
Entandrophragma cylindricum	*Sapelle*	*Sapelle*
Gaurea cedrata	*Bosse*	*Bosse*
Khaya anthotheca	*Acajou-blanc*	*Acajou-blanc*
Khaya ivorensis	*Acajou-d'Afrique*	*Acajou-d'Afrique*
Lovoa trichilioides	*Dibetu*	*Sida*
Turraeanthus africanus	*Avodire*	*Avodire*
Antiaris toxicaria	*Ako*	*Akede*
Chlorophora regia	*Iroko*	*Iroko*
Chlorophora excelsa	*Iroko*	
Pycnanthus angolensis	*Ilomba*	*Akomu*
Lophira alata	*Azobe*	*Ekki*
Coula edulis	*Coula*	*Attia*
Ongokea gore	*Angueuk*	*Angueuk*
Strombosia glaucescens	*Afina*	*Afina*
Anopyxis klaineana	*Kokoti*	*Kokoti*
Cassipourea nialatou	*Elephant Tusk*	*Nialatou Tree*
Parinari excelsa	*Parinari*	*Rough Skin Plum*
Parinari congensis	*Sougue*	
Parinari aubrevillei		
Parinari chrysophylla		
Parinari macrophylla		
Mitragyna ciliata	*Abura*	*Abura*
Nauclea diderrichii	*Bilinga*	*Kussia*

Araliopsis tabouensis	*Chicken Poo-poo*	*Grenian*
Fagara tessmannii	*Olon*	*Mafu*
Fagara macrophylla	*Bahe*	*Akatio*
Chrysophyllum perpulchrum		
Chrysophyllum albidum		
Chrysophyllum africanum	*African Star Apple*	
Chrysophyllum pruniforme		
Manikara obovata	*Fou*	
Tieghemella heckelii	*Makore*	*Makore*
Klainedoxa gabonensis	*Eveuss*	*Kroma*
Quassisa undulate		
Heritiera utilis	*Whismore*	*Whismore*
Nesogordonia papaverif	*Kotibe*	
Triplochiton scleroxylum	*Wawa*	
Funtumia Africana	*Mutundu*	*Mutundu*
Funtumia latifolia		
Celtis adolfi-friderici	*Lokonfi*	*Lokonfi*
Celtis maldbreadii		
Ricinodendron heudelotii	*Erimado, Eho*	*African Oil Nut Tree*
Loesenera kalantha		

Appendix VIII: FERNS OF LIBERIA

A. LIST OF FERNS (SOIL)

Scientific Name

1. *Trichomanes guineense*
2. *Dryopteris dewevrei*
3. *Dryopteris quadrangularis*
4. *Dryopteris protensa*
5. *Dryopteris lanigera*
6. *Dryopteris bucholzii*
7. *Tectaria angelicifolia*
8. *Tectaria fernandensis*
9. *Blbitis acrostichoidees*
10. *Bolbitis gemmifera*
11. *Asplenium emarginatum*
12. *Pityrogramma calomelanos*
13. *Adiantum vogelii*
14. *Adiantum philippense*
15. *Pteris catoptera*
16. *Pteris atrovirens*
17. *Pteris burtoni*
18. *Histiopteris incisa*
19. *Anisesorus occidentalis*
20. *Pteridium aquilium*
21. *Gleichenia linearis*

22. *Ophioglossum reticulatum*
23. *Selaginella molleri*
24. *Selasinella subcordata*

B. LIST OF FERNS (GROUND)

1. *Selagineela soyauxii*
2. *Selaginella myosurus*
3. *Selaginell versicolor*
4. *Swlaginella vogelii*
5. *Dryopteris striata*
6. *Lycopodium cernuum*
7. *Asplenium diplazisorum*

C.LIST OF FERNS (MOUNTAIN)

1. *Cyathea camerooniana*
2. *Dryopteris currori*
3. *Bibitis auriculata*
4. *Diplazium proliferum*
5. *Diplazium sulcinervium*
6. ***Pellaea doniana***
7. *Ptris pteridioides*

D. LIST OF FERNS (TREES)

1. *Trichomanes liberiiense*
2. *Trichomanes africanum*
3. *Trichomanes crispiforme*
4. *Hymenophyllum kuhnii*
5. *Oleandra oistenta*
6. *Anthropteris orientalis*
7. *Arthropteris monocarpa*
8. *Rthropteris obliterata*
9. *Davallia chaerophyllodes*
10. *Aspplenium africanum*
11. *Asplenium barteri*
12. *Asplenium dregeanum*
13. *Asplenium hemitomum*
14. *Asplenium megalura*
15. *Asplenium geppii*
16. *Lomariopsis guineensis*
17. *Vittaria guineensis*
18. *Antrophyum mannianum*
19. *Antrophyum immersum*
20. *Micropgramma lycopodioides*
21. *Microsorium scologpendria*
22. *Microsorium punctatum*
23. *Drynaria laurentii*
24. *Pleopeltis preussii*
25. *Xiphopteris serrulata*
26. *Loxogramme lanceotlata*
27. *Ctenoperis villosissima*

28. *Ctenopteris punctata*
29. *Elapholossum preussii*
30. *Elapholossum conferme*
31. *Elapholossum barteri*
32. *Elapholossum clarenceanum*
33. *Platycerium stemari*
34. *Playtycerium angolense*
35. *Lycopodium phlegamaria*
36. *Psilotum nudum*
37. *Nephrolepis biserrata*
38. *Nephrolepis undulate*

E. LIST OF FERNS (TREE TRUNK OR ROCK)

1.*Trichomanes chamaedrys*
2. *Trichomanes erosum*
3. *Trichomanes mannii*
4. *Trichomanes chevalieri*
5. *Trichomanes mettenii*
6. *Trichomanes clarenceanus*
7. *Hymenophyllum ciliatum*
8. *Asplenium formosum*
9. *Asplenum aethipicum*

F. LIST OF FERNS (WET PLACES)

1. *Trichomanes cupressoides*
2. *Dryopteris securidiformis*
3. *Microlepia speluncae*
4. *Diplazium sammattii*
5. *Asplenium variabile*
6. *Asplenium plaustris*
7. *Lomariopsis plaustris*
8. *Lonchitis currori*
9. *Lygodium smithianum*

G. **LIST OF FERNS (AQUATIC)**

1. *Cyathea manniana*
2. *Dryopteris jenseniae*
3. *Bolbitis salicina*
4. *Bilbitis heudelotii*
5. *Bolbitis fluviatilis*
6. *Ceratoptersis cornuta*
7. *Lygodium microphyllum*
8. *Marttia fraxinea*

Appendix IX SCNL MEDICINAL PLANT SURVEY IN PRINT

Scientific Names	Common Names	Parts Used	Treatment	Comment	Resource Persons
Terminalia ivoresis	Framaire	Bark	To treat poison	Pouind bark and mix with piassava wine, drink a cup daily	Junior Sarbor
Saciglotis gabonentis	Sacoglotis	Ripe fruits bark	Food/stomach ache	Gather ripe fruits and eat	John Weah
Lophira alata	Ekki	Bank	Fro treating stomach ache, back pain and scabies	Extract bark, cut into pieces boil and pump once weekly for 2-3 weeks	Jacob Koffa
Mitragyna Sapulsa	Abura	Bank	To treat menstrual disorder	Extract bark pound and add cold water	Mary Kayee
Distemonanthus benethamlanus	Money can't climb	Bark	Malaria treatment	Pound bark, mix with water and drink	Junior sarbor
Elrythrophleum ivorense	Sassywood tree	Bank	Prolong sore	Collect bark and pump with solution once daily for a week	Thomas Kai
Fagara tessmannii	Fagara	Roots	Treatment for pile infection	Boil roots and pump with solution once daily for a week	Junior Sarbor
Musanga cecropoides	Cork wood tree	Leaves/roots	To treat toothache	Boil leaves/roots put solution to affected areas in the mouth	Cyrus Friday
Xylopia spp	Bush pepper	Seeds	For food season	Harvest mature pods, dry extract seed, pound to powder add to cooked food	Bone Nimely
Calpocalyx auberiblei	Calpocalyx	Seeds	Food	Collect seeds, cook and eat	Jacob Koffa
Raphia spp	Rattan	Vine	Furniture and construction materials	Collect vines, clean, dry and produce furniture	Thomas Kai

Appendix X. Species for Which Scientific and Common Names Could Not be Established Though medicinal and Other Values were Identified

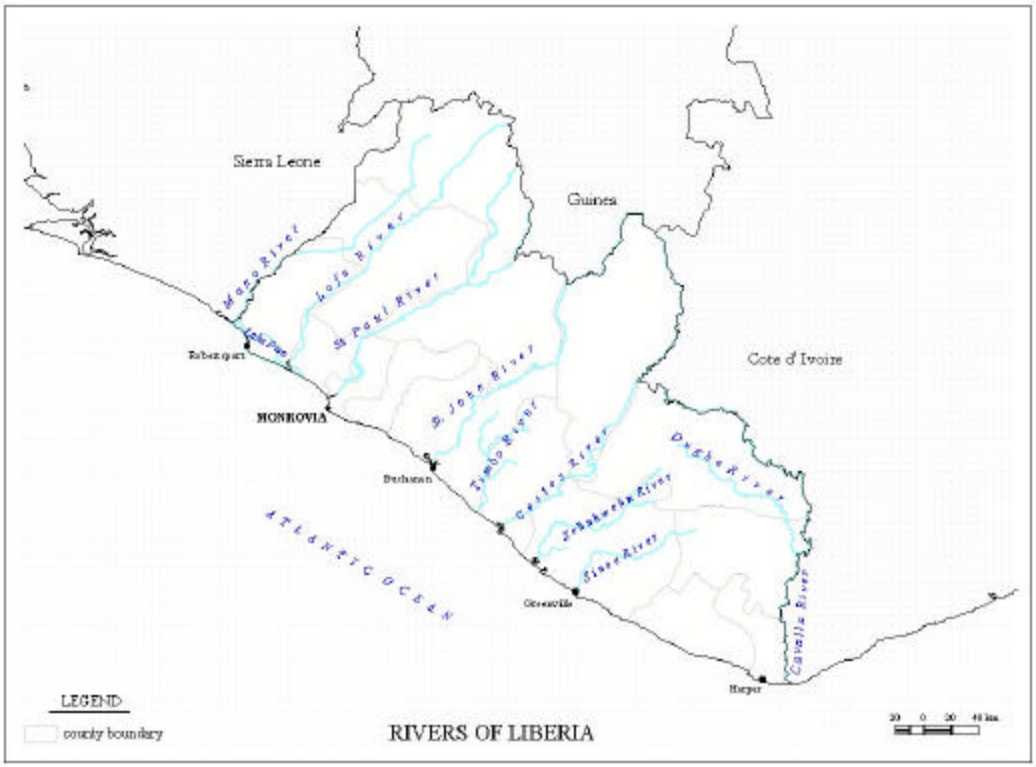
Species/Indigenous Name	Resource Person
1. Nuon – Pennu	Jacob Koffa and Myers Sneh
2. Zoeboweh	Bone Nimely
3. Mondubumon – Tu	John Wah
4. Buebeh – Tu	John Wah
5. Nenehiwea	Thomas Kai
6. Waldacdo	Mary Kayee and Anna Sabbeh
7. Sandubu	Mary Kayee and Gabriel Kannah
8. Tologbor	Gabriel Kannah
9. Toogbo	Ezekiel F. Tweh
10. Worloch	Anna Jabbah
11. Tobotweh	John Wah
12. Duldufu	Ezekiel F. Tweh
13. Vupoubueh – Tu	Bone Nimely
14. Soloweh	Ezekiel F. Tweh
15. Jlanouh	Ezekiel F. tweh
16. Seaclaycafahn	Anna Jabbah
17. Saybay	Michael Thomas
18. Dorleh	Gabriel Kannah
19. Kpyan	Ezekiel F. Tweh
20. Toadia	John Wah
21. Tohn	Dorothy Koffa
22. Sunyeh – Tu	Jacob Kofa
23. Nemenejeblo	Bartu Wleh
24. Chlogba	Mary Kayee
25. Monteh – Tu	Mary Kayee
26. Gbely	Bartu Wleh
27. Polar- Tu	Jacob Koffa
28. Kojarkumglah	Jacob Koffa
29. Korbuwo	Ezekiel F. Tweh
30. Dufukor	Myers Sheh

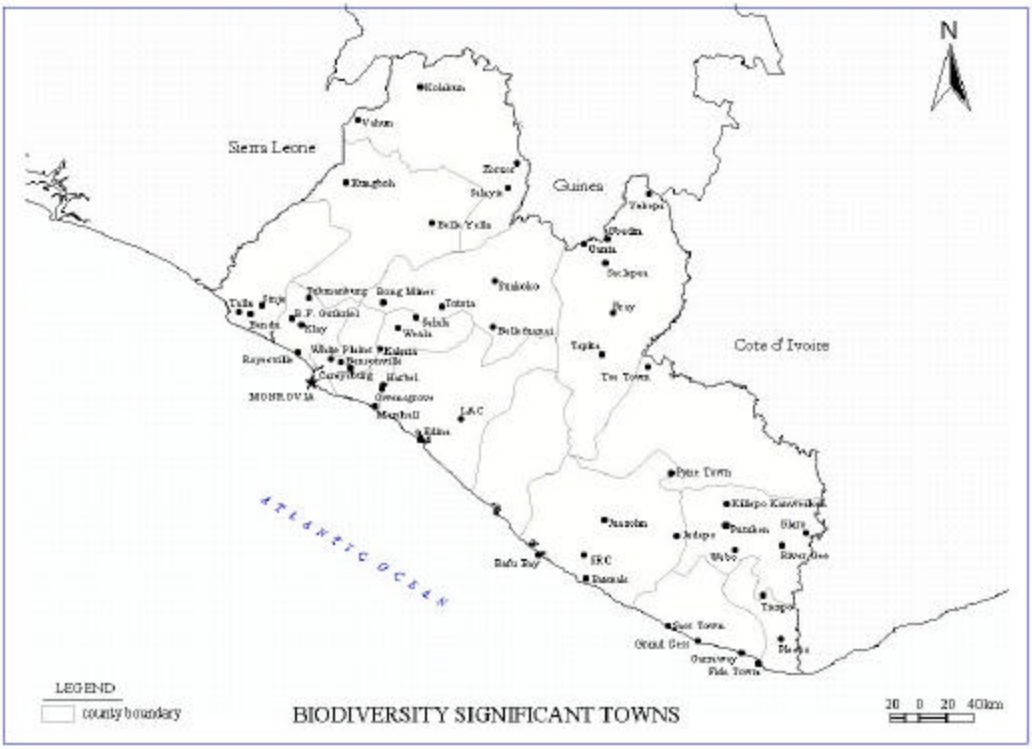
Appendix XI. Plants of Medicinal Values Identified by: William T. Gayflor, University of Liberia

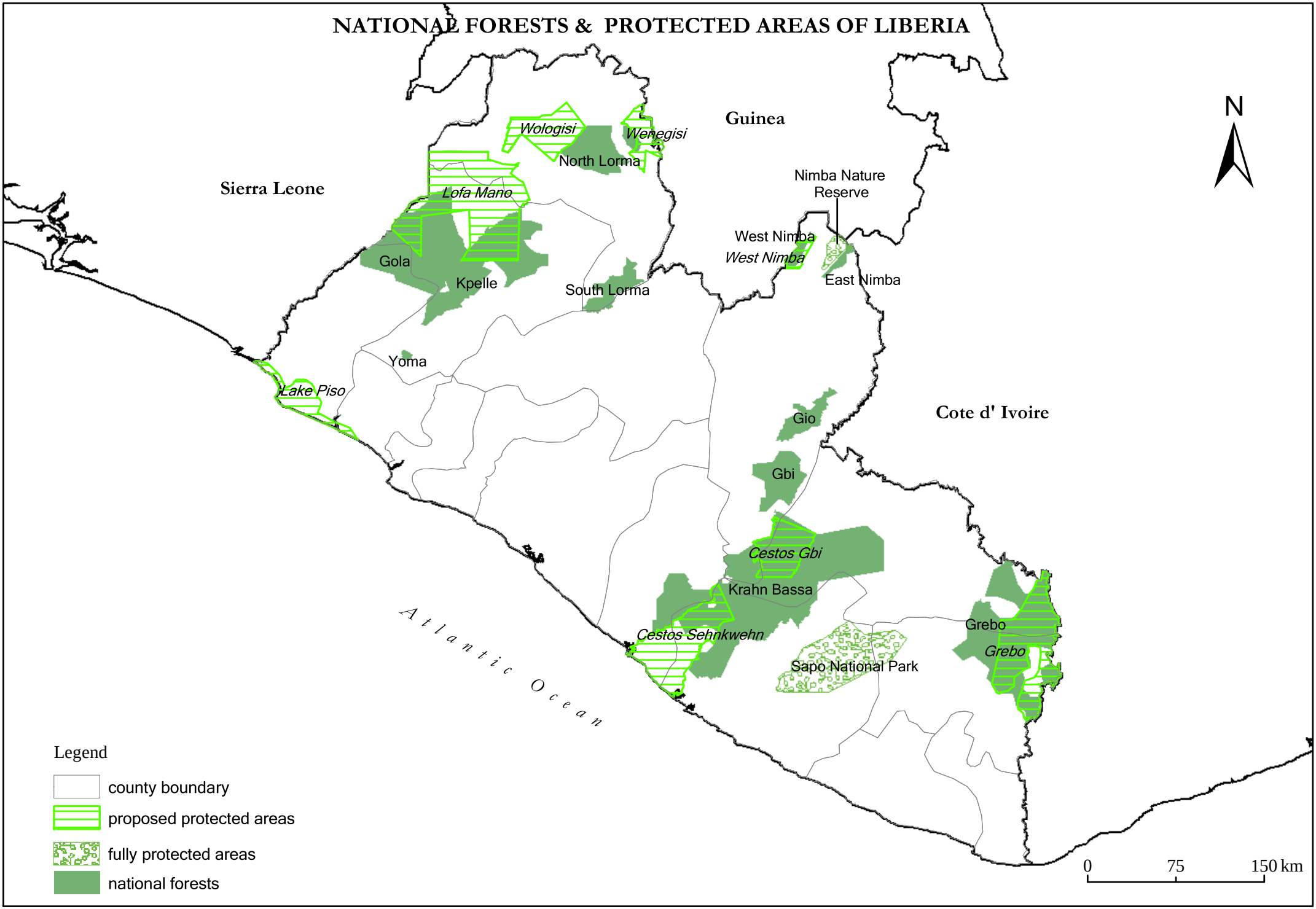
Scientific Names	Common Names	Parts Used	Treatment	Comments
Arachis hypogaea	Unknown	Leaves	Rheumatism	Roast leaves, add water and rub
Soalanum melongena	"	Bark	Toothache, dysentery	Boil for about an hour and drink
Lactuca Sativa	"	Bark, Leaves	Ulcer	Beat in mortar and add water, place in bottle for drinking
Corchus spp	"	Leaves	Worms	To be boiled for an hour for drinking
Armoracia rustican	"	Roots	Red eyes or Appolo	Slash, wash and beat in mortar and treat eye
Raphanus Sativus	"	Roots	Impotency	Cut roots into pieces and add water, put into bottle for drinking
Rungia Klossi	"	Leaves	Arrest bleeding after birth	Rub leaves and take internally
Vigna unguicuta	"	Laves	Measles	Boil leaves for about an hour and drink
Cicer arietinum	"	Bark	Cough	Wash and put in water
Nelum Nucifera	"	Leaves	Open-mole	Wash and beat in a mortar and apply to affected area on head
Ipomaea aquatica	"	Leaves	Hick-up	Plug leaves and inhale or smell
Petroselinum Cripum	"	Leaves	Malaria	Boil for an hour and drink at least a cup at interval
Oenanthe javanica	"	Leaves	Constipation	Boil for an hour and drink
Circhorium endivial	"	Leaves	Dimness in the eyes, dizziness	Collect leaves and squeeze in eyes

Appendix XII. Plants That Contain Tannins As Identified By Senior Students Of The Biology Department Of The University Of Liberia

Scientific Names	Common Name	Parts Used	Uses/Treatment	Comment
Anacardium occidentale	Cashew Tree	Bark, seeds, leaves	Dye, ink	More research needed
Avicennia africana	Black Mangrove	Barks, leaves, fruits	Dyes ink, tan for hides (leather)	"
Parinari excelsa	Guirvea plum	Barks, fruits	Dyes, ink, astrigent leather tan	"
Terminalia Catappa	Indian almond	Barks, flower, seed	Tan for leather dyes, ink	"
Mangiferia Indica	Mango	Barks, flowe, seeds	Tan for leather dyes, ink	
Rhizophora Mange	Red mangrove	Barks, leaves	Astringent, toothache, dysentery, diorrhoea, sore throat, ear ache, and leprosy	"
Cocos nucifera	Coconuts	Husks, roots, peels of bark	Toothache, earache, Astrigent	"
Psidium guajava	Guava	Leaves, roots, seeds, bark, fruit	Dysentery, diarrhoea, toothache	"
Securidea longepedunculata	-	Roots, seeds	Arrow away poison, (snake bites), Rheumatism	"
Spondia Monbin	Sour plum	Bark, seed, fruits	Cures, burns and skin eruption	"


Sierra Leone
Guinea
Cote d'Ivoire
Mano River
Lofa River
St Paul River
St John River
Cestos River
Sinoe River
Cavalla River
Robertsport
MONROVIA
Buchanan
Greenville
Harper
ATLANTIC OCEAN
LEGEND
county boundary
RIVERS OF LIBERIA


N
Sierra Leone
Guinea
Cote d'Ivoire
ATLANTIC OCEAN
MONROVIA
LEGEND
county boundary
BIODIVERSITY SIGNIFICANT TOWNS
30 0 20 40km


NATIONAL FORESTS & PROTECTED AREAS OF LIBERIA
Guinea
Sierra Leone
Cote d' Ivoire
Wologisi
Wehegisi
North Lorma
Lofa Mano
Nimba Nature Reserve
West Nimba
West Nimba
East Nimba
Gola
Kpelle
South Lorma
Yoma
Lake Piso
Gio
Gbi
Cestos Gbi
Krahn Bassa
Cestos Sehnkwehn
Sapo National Park
Grebo
Grebo
Atlantic Ocean
N
Legend
county boundary
proposed protected areas
fully protected areas
national forests
0
75
150 km