



28 February 2022

Bid Bulletin 1
RFP-021-PHL-2022
Services of a Firm for ISSP Enhancement and ICT Road Map

Dear Bidders,

Please be informed that we will be extending the deadline of submission of proposal from 28 February 2022; 5:00 P.M. Manila Time to ***07 March 2022; 5:00 PM. Manila Time.***

Please be guided accordingly.

Thank you.

UNDP Procurement Unit



PART I. ORGANIZATIONAL PROFILE

A. DEPARTMENT VISION/MISSION STATEMENT

A.1. Mandate/Functions

Legal Basis

Executive Order No. 192 dated June 10, 1987 states the following as the Department's mandate:

"The Department shall be in charge of carrying out the State's constitutional mandate to regulate and supervise the exploration, development, utilization and conservation of the country's natural resources."

Functions

DENR is tasked to formulate and implement policies, guidelines, rules and regulations, plans and programs relating to the:

- 1) management of the environment, and control and prevention of pollution;
- 2) management, conservation, development, use and replenishment of the country's natural resources and ecological biodiversity; and
- 3) exploration, development, extraction, disposition, and use of the country's forests, lands, minerals, wildlife and other natural resources.

A.2. Vision Statement

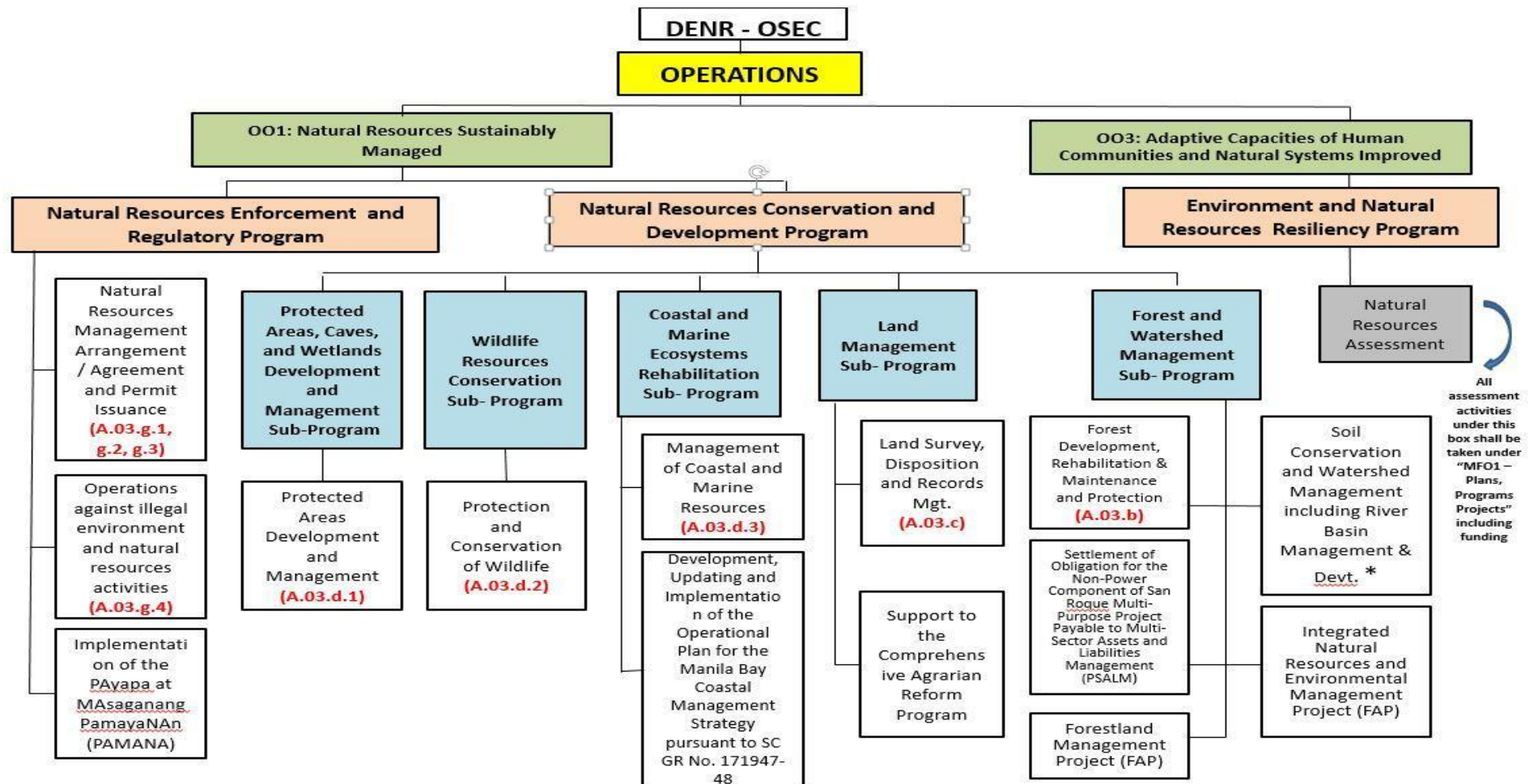
DENR envisions "a nation enjoying and sustaining its natural resources and clean and healthy environment."

A.3. Mission Statement

The DENR shall be the driving force in the pursuit of sustainable development, enabling stakeholders' participation in the protection, conservation, and management of the environment and natural resources for the present and future generations.



A.4. Programs Expenditure Classification (PREXC)





B. DEPARTMENT/AGENCY PROFILE

B.1. Name of Designated IS Planner

Name: **Atty. Ernesto D. Adobo, Jr.**
 Plantilla Position: Undersecretary
 E-mail address: edadobojr@denr.gov.ph
 Contact Number/s: (02) 8920-2213

Organizational Unit	Name of Agency Head	Designated IS Planner			Number of Employees					Current Annual ICT Budget (Php M)
		Name	Plantilla Position	E-mail Address	Regular & CTI	Casual	Contract (PS)	Contract 29	Grand Total Employees	
CENTRAL OFFICE	Roy A. Cimat	Ernesto D. Adobo Jr.	Undersecretary	edadobojr@denr.gov.ph	644	11	7	426	1088	264
REGIONAL OFFICE										
CAR	Ralph C. Pablo	Cirilo M. Gali	ISA III	cmgali@denr.gov.ph	1045	8	0	1,213	2266	2
Region –1	Atty. Crizaldy M. Barcelo	Bernard B. Quiros	ISA III	bbquiros@denr.gov.ph	727	15	0	73	815	2
Region – 2	Atty. Antonio A. Abawag	Aldwin Jay Cuntapay	ISA II	abcuntapay@denr.gov.ph	1091	16	0	815	1,922	2
Region – 3	Paquito T. Moreno	Karl Kevin D. Tallorin	ISA III	kkdtallorin@denr.gov.ph	1103	16	0	663	1,782	2
NCR	Jacqueline A. Caancan	Lea C. Orcilla	ISA III	lcorcilla@denr.gov.ph	295	0	0	304	599	2
Region - 4A	Engr. Gilbert C. Gonzales	Dennis M. Segovia	ISA III	dgmsegovia@denr.gov.ph	898	13	0	0	911	2
MIMAROPA	Henry A. Adornado	Jioliza E. Cabrera	ISA III	jecabrera@denr.gov.ph	1072	11	0	431	1,514	2
Region – 5	Atty. Gil A. Aromin	Rene L. Manzanades	ISA III	rlmanzanades@denr.gov.ph	732	16	0	691	1,439	2
Region – 6	Francisco E. Milla Jr.	Jade J. Valla	ISA III	jivalla@denr.gov.ph	986	14	0	1,294	2,294	2
Region – 7	Paquito D. Melicor, Jr.	Dennis T. Cuizon, Jr	ISA III	dtcuizonjr@denr.gov.ph	746	15	0	908	1,669	2
Region – 8	Tirso P. Parian, Jr.	Naomi C. Ansale	ISA III	ncansale@denr.gov.ph	882	17	0	595	1,494	2
Region – 9	Crisanta Marlene P. Rodriguez	Cyrus B. Bayawa	ISA III	cbbayawa@denr.gov.ph	1035	12	0	0	1,047	2
Region – 10	Arleigh J. Adorable	Ma. Lapertina S. Madridano	ISA III	mlsmadridano@denr.gov.ph	930	17	0	88	1,035	2
Region – 11	Ruth M. Tawantawan	Clyde Jay G. Dela Pena	ISA II	cgdelapena@denr.gov.ph	887	15	0	382	1,284	2
Region – 12	Sabdullah C. Abubakar	Eric A. Cagaan	ISA III	ecagaan@denr.gov.ph	733	16	0	403	1,152	2
Region – 13	Atty. Felix S. Alicer	Gerard M. Lopez	ISA III	gmlopez@denr.gov.ph	1,028	16	0	708	1,752	2



Organizational Unit	Name of Agency Head	Designated IS Planner			Number of Employees					Current Annual ICT Budget (Php M)
		Name	Plantilla Position	E-mail Address	Regular & CTI	Casual	Contract (PS)	Contract 29	Grand Total Employees	
STAFF BUREAUS										
ERDB	For. Nonito M. Tamayo	Alvin F. Olvida	ISA II	afolvida@erdb.denr.gov.ph	334	0	12	319	665	
FMB	For. Lourdes C. Wagan	Eugene V. Estrada	ITO II	evestrada@denr.gov.ph	154	0	0	185	339	
LMB	Atty. Emelyne V. Talabis	Warlito G. Quimirit	ITO II	wqguirimit@lmb.denr.gov.ph	139	0	0	83	222	
BMB	Ricardo L. Calderon	Darwin R. Tejerero	ITO II	radniw518@gmail.com	156	0	0	113	269	
TOTAL					15,617	228	19	9,694	25,558	

B.2. Current Annual ICT Budget

Total Annual ICT Budget: For 2020: **PhP263,647,000**

*No other sources of funds

B.3. Organizational Structure

Total number of employees

25,558 (14,273 Male and 11,285 Female)

Number of line bureaus

2 bureaus

- Environmental Management Bureau: Central Office and 16 Regional Offices
- Mines and Geo-Sciences Bureau (MGB): Central Office and 15 Regional Offices

Number of staff bureaus

4 bureaus

- Ecosystems Research and Development Bureau (ERDB) with 6 Research Centers
- Forest Management Bureau (FMB)
- Land Management Bureau (LMB)
- Biodiversity Management Bureau (BMB)



Number of attached agencies

3 attached agencies

- National Mapping and Resource Information Authority (NAMRIA)
- National Water Resources Board (NWRB)
- Palawan Council for Sustainable Development Staff (PCSDS)

Number of Regional Offices

16 Regional ENR Offices

Number of Provincial Offices (Provincial Environment and Natural Resources Office -PENRO)

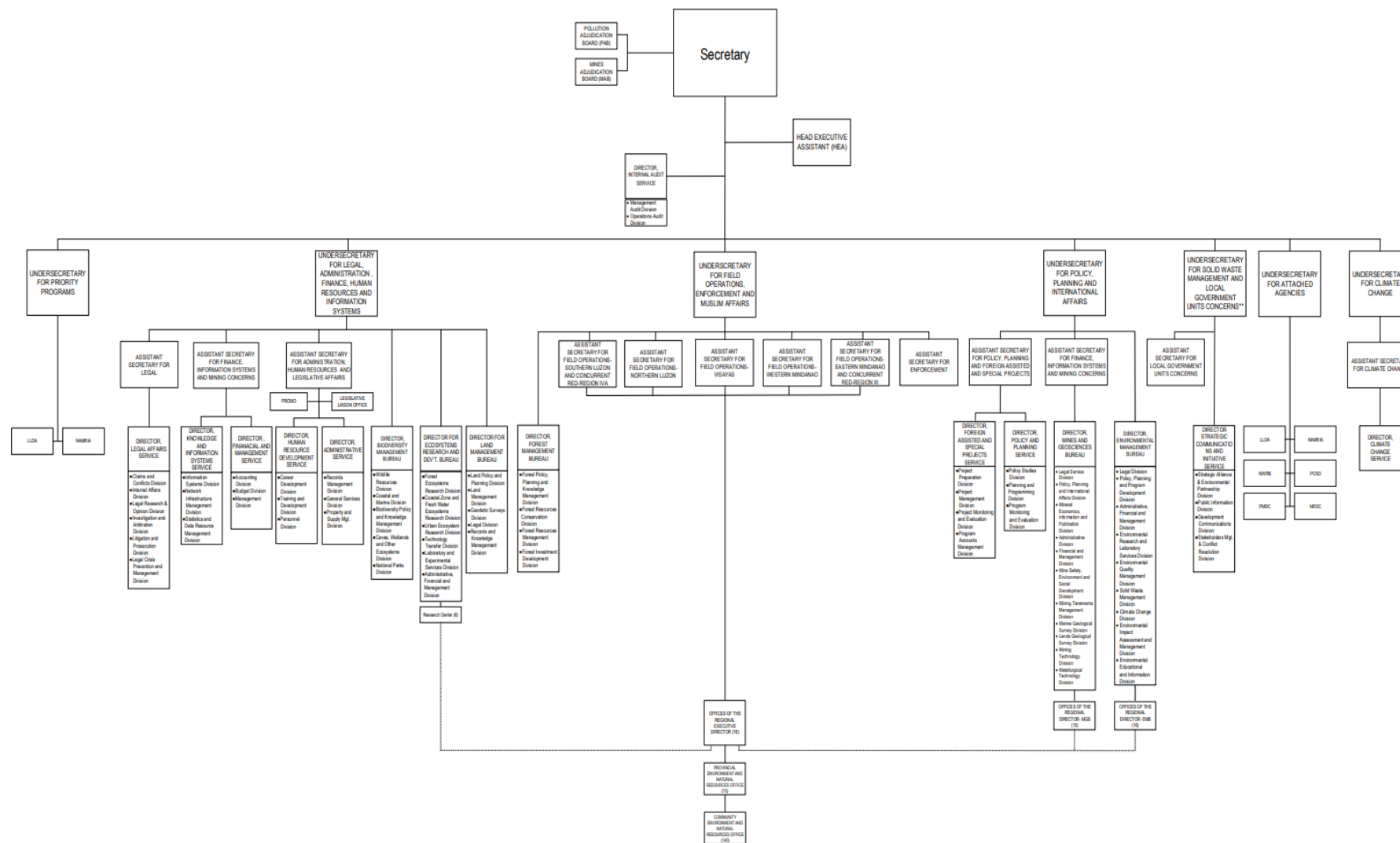
76 PENROs

Number of Community Environment and Natural Resources Office-CENRO)

142 CENROs



B.4. Organizational Functional Chart



*Supervised by Task Force (Environmental Protection and Enforcement Task Force, TP, Taps and Railways)
**Organized National Solid Waste Management Commission Secretariat (NSWMC) and Solid Waste Management Division



CENTRAL OFFICE

A. INTERNAL AUDIT SERVICE

- Assist and advise the Secretary on all matters relating to management control and operations audit;
- Conduct management and operations audits of the Department functions, programs, projects and activities;
- Determine the degree of compliance with their mandate, policies, government regulations, established objectives, systems and procedures/processes and contractual obligations;
- Review and appraise systems and procedures, organizational structure, asset management practices, financial and management records, reports and performance standards of the Department proper, Bureaus, and Regional Offices;
- Analyze and evaluate management in improving operational efficiency and effectiveness control deficiencies and assist top management by recommending appropriate courses of action; and
- Perform other functions that may be assigned by higher authority.

1. Management Audit Division

- Evaluate the achievement of the control objectives of the Department which include the safeguarding of assets, checking the accuracy and reliability of accounting data, adherence to established policies, compliance with laws, rules and regulations by utilizing internal auditing methods;
- Conduct management audit of activities and its units and determine the degree of compliance with the mandate, policies, government regulations, established objectives, systems and procedures/processes and contractual obligations;
- Review and appraise systems and procedures/processes, organizational structure, assets management practices, financial and management records, reports and performance standards of the agencies/units covered;
- Verification and analysis of financial and management data to ascertain complete, accurate and valid reports;
- Ascertain the reliability and integrity of financial and management information and the means used to identify, measure, classify and report such information;
- Ascertain the extent to which the assets and other resources of the institutions are accounted for and safeguarded from losses of all kinds;



- Review and evaluate the soundness, adequacy and application of accounting, financial and management controls and promote the most effective control at reasonable cost; evaluate the quality of performance of groups/individuals in carrying out their assigned responsibilities;
- Perform functions of a protective nature, such as prevention and detection of fraud or dishonesty;
- Review of cases involving misuse of agency property and checking of transactions with outside parties;
- Perform miscellaneous services, including special investigations and assistance to outside contacts such as Commission on Audit; and
- Perform other functions that may be assigned by higher authority.

2. Operations Audit Division

- Undertake the evaluation of outcomes, outputs, processes and inputs to government operations, programs and projects as to its economy, efficiency, effectiveness, and ethicality including compliance with laws, regulations, managerial policies, established objectives, systems and procedures and accountability measures in contractual obligations;
- Review and appraise systems, procedures and processes, organizational structure, operations, practices, records, reports and performance standards of offices or units audited;
- Evaluate the quality of performance of groups/individuals in carrying out their assigned responsibilities;
- Recommend courses of action on operational deficiencies observed;
- Perform special assignments and other functions of a protective nature such as prevention and detection of fraud; and
- Perform other functions that may be assigned by higher authority.

B. STRATEGIC COMMUNICATION AND INITIATIVES SERVICE

- Serve as the information, education and communication arm of the Department
- Responsible for disseminating information on environment and natural resources development policies, plans, programs and projects and respond to public queries on such concerns;
- Conduct environmental education;
- Undertake strategic alliance and partnership activities with external stakeholders;



- Monitor and assess current issues and concerns raised by the public either in media or other means and recommend approaches in addressing such concerns; and
- Handle priority areas/subjects identified by the Secretary which necessitate special and immediate attention.

1. Strategic Alliance and Environmental Partnership Division

- Promote volunteerism in environmental protection through strategic alliance and partnership with external stakeholders;
- Undertake social mobilization for wider participation, coalition building, program ownership, and resource mobilization; and
- Formulate and recommend policies on stakeholder enlistment and engagement.

2. Public Information Division

- Develop publics who are critically aware and engaged on DENR policies, plans, programs, projects and accomplishments through effective use of multi-media (mass, traditional, electronic, and social/online media);
- Manage the corporate brand and identity of DENR;
- Promote ENR information sharing and exchange;
- Set up and manage DENR nationwide media relations network and related activities;
- Develop and manage content of the DENR-OSEC website;
- Provide library services in the DENR central office; and
- Formulate and recommend standard policies and practices on public information and media relations.

3. Development Communications Division

- Engage in participatory planning and development of institutional (i.e., DENR) and program-specific communication strategies aimed at achieving desired behavioral and social changes;
- Establish quality standards in the planning and practice of development communication work and crafting of institutional core messages for mainstreaming in all communication initiatives;
- Develop innovative, creative, and user-friendly IEC materials and facilitate citizen engagement in various aspects of development communication; and



- Provides technical support to DENR bureaus, attached agencies and regional offices in the planning and management of development communication initiatives including capacity development.

4. Stakeholders Management and Conflict Resolution Division

- Manage current and emerging ENR issues and concerns to minimize or help prevent conflicts;
- Provide frontline services in responding to public assemblies and rallies;
- Facilitate issue management and conflict resolution;
- Develop ENR programs for special groups and sectors; and
- Formulate and recommend policies on quick response, conflict management, and community relations.

C. FOREIGN-ASSISTED AND SPECIAL PROJECTS SERVICE

- Identify and prepare investment project and program proposals for possible foreign and local assistance in close coordination with other appropriate government agencies;
- Prepare a development framework plan and guidelines/strategies for the Department on foreign assistance;
- Prioritize programs and/or projects requiring foreign and local assistance;
- Conduct and undertake feasibility studies for projects identified for external assistance;
- Represent the Department in negotiating for foreign loans/grant assistance;
- Provide staff support in the implementation of foreign-funded and special projects;
- Monitor and evaluate the performance of foreign-assisted and special projects in coordination with financial donors; and
- Perform other functions that may be assigned by higher authority.

1. Project Preparation Division

- Develop and program project proposals for foreign-assistance and special funding;
- Conduct pre-implementation activities; and
- Perform other functions that may be assigned by higher authority.



2. Project Management Division

- Implement the Department's special projects, both local and foreign-assisted;
- Institutionalize a system to effect a smooth transition from project preparation to implementation, and from project completion to post-evaluation; and
- Perform other functions that may be assigned by higher authority.

3. Project Monitoring and Evaluation Division

- Assess the progress and success of projects based on the achievement of project outputs and outcomes;
- Establish and implement a monitoring and evaluation system for foreign-assisted and special projects (FASPs) that is consistent with standards prescribed by oversight agencies, financing institutions, and the DENR; and
- Perform other functions that may be assigned by higher authority.

4. Project Accounts Management Division

- Assess the progress and success of projects based on the achievement of project outputs and outcomes;
- Establish and implement a monitoring and evaluation system for FASPS that is consistent with standards prescribed by oversight agencies, financing institutions, and the DENR;
- Develop and manage systems and procedures for the effective financial management of FASPs;
- Monitor the financial management of the accounts of each project; and
- Perform other functions that may be assigned by higher authority.

D. KNOWLEDGE AND INFORMATION SYSTEMS SERVICE

- Manage the information and communication technology (ICT) of the Department.
- Provide guidelines and services to various offices in the management of ICT in the Department that will facilitate well-informed decision making and improve the delivery of service of DENR units;
- Oversee the integration of ENR-related information/statistics generated by various sectors and convert the same into knowledge products;



- Oversee the implementation and updating of Information Systems Statistic Plan (ISSP); and
- Perform other functions that may be assigned by higher authority.

1. Information Systems Division

- Coordinate the design and provide support in the implementation of the information systems;
- Monitor and evaluate the performance of each information systems rolled-out in various units of DENR and recommend necessary improvements as necessary;
- Participate in the updating of the Department's ISSP;
- Coordinate with other agencies with regard to cross agencies systems;
- Act as Secretariat of the Change Management for Programs on Information and Communication Technology (CHAMP-IT); and
- Perform other functions that may be assigned by higher authority.

2. Network Infrastructure Management Division

- Continually update the Department's information network to ensure effective and efficient interconnectivity in any DENR units and with other agencies;
- Assist the various DENR offices in trouble shooting facilities;
- Maintain connectivity of the safety and security facilities of the Department from the Central Office to the field offices;
- Assist in defining the necessary specifications of ICT equipment appropriate to each office;
- Act as secretariat of CHAMP-IT; and
- Perform other functions that may be assigned by higher authority.

3. Statistics and Data Resource Management Division

- Coordinate the gathering of statistical data from various DENR offices and convert them into knowledge products;
- Update the Statistical Reporting System (SRS) manual;
- Develop and maintain a GIS-based statistical database and disseminate the information to various stakeholders;



- Assist in the coordination with national agencies concerned with statistics; and
- Perform other functions that maybe assigned by higher authority.

E. POLICY AND PLANNING SERVICE

- Develop planning and resource allocation guidelines and integrate all short/medium/long-term development plans and programs of the various sectors/functions guided by the mandate of the Department;
- Coordinate all planning activities, monitor and evaluate the performance of various units and sectors of the Department;
- Formulate policy recommendations and strategies for environmental and natural resources management;
- Formulate alternative global and national scenarios as bases for long term resource policy agenda;
- Recommend policies based on studies for the efficient and effective conservation of environment and natural resources; and
- Perform other functions that may be assigned by higher authority.

1. Policy Studies Division

- Formulate alternative global, regional and national scenarios as bases for long term resource policy recommendations and strategies for environment and natural resources;
- Perform continuing studies on the impact of national development policies on natural resources conservation and vice versa;
- Review and evaluate the implementation of policies concerning the sustainability of environment and natural resources;
- Review, analyze and evaluate existing policies in relation to international and national policies affecting ENR; and
- Perform other functions that may be assigned by higher authority.

2. Planning and Programming Division

- Integrate and recommend the long, medium, and short-term plans together with the investment programs and requirements of the DENR in line with the national developmental goals;



- Provide planning standards and guidelines in translating the plans and programs for funding execution;
- Evaluate and integrate annual plans in accordance with the Department's approved budget; provide criteria for determining priorities for proposed projects for budget support and defense;
- Provide technical assistance to bureaus, attached agencies and regional offices as well as the local and foreign-assisted programs/projects in plan preparation and guide in crafting performance indicators; and
- Perform other functions that may be assigned by higher authority.

3. Program Monitoring and Evaluation Division

- Coordinate and track the progress of performance of outputs by bureaus, attached agencies and field operations of the department in accordance with priority areas and work plan;
- Review and validate the accomplishments of project/program of the various units and sector according to technical feasibility, administrative expediency, other generally accepted criteria for development management;
- Evaluate and assess periodically and objectively performance reports and assess its implications for aggregate and strategic planning; and
- Perform other functions that may be assigned by higher authority.

F. LEGAL AFFAIRS SERVICE

- Advise and assist the Secretary in all legal matters in the implementation and enforcement of ENR laws, rules and regulations;
- Assist the Secretary in the exercise of his/her quasi-judicial functions;
- Render legal opinions involving questions of law and interpretation of policies, rules and regulations;
- Review proposed administrative issuances, policies, proclamations, other executive issuances and legislative bills which require comments and recommendations of this Department;
- Review contracts and memoranda of agreement or understanding where this Department is a contracting party;
- Prepare bonds and other instruments involving any interest of the Department, or provide comments and recommendations on any instruments already drawn;
- Assist the Secretary and other officials of the Department in investigation and prosecution of violations of ENR laws, rules and regulations;



- Act as legal counsel of the Department, and when authorized by the Office of Solicitor General (OSG), represent the Department and its officers in courts or tribunals in all civil actions, special civil actions, special proceedings and environmental cases in which the Department or any of its officer in his/her official capacity is a party;
- Assist the Secretary in his/her disciplinary function over officers and personnel; and
- Perform other functions that may be assigned by higher authority.

1. Legal Research and Opinion Division

- Prepare legal opinions on questions involving interpretation and implementation of ENR laws, policies, rules and regulations;
- Review proposed administrative issuances, proclamations, executive issuances, congressional measures or bills affecting environment and natural resources;
- Review contracts and memoranda of agreement or understanding entered into by the Department, its bureaus or agencies; research, compile and maintain database of all codes, statutes, jurisprudence, legislative and executive materials, as well as internal documents, such as, but not limited to, United Nations (UN) materials, treatises, international law cases, and other foreign legal documents pertinent to protection, conservation, and management of the environment and natural resources;
- Regularly disseminate information and updates on the above legal authorities and materials;
- Initiate and assist in enhancing the legal capabilities of the personnel implementing ENR laws, rules and regulations; and
- Perform other functions that may be assigned by higher authority.

2. Investigation and Arbitration Division

- Develop and update rules of procedure specific to ENR-related cases in the adoption of arbitration and other modes of Alternative Dispute Resolution (ADR) used to resolve disputes or controversy, other than by adjudication of a presiding officer; provide support for strengthening the capacities for ADR of lawyers and key personnel of this Department, its bureaus and agencies;
- Review and evaluate ENR cases appealed to the Office of the Secretary and/or ENR cases initiated *motu proprio* by the Secretary, and conduct investigation/hearing and/or ocular inspection when necessary in the practice of arbitration and/or ADR forms;



- Represent the Department in arbitration cases before regular courts and other arbitration bodies as may be authorized by law; and
- Perform other functions that may be assigned by higher authority.

3. Litigation and Prosecution Division

- When authorized by OSG, represent the Department and its officers acting in official capacity in environmental cases, civil actions, special civil actions, and special proceedings;
- Conduct administrative hearings and other proceedings for the establishment of reversion and other ENR cases;
- Gather evidence, establish facts and if warranted, prosecute persons and entities before the regular courts and other tribunals/bodies in coordination with the Department of Justice for violation of environmental laws, rules and regulations;
- Provide technical assistance to OSG in environmental cases pending in courts, where OSG is the handling lawyer of said cases;
- Advise and assist the Secretary in all legal matters in the implementation and enforcement of all environmental laws, rules and regulations; and
- Perform other functions that may be assigned by higher authority.

4. Claims and Conflicts Division

- Assist the Secretary in his/her quasi-judicial functions through review, evaluation, and preparation of decisions/resolutions/orders on claims and conflicts cases elevated on appeal or exercised *motu proprio* when necessary;
- Review and evaluate controversies involving ENR cases, including those with incomplete or insufficient factual evidence;
- Conduct hearing and/or ocular inspection, and recommends investigation and/or arbitration in claims and conflicts cases;
- Assist the Secretary in the implementation/execution of the decisions, orders, or resolutions relative to ENR cases which have been declared final and executory by the Secretary, Office of the President or other courts/tribunals; and
- Perform other functions that may be assigned by higher authority.



5. Internal Affairs Division

- Assist the Secretary in the resolution of administrative or personnel-related cases;
- Assist the Secretary in the review and evaluation of appealed decisions of the Regional and Bureau Directors on disciplinary and non-disciplinary cases;
- By authority of the Secretary, conduct fact-finding and/or formal investigations of administrative complaints/charges against personnel of the Department, its bureaus and agencies;
- Advise and assist the Secretary in other legal matters in connection with the exercise of his/her disciplinary powers;
- Provide legal assistance and advice to all units of the Department, Bureaus, attached agencies, and regional offices in the implementation of civil service laws, rules and regulations on personnel disciplinary and non-disciplinary actions;
- Prepare legal opinions on queries pertaining to laws on personnel administration and discipline;
- Review, evaluate and recommend legal actions/orders on matter pertaining to non-disciplinary actions from the Personnel Division, Regional Offices and Bureaus; provide legal assistance and support on the integrity development activities of the Department; and
- Perform other functions that may be assigned by higher authority.

G. ADMINISTRATIVE SERVICE

- Provide assistance and services on the promulgation of office orders, rules and regulations related to economic, efficient and effective administrative services in the Department-wide policies and standards on matters including general services, communications, logistics, property, safety and security, records management and documentation, and the like; and
- Perform other functions that may be assigned.

1. Records Management Division

- Develop and maintain a system of records management for the Department;
- Recommend policy guidelines on the management and disposition of records and documents;



- Compile and maintain necessary records and certify official documents upon request;
- Represent the Department in the presentation of documents required by the courts and other bodies; and
- Perform other functions that may be assigned by higher authority.

2. General Services Division

- Design, develop and implement an effective system of maintenance, security and safety of the Department's personnel and facilities including its buildings, grounds, vehicles and communications facilities;
- Receive, collect and deposit cash payment, prepare checks; and
- Perform other related functions that may be assigned by higher authority.

3. Property and Supply Management Division

- Prepare, implement and monitor the property and supply management program of the Department; recommend policies and guidelines on the utilization, maintenance, storage, and disposal of supplies, materials and equipment;
- Coordinate the preparation of the annual procurement program of the Department;
- Conduct inventory of all properties;
- Handle the insurance requirements of the Department, unless otherwise delegated to other units; and
- Perform other functions that may be assigned by higher authority.

H. FINANCIAL AND MANAGEMENT SERVICE

- Provide assistance and advice on the promulgation of office policies, orders, rules, regulations and standards related to financial and management services of the Department;
- Develop, maintain and improve a cost and financial accounting system for all programs/projects of the Department;
- Formulate basic policies and guidelines for the preparation of the Department's budget in close coordination with the Policy and Planning Service;
- Direct the financial and management services of the Department and exercise over-all supervision over the financial and management functions and activities/operations of bureaus and regional/field offices; and
- Perform functions that may be assigned by higher authority.



1. Management Division

- Review whether internal controls are applied at all levels within and across the Department-wide operations;
- Recommend measures for management improvement;
- Assist in the monitoring of compliance of the different units of the Department to these systems and processes (internal controls);
- Conduct management surveys of the organizational structure, manpower and operations, and conduct management studies on special assignments;
- Recommend standards/specifications on organization, staffing and operations, in consonance with laws, relevant guidelines and regulations; and
- Perform other related functions that may be assigned by higher authority.

2. Budget Division

- Develop and improve budgeting methods;
- Review, evaluate and integrate budget proposals of the Department (bureaus, regional offices, line bureaus and attached agencies) for submission to oversight agencies/offices in coordination with the Policy and Planning Service and provide budget briefing materials/justifications in the presentation of the Department's Budget Proposal;
- Review/evaluate and consolidate annual Work and Financial Plans (WFPs);
- Prepare, consolidate and submit Budget Execution Documents as required by DBM, and implement budget as provided in the Annual General Appropriations Act;
- Prepare and consolidate Budget Accountability Reports submitted by Bureaus/Regions for submission to DBM, COA and oversight agencies;
- Provide technical assistance to the Department's Operating Units; and
- Perform other related functions that may be assigned by higher authority.

3. Accounting Division

- Maintain basic and subsidiary accounting records and books of accounts to reflect accurate and current financial information required by existing accounting and auditing rules and regulations and by management;



- Implement administrative and financial policies of the Department and other oversight agencies regarding disbursement/expenditures and collections;
- Exercise technical supervision over all accounting units of the Department, including those of Attached Agencies;
- Prepare and submit financial reports required by management and other oversight agencies; and
- Perform other related functions that may be assigned by higher authority.

I. HUMAN RESOURCE DEVELOPMENT SERVICE

- Provide assistance and services on the promulgation of office orders, rules and regulations related to the administrative, operational and strategic aspects of human resource management and development;
- Plan, program, and implement competency-based human resource interventions of the Department;
- Evaluate learning and development programs and other human resource development activities of the various units of the Department;
- Develop a responsive employee career development program that will maximize potentials of employees in their jobs and in the organization; and
- Perform other functions that may be assigned by higher authority.

1. Career Development Division

- Develop and recommend policies and programs on employee development;
- Develop a continuing scholarship program of the Department;
- Assess and plan the staffing and competency requirements of the Department;
- Review and evaluate the present human resource available in the entire Department for purposes of developing policy guidelines on employee development and career patterns;
- Provide assistance to the various units in helping each employee evolve a career path and develop himself/herself in the job and in the Department;
- Provide career counseling; and
- Perform other functions that may be assigned by higher authority.

2. Training and Development Division



- Plan, design, program, coordinate and conduct learning and development activities in support of the performance of the Department's core functions;
- Assist the various sectors in the formulation of learning and development programs and related services directed to the development of the Department's partners;
- Design and develop a system of assessing human resources and capability needs to serve as basis for learning and development plans;
- Conduct periodic monitoring and evaluation of learning and development programs and other human resource development interventions conducted by the Department; and
- Perform functions that may be assigned by higher authority.

3. Personnel Division

- Administer a Department-wide personnel management program which shall include selection and placement, position classification and compensation, performance evaluation, employee relations and welfare services;
- Develop and implement an integrated system on attendance, transfers, personnel records management and other personnel services in the Department;
- Administer a mechanism for the adjudication of employees' complaints and grievances; and
- Perform other related functions that may be assigned by higher authority.

STAFF BUREAUS

A. FOREST MANAGEMENT BUREAU

- Prepare and recommend policies and programs for the sustainable management of the Philippine forests taking into consideration the production function of the forest in providing livelihood and ecosystem services as well as the role of the forest in climate change mitigation;
- Formulate plans, programs and policies for the sustainable management of production forest including grazing and forest plantation, critical watershed and river basin, forest reservation and rehabilitation of degraded and denuded forestland including mangrove forest;
- Formulate and develop forestry related investment strategies but not limited to community forestry, forest plantation and wood-based industries including non-wood forest products and services;



- Conduct studies on the supply and demand trends at the national and international levels including the development of national certification policy to comply with the international requirements in the trade of forest goods and services;
- Provide technical assistance and extension services to the field offices on the protection, conservation, management and development of forests and forestland;
- Conduct technical monitoring and evaluation in the implementation of programs, projects and activities as input to policy formulation and program level assessment;
- Represent the Department in the international cooperation on forests and related agreements; and
- Perform other functions that may be assigned by higher authority.

1. Forest Policy, Planning and Knowledge Management Division

- Monitor and evaluate performance of forestry programs/projects;
- Conduct policy development, planning, information and knowledge management efforts to support the formulation of sustainable forestry programs and the implementation of stakeholder-oriented activities to generate broad-based support of forestry protection, conservation, development and utilization; and
- Perform other functions that may be assigned by higher authority.

2. Forest Resources Conservation Division

- Formulate policies and strategies on conservation-related plans and programs taking into consideration the emerging issues such as forest degradation, climate change, biodiversity, and impact of illegal logging activities; and
- Perform other functions that may be assigned by higher authority.

3. Forest Resources Management Division

- Formulate policies, standards and protocols on forestry management and utilization, consistent with the principles of conservation and protection, as well as sustainable development and ecological health; and
- Perform other functions that may be assigned by higher authority.

4. Forest Investment Development Division



- Formulate forestry-specific investment policies, strategies and opportunities which are aligned with the principles and policies relative to forestry protection, conservation, management and utilization to promote equitable use and sustainable development; and
- Perform other functions that may be assigned by higher authority.

B. LAND MANAGEMENT BUREAU

- Formulate and recommend policies and programs for efficient and effective administration, management, survey and disposition of alienable and disposable (A and D) lands of the public domain and other lands outside the responsibility of other government agencies;
- Advise the DENR field offices on the efficient and effective implementation of policies, programs and projects for more effective public lands management, formulate and recommend standards, guidelines, regulations towards the optimal development and utilization of land resources;
- Advise the Secretary on matters involving public land management and on implementation of The Public Land Act and other land-related laws; and
- Perform other functions that may be assigned by higher authority.

1. Land Policy and Planning Division

- Formulate policies, plans and programs and develop projects for the efficient and effective public lands management and administration;
- Conduct monitoring, assessment and evaluation of the implementation of policies, plans, programs, projects and all activities relating thereto;
- Upgrade, manage and maintain the Land Administration and Management System (LAMS) and develop other database on land information, communication and technology; and
- Perform other functions that may be assigned by higher authority.

2. Land Management Division



- Conduct studies and research, and assist in the formulation of policies, guidelines/standards, plans and programs for the rational disposition and management of A and D lands of the public domain, foreshore areas adjacent to A and D land, friar lands and other patrimonial properties of the Government; provide technical assistance and guidance in the disposition of public lands and processing of patents, public land applications;
- Conduct monitoring to ensure proper implementation of Contracts, Deeds, Leases, Proclamations and other conveyances of public lands;
- Ensure efficient revenue collection/generation over the disposition of patrimonial properties under the administration of the Bureau; and
- Perform other functions that may be assigned by higher authority.

3. Geodetic Surveys Division

- Assist in the formulation of policies relative to digital projection and geo-reference, project control, technical standards, survey project management, political boundary delineation and other related land survey matters;
- Develop and recommend standards, techniques, methods and procedures of execution, conduct and approval of land surveys and render technical assistance to the field offices on the matter; establish and maintain national database of geographic and plane coordinates (GPC) of all land survey reference monuments belonging to the third order and below;
- Consolidate municipal, provincial and regional base maps and prepare certifications of land areas of local government units (LGUs) for purposes of the Internal Revenue Allocation (IRA);
- Collate and analyze all geo-based information for the development of standard text and spatial database for the maintenance of the Land Information System (LIS);
- Conduct monitoring and field validation and assessment of land survey projects;
- Assist in LAMS roll-out and operationalization;
- Attend congressional deliberations, inter-agency meetings and court hearings on land survey matters; and
- Perform other functions that may be assigned by higher authority.

4. Legal Division

- Assist in the formulation of policies, laws, rules and regulations relating to the administration and management of public lands and the efficient resolution of land cases;



- Conduct research and provide legal advice, assistance, and render comment and opinion on the interpretation and application of The Public Land Act and other land-related laws and issuances;
- Conduct investigation on land claims and conflicts cases and petitions for annulment/cancellation of titles involving patrimonial properties under the jurisdiction of the LMB, as well as administrative cases against LMB employees, and prepare reports and recommendations through resolutions, decisions, or orders;
- Provide assistance to the Office of the Solicitor General (OSG) in the prosecution of land cases; and
- Perform other functions that may be assigned by higher authority.

5. Records and Knowledge Management Division

- Assist in the formulation of policies, rules and regulations, development of plans, programs and projects on the efficient management of land records;
- Recommend systems and procedures in the field of records management to improve delivery of service;
- Provide technical assistance to the field offices on records management;
- Ensure custody, safekeeping, maintenance and control of all LMB records in accordance with the Land Administration and Management System (LAMS);
- Ensure the implementation of a document tracking system and the expeditious and efficient actions on requests from the public clientele;
- Issue certifications relating to the status of land and records and act as witness and testify on Subpoena Duces Tecum pursuant to Court Orders; and
- Perform other functions that may be assigned by higher authority.

C. BIODIVERSITY MANAGEMENT BUREAU

- Formulate, review and recommend policies, plans and programs for the management of an integrated protected area system (NIPAS) and Other Effective Conservation Measures (OECM's), as well as, conservation of biological resources;
- Monitor and assess the implementation of policies, plans and programs on the conservation of biological diversity and other relevant laws, rules and regulations;
- Develop partnerships and linkaging in biodiversity conservation and management at the ecosystem and species level;



- Develop and implement capacity building programs and provide technical assistance to DENR Field Offices and other clienteles regarding the conservation and management of wildlife resources, protected areas coastal and marine resources, caves, wetlands and other important biodiversity thematic areas;
- Integrate communication development program including research agenda for biodiversity conservation;
- Coordinate, integrate and monitor compliance to international commitments relative to biodiversity;
- Manage the Ninoy Aquino Parks and Wildlife Center and the National Wildlife Research and Rescue Center;
- Develop programs and standards in ecotourism and disaster risk reduction management for coastal and marine ecosystems; and
- Perform other functions that may be assigned by higher authority.

1. Wildlife Resources Division

- Formulate, review and recommend policies strategies, plans and programs for the protection, conservation and sustainable use of wildlife resources in the country pursuant to RA 9147;
- Develop standards on the management of wildlife resources captivity, including establishment of zoos, botanical gardens, wildlife rescue centers and similar facilities;
- Develop and undertake capacity building programs for wildlife species conservation, including policy implementation and enforcement; provide guidelines in the implementation of the Philippine commitments to the Convention on International Trade in Endangered Species of Wild Flora and Fauna (CITES) as Management Authority for terrestrial species;
- Update and maintain data and information on Philippine wildlife resources and critical habitats;
- Provide guidance and technical assistance on the management of wild flora and fauna; and
- Perform other functions that may be assigned by higher authority.

2. Caves, Wetlands and Other Ecosystems Division

- Formulate, review and recommend policies, strategies, plans and programs for sustainable use and multi-stakeholder participation in the management of caves and cave resources pursuant to RA 9072 (National Cave and Cave Resources Conservation and Protection Act); inland wetlands based on the National Wetland Action Plan, and other important biodiversity areas such as urban and agriculture;



- Develop standards and safeguards related to program implementation on caves, inland wetlands and other ecosystems;
- Develop and undertake capacity building programs for caves, inland wetlands and other important biodiversity areas;
- Facilitate marketing and promotion of biodiversity-based products and mainstreaming of biodiversity in wider agricultural landscape and urban settings;
- Establish or strengthen linkages, cooperation, networks and partnerships with relevant institutions or organizations including academe and private entities in the conservation and management of caves, wetlands and other ecosystems;
- Update and maintain data and information on caves;
- Facilitate the implementation of Philippine commitments to the Ramsar Convention on Wetlands; and
- Perform other functions that may be assigned by higher authority.

3. National Parks Division

- Formulate, review and recommend policies, strategies, plans and programs for the management and sustainable development of terrestrial protected areas as well as the local communities pursuant to the National Integrated Protected Areas System Act (RA 7586);
- Develop standards on tenurial instruments, ecotourism program including buffer zone; conduct policy-related studies and provide technical assistance for the sustainable management of terrestrial protected areas, as well as the local communities and indigenous peoples within and around these Protected Areas (PAs) and Buffer Zones (BZs);
- Develop and undertake capacity building programs;
- Update and maintain data and information on PAs under NIPAS and OECDMs; and
- Perform other functions that may be assigned by higher authority.

4. Coastal and Marine Division

- Formulate, review and recommend policies, plans and programs for the management of NIPAS Marine Protected Areas and other important coastal and marine areas and resources pursuant to Executive Order No. 533 on the Integrated Coastal Management Program and the Coral Triangle Initiatives;



- Develop safety nets and standards on tenurial instruments for coastal areas;
- Update and maintain data and information on coastal and marine biodiversity;
- Develop and undertake capacity building programs for coastal and marine;
- Coordinate, integrate and monitor national compliance to relevant international commitments;
- Provide technical assistance and coordinate with concerned governmental and non-governmental stakeholders in the implementation of coastal and marine related programs and projects; and
- Perform other functions that may be assigned by the authority.

5. Biodiversity Policy, Planning and Knowledge Management Division

- Integrate and analyze policies, plans and programs on biodiversity conservation and management based on the national biodiversity strategy and action plan and other related conservation strategies consistent with national programs and priorities, as well as the Philippine commitments to International Convention on Biological Diversity (CBD);
- Responsible in the Bureau-wide planning, monitoring, reporting and evaluation;
- Provide mechanism and strategies for improvement of plans and programs based on changing needs;
- Establish, develop and maintain database and information systems;
- Serve as the national focal unit for the implementation of the Philippine Clearing House Mechanism pursuant to the commitments under the CBD;
- Assist in the evaluation of proposals and projects with biodiversity components for the Global Environment Facility (GEF) and other international funding mechanisms; and
- Perform other functions that may be assigned by higher authority.

D. ECOSYSTEMS RESEARCH AND DEVELOPMENT BUREAU

- Formulate, implement, coordinate and evaluate integrated research, development and extension agenda/programs on ENR and other related cross-cutting concerns;
- Generate and transfer science-based technologies to address the needs of the various sectors in support of the thrusts and programs of the Department and end-users/stakeholders;
- Provide technical assistance by developing and maintaining networks and linkages with DENR sectors, local and international institutions and other stakeholders and civil society; and



- Perform other functions that may be assigned by higher authorities.

Divisions

1. Forest Ecosystems Research Division

- Perform Bureau functions related to technology generation on the conservation and sustainable management of production and protection forests, upland farms, and grasslands, including rehabilitation of mining and degraded areas;
- Assist in the technology assessment, integration, verification, and packaging;
- Develop, improve, and recommend a comprehensive system and policies for sustainable management of forest ecosystem.

2. Coastal Zone and Freshwater Ecosystems Research Division

- Perform Bureau functions related to technology generation on the proper utilization, protection, conservation, rehabilitation and management of beach and mangrove forests, inland and freshwater ecosystems, sea grass, corals, marine and wetland areas;
- Assist in the technology assessment, integration, verification, and packaging;
- Develop, improve, and recommend a comprehensive system and policies for sustainable management of coastal zone and freshwater ecosystem.

3. Urban Ecosystems Research Division

- Perform Bureau functions related to technology generation on the improvement of urban areas (cities, communities, settlements, suburbs, industrial estates) including urban greening, environmental protection to address problems on water, land and air pollution, toxic and hazardous wastes, and inappropriate land use and zoning;
- Assist in the technology assessment, integration, verification, and packaging;
- Develop, improve, and recommend methods, protocols, standards, strategies, and policies for the improvement of urban areas.



4. Technology Transfer Division

- Formulate strategies related to the assessment, packaging, promotion, and transfer of technologies for adoption and commercialization in support of RDE units of the Bureau;
- Serve as first level clearing house for technology promotion and transfer;
- Prepare prototype technology transfer materials and ENR publication as well as monitor and evaluate strategies and programs along extension, technology packaging and transfer.

5. Laboratory and Experimental Services Division

- Deliver laboratory services and develop and maintain field experimental and demonstration areas showcasing ENR technologies in support of RDE units of the Bureau;
- Assist in the technology assessment, integration, verification, and packaging;
- Develop, improve, and recommend a comprehensive system and policies for laboratory/field facilities and equipment.

6. Administrative, Financial and Management Division

- Provide financial and administrative support to all units and research centers of the Bureau including personnel management and human resources welfare and development, budget and financial management, property and supply procurement and general services;
- Ensure effective implementation of all general financial and administrative policies, plans, procedures including those imposed by the National Government.

Research Centers

1. Watershed and Water Resources Research Center

- Plan, formulate, and implement RDE programs/projects/activities including generation and transfer of technologies related to management of watersheds and water resources in accordance with the national RDE agenda and framework;



- Provide technical assistance to clientele on watershed and water resources management and other ENR technologies and perform other functions that may be assigned by higher authorities.

2. Land Management, Agro-forestry and Upland Technology Research Center

- Plan, formulate, and implement RDE programs/projects/ activities including generation and transfer of technologies related to the conservation and sustainable land management, agroforestry and upland farming in accordance with the national RDE agenda and framework;
- Provide technical assistance to clientele on land management, agroforestry, upland farming and other ENR technologies; and
- Perform other functions that may be assigned by higher authority.

3. Biodiversity, Coastal, Wetlands and Eco-tourism Research Center

- Plan, formulate, and implement RDE programs/projects/activities including generation and transfer of technologies related to conservation and management of coastal/marine, freshwater and wetlands ecosystems, and promotion of ecotourism in accordance with the national RDE agenda and framework;
- Provide technical assistance to clientele on coastal/marine resources management, wetlands ecotourism and other ENR technologies; and
- Perform other functions that may be assigned by higher authority.

4. Forest and Timber Resources Research Center

- Plan, formulate, and implement RDE programs/projects/activities including generation and transfer of technologies related to conservation and management of forest and timber resources in accordance with the national RDE agenda and framework;
- Provide technical assistance to clientele on forest and timber resources management and other ENR technologies; and
- Perform other functions that may be assigned by higher authorities.

5. Mining and Degraded Areas Rehabilitation Research Center



- Plan, formulate, and implement RDE programs/projects/activities including generation and transfer of technologies related to rehabilitation and management of mining and degraded areas in accordance with the national RDE agenda and framework;
- Provide technical assistance to clientele on mining and degraded areas rehabilitation and other ENR technologies; and
- Perform other functions that may be assigned by higher authorities.

6. Urban, Toxic Substances and Hazardous Wastes Research Center

- Formulate, implement, monitor and coordinate RDE programs and projects on urban environment and management of toxic substances and hazardous wastes, within the area of responsibility;
- In accordance to the National ENR-RDE Agenda, the Center shall promote coordination and networking services among government agencies, local government units and other entities and shall provide technical assistance, disseminate information and conduct educational awareness campaigns on health, safety and related concerns; and
- Perform other functions that may be assigned by higher authority.

FIELD OFFICES

A. OFFICE OF THE REGIONAL DIRECTOR

- Coordinate, direct, manage and supervise the implementation of all policies, regulations, programs and projects on environment and natural resources development and conservation in the region;
- Supervise all activities of the Provincial Environment and Natural Resource Offices and the Community Environment and Natural Resources Office within its jurisdiction as well as all foreign-assisted and special programs in the region;
- Represent the Department in regional administrative bodies in the preparation and formulation of regional plans and programs; and
- Perform other functions that may be assigned by higher authority.



Technical Services

1. Conservation and Development Division

- Assist in the conservation/protection and development activities related to land administration and management, biodiversity conservation, coastal and marine resources management, and forest resources management and conservation;
- Monitor and evaluate all activities related to implementation of policies, rules and regulations for the sound management and disposition of all alienable lands, patrimonial and insular government properties, foreshore areas and other lands not placed under the control of any other agencies, and for ecotourism, wetlands, conservation of biological diversities, genetic resources and threatened flora and fauna;
- Perform implementation gaps analysis and formulate appropriate solutions; and
- Perform other functions that may be assigned by higher authority.

2. Surveys and Mapping Division

- Assist in the implementation of land surveys, mapping and classification;
- Monitor and verify cadastral, public land subdivisions and other extensive survey mapping projects, original and isolated surveys;
- Monitor and evaluate all activities relative to enforcement of policies, rules and regulations for the sound management and disposition of all alienable or disposable public lands and other lands in the regions not placed under the control of any other agency;
- Formulate, develop and maintain manual and electronic systems of land records management including appropriate procedures consistent with prescribed rules and regulations regarding classification, disclosure/access, reproduction and printing; and
- Perform other functions that may be assigned by higher authority.

3. Licenses, Patents and Deeds Division

- Assist in the issuance of new licenses, permits and land patents and perform implementation gap analysis and formulate appropriate solutions;
- Process and evaluate applications for all permits, licenses, agreements, contracts, processing plants, etc.;



- Evaluate and recommend issuance of all kinds of land patents, leases and other tenurial instruments;
- Evaluate existing policies and recommend policies to improve licensing and permitting activities;
- Draft proclamation for approval of the President upon the recommendation of the Secretary;
- Initiate/recommend administrative and legal action against violations of forestry rules and regulations; and
- Perform other functions that may be assigned by higher authority.

4. Enforcement Division

- Assist in the monitoring and evaluation of compliance of permit holders;
- Assist in the law enforcement activities within forest lands, protected areas, coastal areas and other reservations;
- Monitor compliance to all ENR laws, rules and regulations including Wildlife NIPAS and Cave Acts, EO 797 (Coral Triangle Initiative) and EO 533 on Coastal and Marine Environment;
- Conduct surveillance of potential violators of government regulatory requirements;
- Coordinate with other law enforcement agencies; and
- Perform other functions that may be assigned by higher authority.

Management Services

1. Planning and Management Division

- Formulate the long-term, medium-term and annual regional environment and natural resources development plans and policies guided by the philosophy, mandate and approved Regional Development Policies and plans;
- Serve as the management information systems unit of the Regional DENR Office;
- Coordinate all monitoring and evaluation of programs, projects and activities implemented; and
- Perform other functions that may be assigned by higher authority.

2. Finance Division

- Maintain basic and subsidiary accounting records and books of accounts to reflect accurate and current financial information required by existing accounting and auditing rules and regulations and by management;



- Implement financial policies of the Department and oversight agencies regarding disbursement/expenditures and collections;
- Exercise technical supervision over all accounting units of the PENROs under the Region's jurisdiction
- Prepare and submit financial reports required by the Central Office and the oversight agencies;
- Process and review all financial transactions prior to approval of the RED;
- Recommend the Approval of Payment of collection of government fees; and
- Perform other functions that may be assigned by higher authority.

3. Legal Division

- Perform the legal operations for the Region;
- Review agreements and contracts involving natural resources and the environment prior to the approval of the RED;
- Appear and act as counsel of the Region;
- Investigate, hear and recommend decisions/orders on regional ENR cases; and
- Perform other functions that may be assigned by higher authority.

4. Administrative Division

- Provide assistance and services on promulgation of office orders, rules and regulations related to economic, efficient and effective administrative services;
- Establish policies and standards including human resource management and development, general services, communications, logistics, property, safe records management and documentation;
- Maintain regional assets and facilities; and
- Perform other functions that may be assigned by higher authority.

B. PROVINCIAL ENVIRONMENT AND NATURAL RESOURCES OFFICE

- Plan, implement, coordinate, control, prepare and/or update plans for the protection of the environment, development and conservation of natural resources management activities in the provinces;
- Enforce environment and natural resources laws, rules and regulations; and
- Perform other functions that may be assigned by higher authority.



1. Technical Services Division

- Assist in the implementation, coordination, monitoring and evaluation of all policies, regulations, programs and projects on environmental and natural resources in the province;
- Supervise the provision of technical services in the CENROs within its jurisdiction;
- Represent the province in the provincial development bodies in the formulation and implementation of provincial plans and programs; and
- Perform other functions that may be assigned by higher authority.

2. Management Services Division

- Assist in the delivery of financial and administrative services within its jurisdiction;
- Ensure that all administrative and financial transactions are in compliance with COA, DBM and CSC rules and regulations;
- Ascertain that plans and programs are attained through sufficient and timely release of funds;
- Monitor spending vis-à-vis accomplishments for efficient and economic fund utilization within its jurisdiction;
- Provide assistance and services on the implementation of office orders, rules and regulations on matters involving personnel management, general services, communications, logistics, property, safety, records management and documentation; and
- Perform other functions that may be assigned by higher authority.

C. COMMUNITY ENVIRONMENT AND NATURAL RESOURCES OFFICE

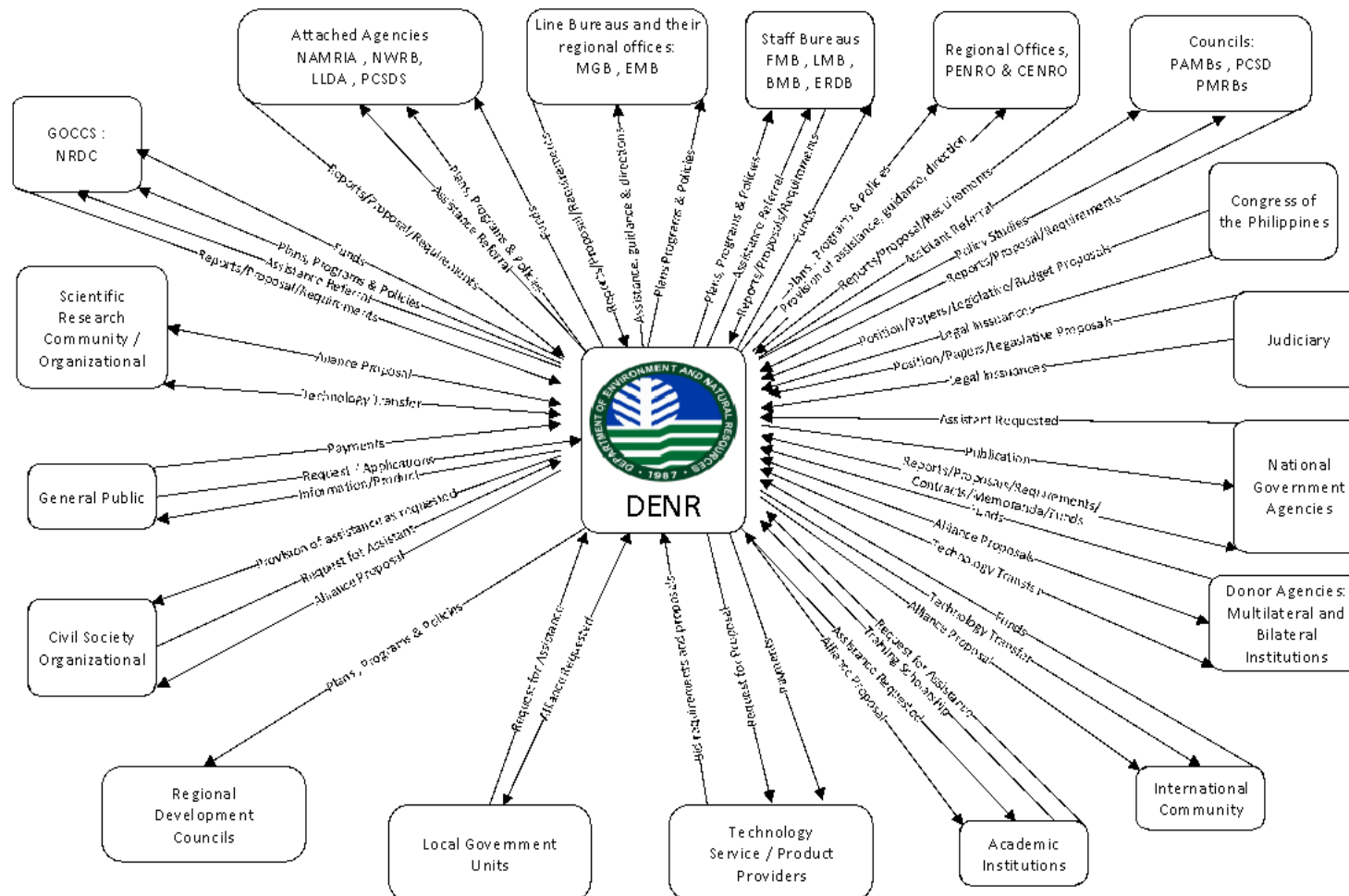
- Implement laws, policies, programs and projects, rules and regulations pertaining to the management, conservation, development, use and replenishment of the country's natural resources, including monitoring and evaluation of permit holders;
- Undertake continuing information and education programs on ENR concerns;
- Collect and account for fees due to government from users of natural resources;
- File in court criminal cases against violators of ENR laws;
- Maintains up-to-date data on ENR conditions;
- Undertake surveys of areas covered by applications for the use and development of natural resources;



- Investigate and recommend appropriate actions to resolve claims and conflicts involving natural resources;
- Conducts measurement, assessment and grading of timber and other forest products in accordance with existing rules and regulations; and
- Perform other functions that may be assigned by higher authority.



C. THE DEPARTMENT/AGENCY AND ITS ENVIRONMENT (FUNCTIONAL INTERFACE CHART)





D. PRESENT ICT SITUATION (STRATEGIC CHALLENGES)

D.1. Mission Critical/Frontline Services

ICT investment is targeted toward technology assets that directly support the unique functions of the DENR. Under this scheme, ICT spending is predictable, assets are supported, and duplication and fragmentation are reduced.

To improve the delivery of services to DENR clients, promote transparency in processing of applications, and accountability of employees and officials, two information systems were developed. One is the Frontline Services and Transaction System (FSTS) for Biodiversity and Forest Management. This is an online system that accepts and processes applications in forestry and biodiversity permits, licenses and tenure instruments. It is envisioned to fast track the process from lodging of application to assessment/evaluation, inspection, preparation of legal documents and approval. In this system, the clients can view online the status of their applications. The FSTS has been rolled-out to all field offices of the DENR. During the pilot implementation of FSTS in 2018, four regions were identified to participate - National Capital Region (NCR), Region 4A, Region 7 and Region 13. Several issues were noted on the actual pilot implementation, which are currently being addressed. After which, the system will be implemented nationwide. The second one is the Land Administration and Management System (LAMS). This is an information system designed to establish a quick and easy processing, tracking and retrieval of land information. It provides a platform for continual harmonization and integration of land information among various agencies involved in land administration and management activities. It also ensures integrity of records, particularly land survey records and public land applications (PLAs).

To support the formulation of evidence-based policies and plans, several systems were also developed such as the Policy Service Information System, Plans and Programs Information System, Automated Statistics Reporting System, Forestry Information System, Project Monitoring Information System. While some are being enhanced or developed such as the Web-based River Basin Integrated Information Management System.

Information systems to support general administration were implemented to facilitate human resource development, financial and administrative processes that are required in the performance of mandates of various offices such as, DENR Personnel Information Systems, Training and Development Resources Information System, Account Remittance System, Legal Management Information System, Stakeholder Management Information System, and Enhanced Document Action and Tracking System.



There are other pending information systems that are with DBM-PS for bidding, such as Climate Change Information System, Forest Land-use Information System and Integrated Biodiversity Management Information System. The next step for the Department is to integrate these systems for easy access of information for the management.

D.2. Office Automation

The agency is improving the delivery of services, transparency and accountability through office automation schemes. The network infrastructure geared towards wireless connectivity have already been established for each DENR office. Although licenses for automation have been procured (MS Office, Cloud email services), it is still not enough since It requires annual maintenance budget. Presently, DENR is already tapping cloud computing to address obsolescence of its servers and will seek to further reduce its capital outlay expenditures each year.

To this date, the Department is still in the process of filling up its vacant plantilla positions due to its rationalization. Hardware to support office automation like computers have been procured to address the gaps identified during the conduct of ICT inventory in relation to the workforce in each offices. The Department is targeting to procure equipment to replace obsolete units in the department. The average personnel to computer ratio have improved to around 1.5:1 from a 3:1 ratio three years ago but an optimal 1:1 ratio is still a target. The estimated computer literacy of DENR employees is still 80%.

DENR is already ISO 9001:2015 and 14001:2015 certified and funds addressing the clauses required in the standards is also included in this ISSP.

D.3. Web Presence

All DENR offices (Office of the Secretary, Bureaus/Attached Agencies, Regional Offices and PENROs) have their own websites, which are mostly hosted by the Central Office to protect the sites from external attacks (hacking, phishing, malware, etc.). These sites will be migrated to the cloud to improve availability and efficiency since the web servers that we have are outdated and end of support already. The Administrative Order No. 2013-39 issued by Malacañang mandates government agencies to update their websites following a unified web content to improve efficiency, accessibility and transparency in public transaction. Following this, the DENR has developed its external DENR Web Portal (EDWP) designed in accordance with the mandatory requirements of the aforementioned AO. The EDWP serves as the Department's communication avenue to reach out to its various clients, with the end in view of engaging them to participate and support the environmental programs



and projects, as well as enhance public compliance with environmental laws and policies. The EDWP link the clients to various information systems.

The EDWP houses the Department's Internal DENR Web Portal (IDWP), which provides access for the Department's internal clients or stakeholder (its officials and employees) to information. Among these are those related to personnel management, learning and development programs, news and event and other DENR internal matters. The IDWP also contains link that provides assigned employees access to various information systems, that serves as a tool to enhance delivery of services.

D.4. Existing and Ongoing Development Information Systems

The DENR has embarked on developing administrative and ENR information systems to support the automation of its processes aimed at improving the delivery of its services to the public, promote transparency and accountability among its officials and employees. The systems also aimed to provide access of information to the public in accordance with the principles of open data, freedom of information and the Privacy Law of the Philippines.

The following are the existing information systems that have been developed and the information systems that are being developed internally or outsourced.

1. Existing Information Systems

NAME OF INFORMATION SYSTEM / SUB-SYSTEM	DESCRIPTION	STATUS	DEV'T STRATEGY
1. Content management system for the DENR Web Portal (DWP)	This project is designed to upgrade existing DENR web portal. The aim of the project is to consolidate most of DENR's application into a single interface that has both local area network and internet presence. Creating a single point of access allows us to provide a single sign-on capability, greatly enhancing security implementation and management. This would also decrease the learning curve of users to new installed applications since the interface is uniform and familiar.	Developed two websites, External and Internal websites, operational	Out-sourced



	<p>The portal would also allow us to host other forms of data integration and access such as web services and mobile access. Additional features such as blogs, wikis, enterprise search, and document sharing, content management would increase collaboration among project team members. Internal and external clients could also subscribe to document releases and updates via email notification and “Really Simple Syndication” (RSS).</p> <p>All future applications shall be integrated with DWP. This would greatly expedite development and implementation, since a framework is already available for development.</p>		
2. Planning and Policy Service Information System (PaPSIS)	<p>An information system that aims to facilitate project planning and monitoring of all project-based initiatives of the DENR regardless of funding source. It should be able to support the following functions:</p> <ul style="list-style-type: none"> • Coordination and formulation of annual plans/programs • Monitoring and appraising of physical and financial performance • Budget preparation, integration and review <p>Policy review and development</p>	Renamed as Plans and Programs Information System (PaPIS); For enhancement	Out-sourced
3. Project Management Information System (PMIS)	An information system aimed to track project physical and financial performance of foreign-assisted projects in accordance with the requirements of the Philippine Government and the donor institutions	For enhancement	Out-sourced
4. Legislative Information System (LIS)	<p>Performs the following functions related to policy, official issuances, Congressional bills and other related matters:</p> <ul style="list-style-type: none"> • Provide organized access to full information; • Prepare abstracts and summaries for executive review and disseminate information to concerned parties; • Provide links and references to related information; • Monitor legislative, executive and legal actions pertaining to policy. 	For enhancement	Out-sourced



5. Plans and Programs Management Information System (PPMIS)	An information system designed to rationalize DENR resource allocation as well as ensure attainment of Medium-Term Philippine Development Plan (MTPDP) objectives. It was designed to satisfy DBM requirements for DENR's budget. It is used as a means to measure and monitor the performance of DENR's through the MFOs.	Integrated with PaPIS	Out-sourced
6. Frontline Services Transaction System (FSTS) for forestry and biodiversity management	Composed of individual applications using common IT services, specifically Internet, e-commerce and database management technologies, to provide better and faster access to and delivery of agency information, services and transactions to support mandated functions, such as: <ul style="list-style-type: none"> • Front-line services for corporate and individual stakeholders and the general public (e.g., issuance of permits and licenses) • Streamlining processes (e.g., permitting and licensing processes from CENROs to PENROs, to Regional Officers to DENR Central, as applicable) Its main objective is efficient processing of transactions with security and authentication requirements.	For testing	Outsourced
7. Integrated Geographic Information System (IGIS)	An information system that will consolidate all spatial data in the DENR Central Office, Bureaus and regional Offices – pilot only.	Completed	Outsourced
8. Statistical Services Information System (SSIS)	An information system that enables encoding and access of ENR statistics at the CENRO, PENRO, regional and national levels in order to provide necessary data in decision-making, planning and measuring progress in the implementation of sustainable development goals. The system also facilitates the production of knowledge products on ENR.	Renamed as Automated Statistical Reporting System (ASRS); Operational	Outsourced
9. Forestry Statistics Reporting System (FSRS)	An information system that will enhance the processing, compilation, analysis, documentation and dissemination of data on production, trade, exports and imports of forest products both on micro and macro levels and local/global scope.	Integrated with the SSIS, now ASRS	



10. Forest Products Revised Price Monitoring System (FRPMS)	An information system that will enhance the processing, compilation, analysis, documentation and dissemination of data on prices of major forest products both on micro and macro levels.	Integrated with SSIS, now ASRS	
11. Enhanced Forest Information System (EFIS)	An information system that consolidates information support management of all forestry related processes.	Enhanced to a web-based system, Operational at the field offices	Combined
12. Lands Administration Management System (LAMS)	An information system that will provide information management support for the following tasks: <ul style="list-style-type: none"> • Inventory of land records; • Reconstitution of survey records; • Inventory of foreshore lands and • Investigation of fake and spurious land titles 	Enhanced to a web-based system, part of Phase I of data capture operational, while the rest is undergoing bidding	Combined
13. Ecosystems Research and Development Information System (ERDIS) <ul style="list-style-type: none"> - ENR Technology Generation Information System (ENRTGIS) - Monitoring and Evaluation System 	<p>An information system that support the following: Automation of the submission, peer review and approval of research proposals Implementation and monitoring of field-oriented replicable R&D Ecosystem projects</p> <p>An information system that monitors all technologies/information on ENR generated by DENR R&D Ecosystems Network</p>	Operational	Out-sourced
14. Environmental Law Enforcement Management Information Systems	A web-based system that aims to: <ul style="list-style-type: none"> • Facilitate gathering, recording and analysis of evidences of related to environmental law violation particularly for forestry, protected areas, wildlife and mining • Serve as a tool for law enforcers to prepare necessary forms or reports from apprehension to filing of cases • Track down and monitor status of incidents/cases, including seized/confiscated items • Provide vital information and other ELE agencies as basis for action, planning and decision-making 	Operational	In-house
15. DENR Personnel Information System (DPIS)	An information system that will automate and improve the processing and management of: <ul style="list-style-type: none"> • Basic employee records 	Operational	Outsourced



	<ul style="list-style-type: none"> Employee benefits 		
16. Training and Development Resource Information System (TDRIS)	It can also provide an important link to other systems involving employee records (e.g., AMIS pertaining to property accountability).	Operational	Outsourced
17. Records Management Information System (RMIS)	<p>An information system that will provide management support for tasks related to the management of permanent records and current records, including:</p> <ul style="list-style-type: none"> Digital imaging, Indexing and classification, Archiving and storage Dissemination and controlling access across the different agency units 	Operational	Outsourced
18. Enhanced Document and Action Tracking System (EDATS)	An information system that will keep track of the status of all official documents (e.g. memos, instructions, referrals)	Operational	Outsourced
19. Legal Management Information System (LMIS)	<p>An information system that will provide management support to facilitate case prosecution and resolution:</p> <ul style="list-style-type: none"> Case calendaring Access to case facts and documents Access to legal library 	Operational	Outsourced
20. Asset Management Information System (AMIS)	Standalone information system that provides support for the inventory and disposal of fixed and movable assets.	Operational at the Central Office; For enhancement	Outsourced
21. Financial Accountability Reporting System (FARS)	Facilitates the consolidation of financial statement reports from the PENROs to Regional to the Central Office, provides access to real-time status of financial utilization; and enable creation of financial statement from the trial balance	Operational	In-house
22. Library Information System (LibIS)	<p>An information system that will provide support to:</p> <ul style="list-style-type: none"> Library management (storage, indexing, cataloging) Circulation tasks (borrowings and returns) Managing access to books and other library resources 	Operational	Outsourced



23. Alternative Dispute Resolution (ADR) Monitoring and Result System	A web web-based information data management system to establish monitoring and results system of cases subjected to ADR process.	Operational	In-house
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2. Ongoing Development Information Systems

NAME OF INFORMATION SYSTEM / SUB-SYSTEM	DESCRIPTION	STATUS	DEV'T STRATEGY
1. Web-based River Basin Integrated Information Management System	This system was developed by the Partnerships in Environmental Management for the Seas of East Asia (PEMSEA) and was adopted by DENR being a part of PEMSEA. It is as a desktop system that support planning and decision making. It captures data on biophysical, social, cultural and biological features of a river basin, including programs and projects. Enhancement of the system includes its conversion from desktop to a web-based system to enable faster consolidation of data and generation of reports.	On-going enhancement. On-going pilot testing	Outsource
2. Forest Land Use Assessment Information System (FLUAIS)	A web-based system that provide information on the proper allocation of forestlands to their best uses in order to harmonize conflicting uses and attain a sustainable forest development/management.	On-going bidding	Outsource
3. Nation Forest Monitoring System (NFMS)	This will integrate, monitor, account and put associated value to forest resources and changes such as, but not limited to ecosystems services, that are consistent with national and international reporting requirements towards achieving sustainable forest management	On-going bidding	Outsource
4. Climate Change Information Management System (CCIMS)	A dynamic climate change information management system and network where the necessary information is collected, organized, shared, analyzed, managed and maintained. The Cabinet Cluster on Climate Change will contribute relevant information in the development of the information system	On-going bidding	Outsource
5. Philippine Biodiversity Conservation Information System (PBCIS)	An information system that will provide information management support for the following tasks:	On-going bidding; renamed to Integrated Biodiversity	Combined



	<ul style="list-style-type: none"> • Establish initial components of National Integrated Protected Areas System (NIPAS); • Development of ecological roads and ecological destinations; • Rehabilitation of priority national parks; • Inventory of wetlands critical to biodiversity conservation; • Proclamation of areas under NIPAS; • Resource valuation 	Management Information System	
6. DENR Employee New Payroll System (EPS)	A web-based application system that provides fast and efficient payroll system, record keeping and retrieval of employee personal and financial data	On-going bidding	Outsource

E. STRATEGIC CONCERNS FOR ICT USE

MAJOR FINAL OUTPUT	CRITICAL MANAGEMENT/OPERATING/ BUSINESS SYSTEMS	PROBLEMS	INTENDED USE OF ICT
<p>OO1 : SUSTAINABLY MANAGED NATURAL RESOURCES</p> <p>Natural Resources Conservation and Development Program</p> <p>Forest and Watershed Management Sub-Program</p>	Watershed Characterization, Vulnerability Assessment and Formulation of Integrated Watershed Management Plan	<ul style="list-style-type: none"> • Longer time needed in submission of reports • Monitoring results are stored manually making analysis difficult. They are stored in Excel files. • Difficulty of accessing data required to formulate an integrated watershed management plan due 	<ul style="list-style-type: none"> • Watershed Ecosystem Management Information System (WEMIS) is a web-based system that shall store data of the Watershed Characterization and Vulnerability Assessment data and consolidate integrated watershed management plan.



		to lack of a system that would systematically store data	
	Carbon Accounting, Verification and Certification	<ul style="list-style-type: none"> • Lack of an information system to track client applications, facilitating of reviews and verification, recognizing protection and sequestration of carbon stock, and issuing carbon certificates • Difficulty of accessing data required to generate reports due to lack of a system that would systematically store data. 	<ul style="list-style-type: none"> • Carbon Accounting, verification, and Certification Systems (CAVCS) is a system shall track applications, facilitating review and verification, recognizing protection and sequestration of carbon stock and certify the increase or decrease of carbon stock on forest protection projects, reforestation and other forest restoration activities.
	Investment Feasibility and Readiness of Forest Plantations	<ul style="list-style-type: none"> • Lack of information systems to determine the investment feasibility and readiness of forest plantations. • Difficulty of accessing data required to formulate an investment plan due to lack of a system that would systematically store data • Monitoring results are stored manually making analysis difficult. They are stored in Excel files. 	<ul style="list-style-type: none"> • Registry of Investment-Ready Forest Plantations (RIRFPIS) a system that shall determine and monitor the investment feasibility and readiness of forest plantations established under tenured and untenured areas.
	Forest Cover, Forest Condition Biodiversity, Socio-Economic and Environmental Functions of Forest	<ul style="list-style-type: none"> • Monitoring results are stored manually making analysis difficult. They are stored in Excel files. • Difficulty of accessing data required to generate reports due to lack of a system that would systematically store data. 	<ul style="list-style-type: none"> • National Forest Monitoring System (NFMS) is a web-based system that shall provide information on extent of forest cover, forest condition, biodiversity, socio-economic and environmental functions of forest.

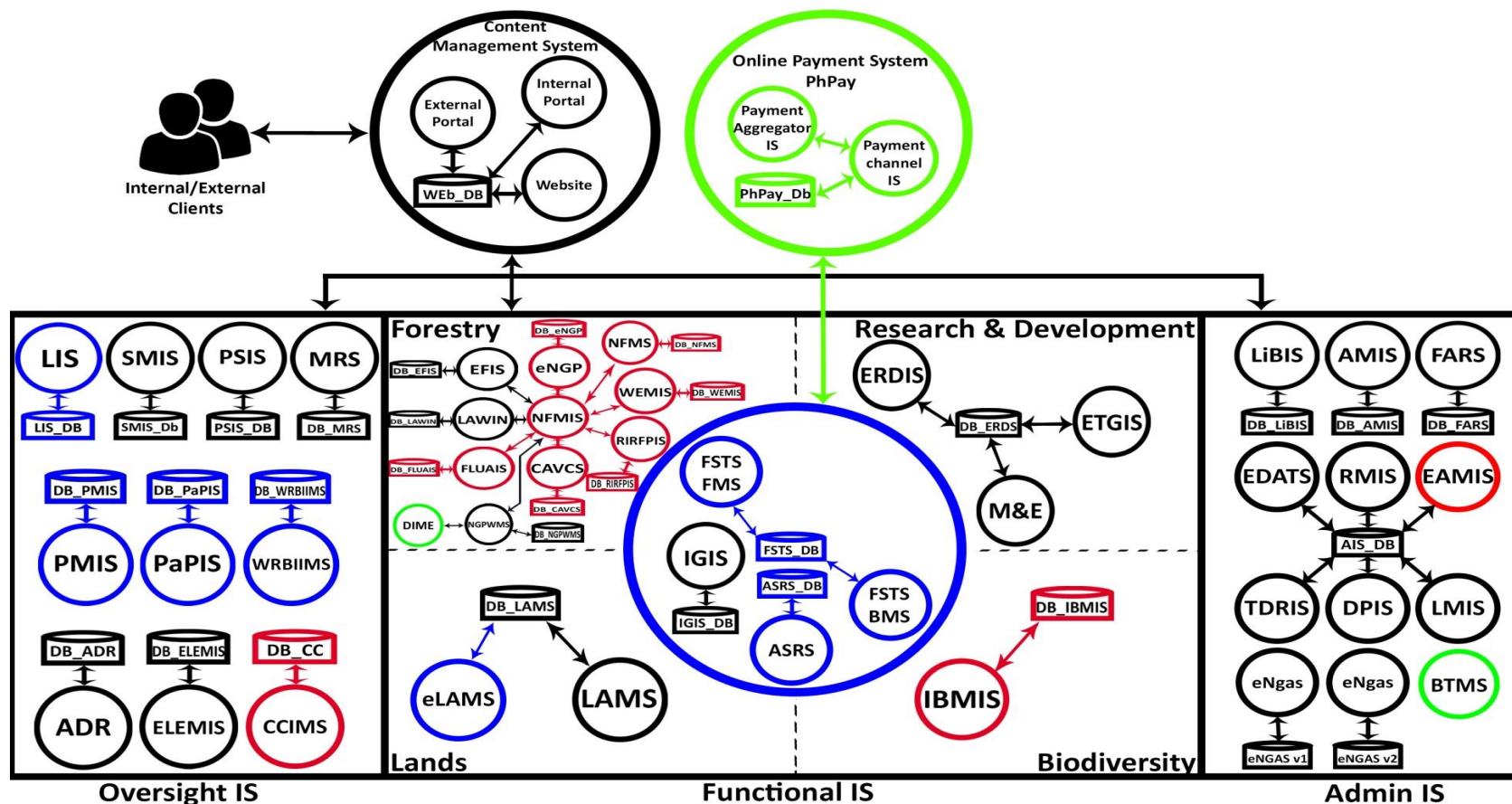


	Forest Development, Rehabilitation and Protection	<ul style="list-style-type: none">• Lack of an information system that will provide information on forest condition, biodiversity, socio-economic and environmental functions of forest, and legal frameworks related there to.• Difficulty of accessing data required to generate reports due to lack of a system that will integrate forest related information system to generate consolidated reports.	<ul style="list-style-type: none">• National Forest Management Information System (NFMIS) is a GIS-based online system that shall provide information on forest condition, biodiversity, socio-economic and environmental functions of forest, and legal frameworks related there to. The NFMIS will become the umbrella platform for all forestry-related information systems.
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PART II. INFORMATION SYSTEMS STRATEGY

A. CONCEPTUAL FRAMEWORK FOR INFORMATION SYSTEMS (DIAGRAM OF IS INTERFACE)





B. DESCRIPTION OF PROPOSED INFORMATION SYSTEMS

NAME OF INFORMATION SYSTEM/ SUB-SYSTEM		Watershed Ecosystem Management Information System (WEMIS)
DESCRIPTION		A system that shall contain Watershed Characterization and Vulnerability Assessment data and consolidate Integrated watershed management plan.
STATUS		For development
DEVELOPMENT STRATEGY		Outsource
COMPUTING SCHEME		Web-based
USERS	INTERNAL	DENR Central and Field Offices (Region, PENRO, CENRO)
	EXTERNAL	
OWNER		Forest Management Bureau

NAME OF INFORMATION SYSTEM/ SUB- SYSTEM		Carbon Accounting, Verification, and Certification System Registry (CAVCS)
DESCRIPTION		A system that shall account, verify and certify the increase or decrease of carbon stock on forest projects, reforestation, and other forest restoration activities.
STATUS		For development
DEVELOPMENT STRATEGY		Outsource
COMPUTING SCHEME		Web-based
USERS	INTERNAL	DENR Central and Field Offices (Region, PENRO, CENRO)
	EXTERNAL	
OWNER		Forest Management Bureau

NAME OF INFORMATION SYSTEM/ SUB- SYSTEM		Registry of Investment-Ready Forest Plantations (RIRFPIS)
DESCRIPTION		A system that shall determine and monitor the investment feasibility and readiness of forest plantations established under tenured and untenured areas.
STATUS		For development
DEVELOPMENT STRATEGY		Outsource
COMPUTING SCHEME		Web-based
USERS	INTERNAL	DENR Central and Field Offices (Region, PENRO, CENRO)
	EXTERNAL	



OWNER	Forest Management Bureau
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NAME OF INFORMATION SYSTEM/ SUB- SYSTEM		National Forest Monitoring System (NFMS)
DESCRIPTION		A system that shall provide information for measuring, reporting and verifying greenhouse emissions and removals from the forests.
STATUS		For development
DEVELOPMENT STRATEGY		Outsource
COMPUTING SCHEME		Web-based
USERS	INTERNAL	DENR Central and Field Offices (Region, PENRO, CENRO)
	EXTERNAL	
OWNER		Forest Management Bureau

NAME OF INFORMATION SYSTEM/ SUB- SYSTEM		National Forest Management Information System (NFMIS)
DESCRIPTION		An online system that shall provide information on forest condition, biodiversity, socio-economic and environmental functions of forest, and legal frameworks related there to. The NFMIS will become the umbrella platform for all forestry-related information systems.
STATUS		For development
DEVELOPMENT STRATEGY		Outsource
COMPUTING SCHEME		GIS-based
USERS	INTERNAL	DENR Central and Field Offices (Region, PENRO, CENRO)
	EXTERNAL	
OWNER		Forest Management Bureau

NAME OF INFORMATION SYSTEM/ SUB-SYSTEM		Caves and Wetlands Information System (CWIS)
DESCRIPTION		An information system on caves and wetlands. It contains information related to assessment, reports and other related documents.
STATUS		For development
DEVELOPMENT STRATEGY		Outsourced
COMPUTING SCHEME		Web-based
USERS	INTERNAL	FIELD OFFICES (REGIONS, PENROS, CENROS)
	EXTERNAL	



OWNER	Biodiversity Management Bureau
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NAME OF INFORMATION SYSTEM/ SUB-SYSTEM		Integration of Biodiversity Monitoring System (BMS) with LAWIN
DESCRIPTION		A system that will integrate BMS in the LAWIN forest and biodiversity protection system.
STATUS		For development
DEVELOPMENT STRATEGY		Outsourced
COMPUTING SCHEME		Web-based
USERS	INTERNAL	FIELD OFFICES (REGIONS, PENROS, CENROS)
	EXTERNAL	
OWNER		Biodiversity Management Bureau

NAME OF INFORMATION SYSTEM/ SUB-SYSTEM		DENR Strategic Performance Management System (SPMS) Monitoring and Evaluation System
DESCRIPTION		A system that generate timely, accurate, and reliable information for both performance monitoring/tracking; accomplishment reporting, program improvement and policy decision-making.
STATUS		For development
DEVELOPMENT STRATEGY		Outsourced
COMPUTING SCHEME		Web-based
USERS	INTERNAL	CENTRAL OFFICE, FIELD OFFICES (REGIONS, PENROS, CENROS)
	EXTERNAL	
OWNER		Planning and Programming Service Office

NAME OF INFORMATION SYSTEM/ SUB-SYSTEM	Enhanced Land Administration and Management System (eLAMS)
DESCRIPTION	<p>Migration of existing LAMS Philippines (LAMS IVAS and LAMS PLA) to online based application and integration from the Regional and field offices databases into a LAMS centralized database, and unify all land processes in a single application system</p> <p>The Major Features of this systems are:</p> <ol style="list-style-type: none"> 1. Online submission; 2. Integration of all Regional DB with DENR/LMB; 3. Online application system;



		4. Online payment application; 5. Online access of survey and PLA information; 6. DCDB Cleansing; 7. Linking and sharing of DCDB to LGUs and other national government agencies; 8. Implementation of Digital Signature in LAMS IVAS and PLA; 9. Paperless IVAS; 10. Online transaction monitoring; 11. Built-in SMS service; 12. Email notification; and 13. Customized transaction tracking system.
STATUS		For development
DEVELOPMENT STRATEGY		Outsourced
COMPUTING SCHEME		Web-based, mobile application
USERS	INTERNAL	DENR OFFICES (CENTRAL OFFICE, LMB, REGIONAL OFFICES, PENROS, CENROS)
	EXTERNAL	PRIVATE AND PUBLIC GEODETIC ENGINEERS, CLIENTS
OWNER		Land Management Bureau

C. DATABASES REQUIRED

NAME OF DATABASE		Priority Critical Watershed Database
GENERAL CONTENTS/ DESCRIPTION		Information on priority critical watershed characterization vulnerability assessment and watershed management plan.
STATUS		Build-up
INFORMATION SYSTEMS SERVED		
DATA ARCHIVING/STORAGE MEDIA		Storage Area Network, Cloud-based storage
USERS	INTERNAL	DENR Central and Field Offices (Region, PENRO, CENRO)
	EXTERNAL	
OWNER		Forest Management Bureau

NAME OF DATABASE		Carbon Accounting, Verification, and Certification Database
GENERAL CONTENTS/ DESCRIPTION		Information on carbon stock on forest rehabilitation and protection projects
STATUS		Build-up
INFORMATION SYSTEMS SERVER		
DATA ARCHIVING/STORAGE MEDIA		Storage Area Network, Cloud-based storage



USERS	INTERNAL	DENR Central and Field Offices (Region, PENRO, CENRO)
	EXTERNAL	
OWNER		Forest Management Bureau

NAME OF DATABASE		Registry of Investment-Ready Plantation within Tenured and Untenured Areas
GENERAL CONTENTS/ DESCRIPTION₂		Information on investment feasibility and readiness of plantations established under tenured and untenured areas.
STATUS		Build-up
INFORMATION SYSTEMS SERVED		
DATA ARCHIVING/STORAGE MEDIA		Storage Area Network, Cloud-based storage
USERS	INTERNAL	DENR Central and Field Offices (Region, PENRO, CENRO)
	EXTERNAL	
OWNER		Forest Management Bureau

NAME OF DATABASE		Forest Cover and Measurement, Reporting, and Verification System Status Database
GENERAL CONTENTS/ DESCRIPTION		A web-based system that shall provide information on extent of forest cover, forest condition, biodiversity, socio-economic and environmental functions of forest.
STATUS		Build-up
INFORMATION SYSTEMS SERVED		
DATA ARCHIVING/STORAGE MEDIA		Storage Area Network, Cloud-based storage
USERS	INTERNAL	DENR Central and Field Offices (Region, PENRO, CENRO)
	EXTERNAL	
OWNER		Forest Management Bureau

NAME OF DATABASE		National Forest Management Information System Database
GENERAL CONTENTS/ DESCRIPTION		Database that shall provide information on forest condition, biodiversity, socio-economics and environmental functions of forest, and legal frameworks related there to. The NFMIS will become the umbrella platform for all forestry-related information.
STATUS		Build-up
INFORMATION SYSTEMS SERVED		
DATA ARCHIVING/STORAGE MEDIA		Storage Area Network, Cloud-based storage
USERS	INTERNAL	DENR Central and Field Offices (Region, PENRO, CENRO)
	EXTERNAL	
OWNER		Forest Management Bureau



NAME OF DATABASE₁		Caves and Wetlands Database
GENERAL CONTENTS/ DESCRIPTION		A database on caves and wetlands. It contains information related to assessment, reports and other related documents.
STATUS		Build-up
INFORMATION SYSTEMS SERVED		
DATA ARCHIVING/STORAGE MEDIA		Storage Area Network, Cloud-based storage
USERS	INTERNAL	DENR Central and Field Offices (Region, PENRO, CENRO)
	EXTERNAL	
OWNER		Biodiversity Management Bureau

NAME OF DATABASE		DENR Strategic Performance Management System (SPMS) Monitoring and Evaluation System Database
GENERAL CONTENTS/ DESCRIPTION		A database with accurate, and reliable information for both performance monitoring/tracking; accomplishment reporting, program improvement and policy decision-making
STATUS		Build-up
INFORMATION SYSTEMS SERVED		
DATA ARCHIVING/STORAGE MEDIA		Storage Area Network, Cloud-based storage
USERS	INTERNAL	DENR Central and Field Offices (Region, PENRO, CENRO)
	EXTERNAL	
OWNER		Planning and Programming Service Office

NAME OF DATABASE		Enhanced Land Administration and Management System (eLAMS) Database
GENERAL CONTENTS/ DESCRIPTION		Integration of existing Regional and Field Offices LAMS database, includes the following: <ol style="list-style-type: none"> 1. Survey information 2. Public Land Information 3. Projection and Cadastral Maps 4. Thermal Maps 5. Reports 6. Land Classification Maps 7. Spatial 8. Survey Documents 9. Public Land Documents 10. Survey Plans
STATUS		For development

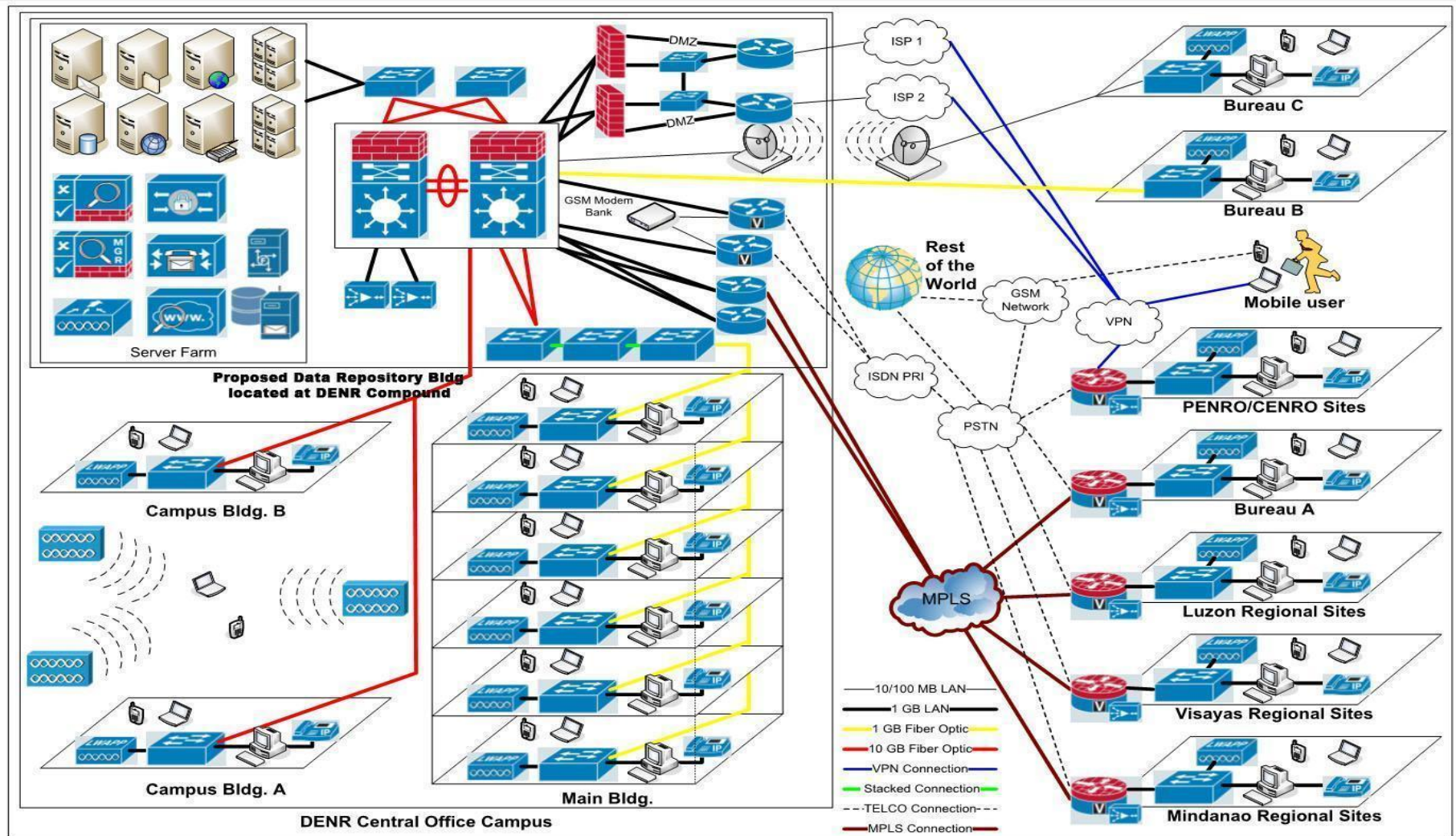


INFORMATION SYSTEMS SERVED		eLAMS
DATA ARCHIVING/STORAGE MEDIA		Storage Area Network, Cloud-based storage
USERS	INTERNAL	DENR OFFICES (CENTRAL OFFICE, LMB, REGIONAL OFFICES, PENROS, CENROS)
	EXTERNAL	PRIVATE AND PUBLIC GEODETIC ENGINEERS, CLIENTS
OWNER		Land Management Bureau



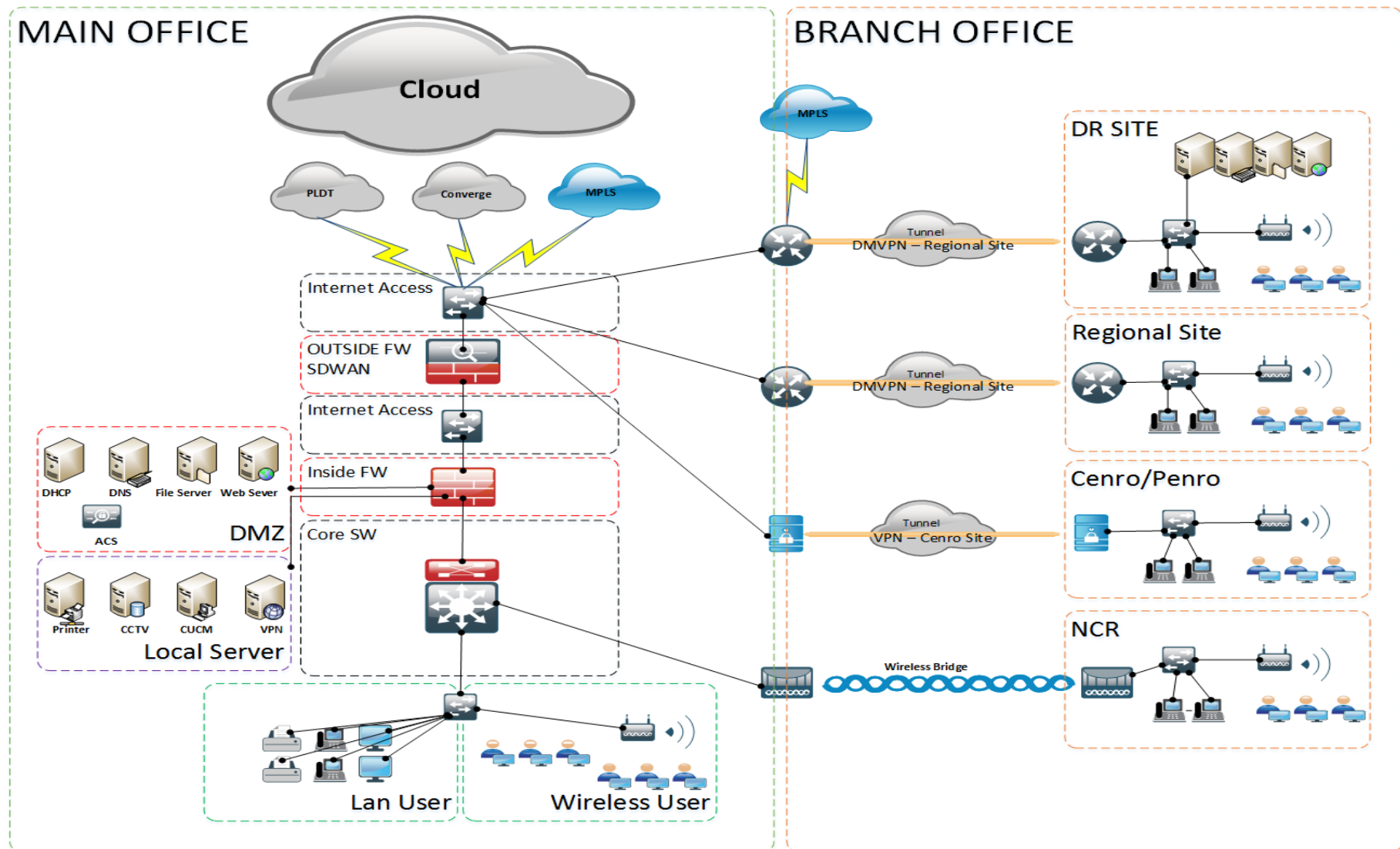
D. NETWORK LAYOUT

Existing network layout



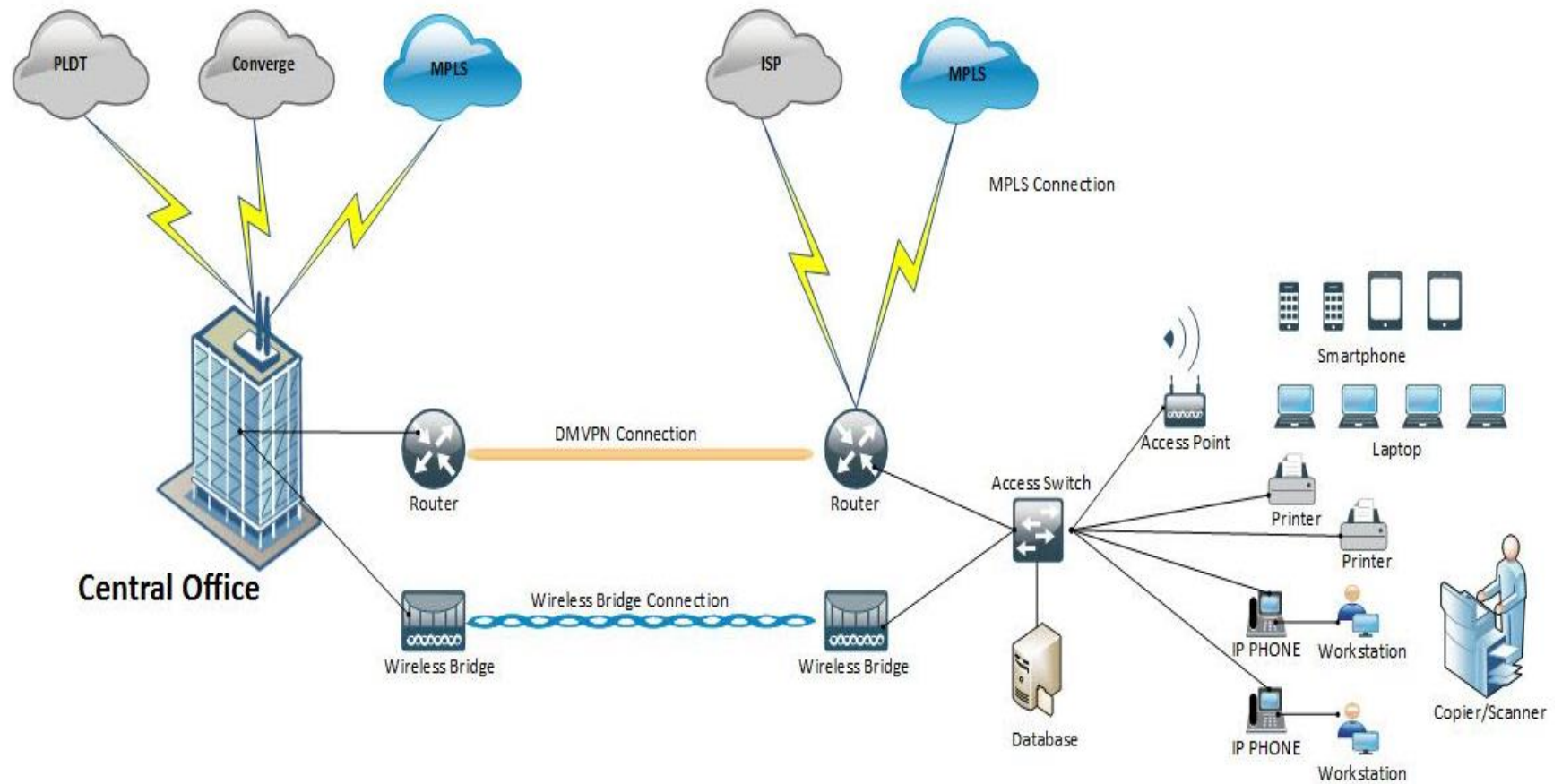


Proposed network layout





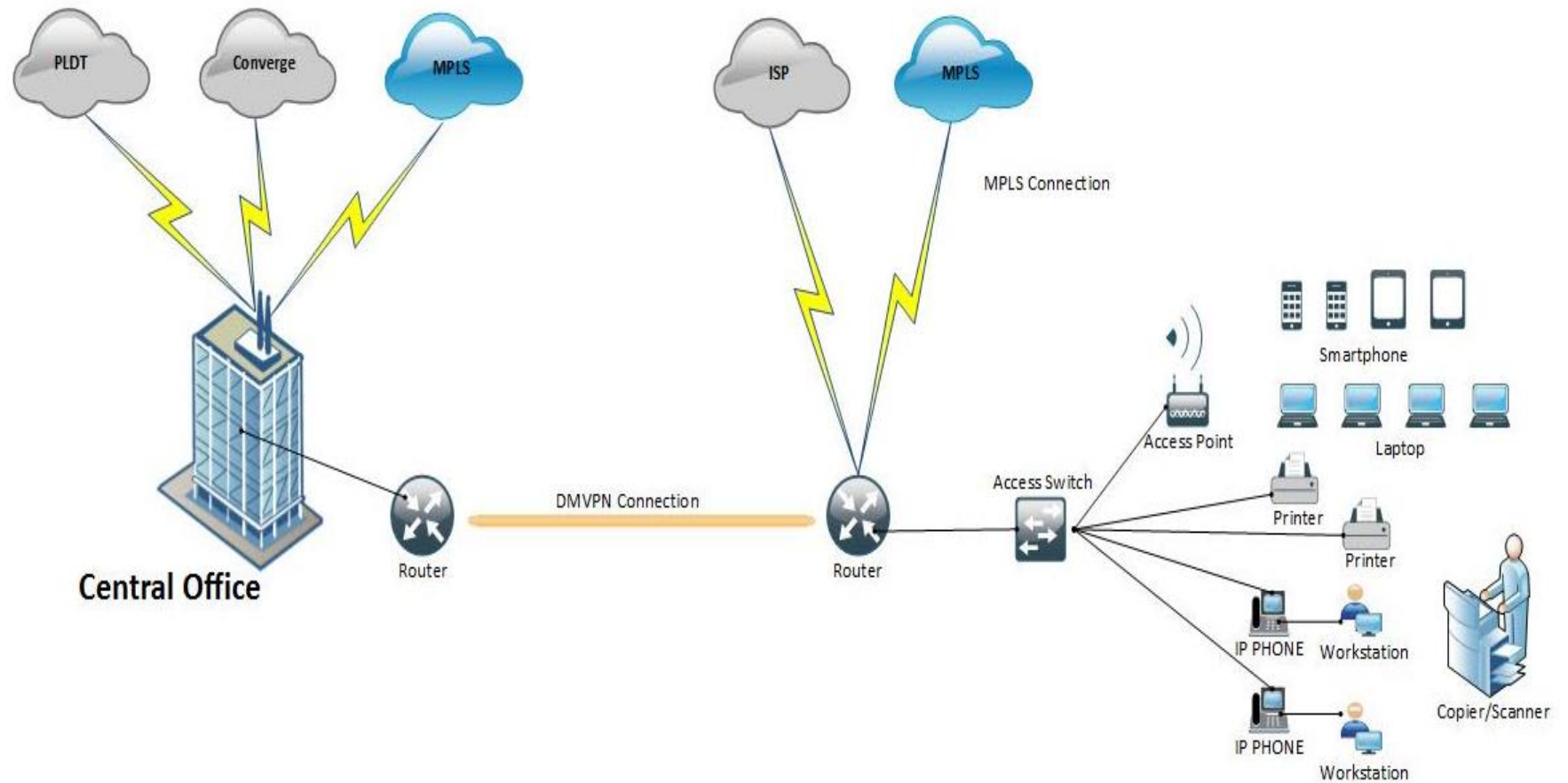
BUREAU SETUP



BUREAU SETUP



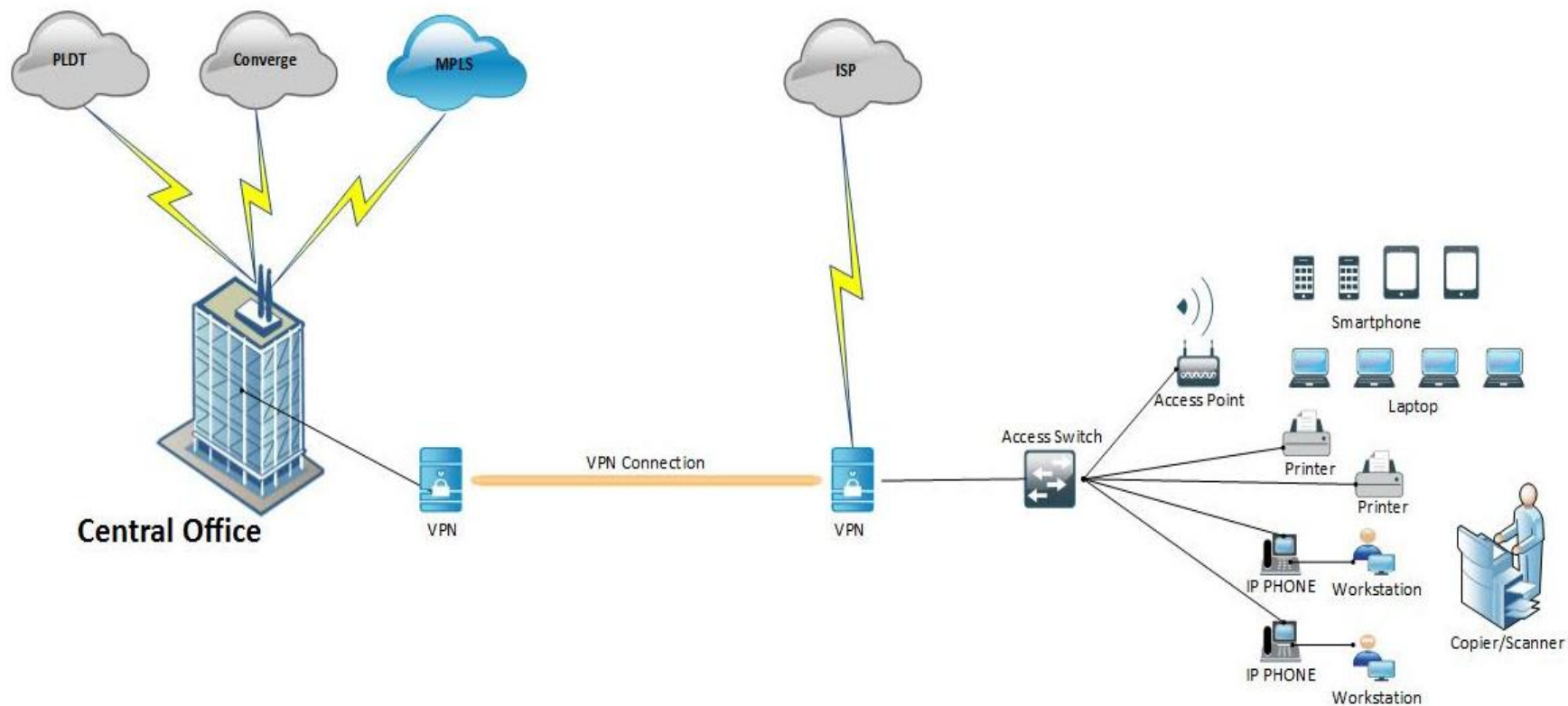
REGIONAL SETUP



REGIONAL SETUP



PENRO/CENRO SETUP



PENRO /CENRO SETUP



PART III. DETAILED DESCRIPTION OF ICT PROJECTS

A. INTERNAL ICT PROJECTS

1. Name	Caves and Wetlands Information Systems
2. Objectives	<ul style="list-style-type: none"> To improve policy formulation, planning and implementation of programs and projects for the sustainable use of caves and inland wetlands To provide accurate data/statistics on caves and wetlands To provide linkages to other information systems developed by the Bureau for easy access and analysis of data To develop and implement the Caves and Wetlands Information Systems
3. Duration	2020-2022
4. Deliverables	Caves and Wetlands Information Systems developed Training on the use and maintenance of the CWIS conducted User and System Administrator Manual developed

1. Name	BMS-LAWIN Integrated Information System
2. Objectives	<ul style="list-style-type: none"> To improve policy formulation and planning of programs and projects for the effective forest and biodiversity protection and conservation To develop an information system integrating BMS with LAWIN To provide accurate and real-time data/statistics on current status of forest and biodiversity in Protected Areas To provide linkages to information systems developed by the Bureau for easy access and analysis of data
3. Duration	2020-2022
4. Deliverables	BMS-LAWIN Integrated Information Systems developed Training on the use and Administration of the BMS-LAWIN IIS conducted Manual on the implementation and administration of the BMS-LAWIN IIS developed Policy on implementation of LAWIN-BMS Integrated system formulated

1. Name/Title	Watershed Ecosystem Management Information System (WEMIS)
2. Objectives	To establish a web-based system that shall determine the status of priority critical watersheds that shall contain characterization and vulnerability assessment data and integrated watershed management plan.



3. Duration	2021-2022
4. Deliverables	Priority Critical Watershed Database, Watershed Ecosystem Management Information System (WEMIS) Training on the use and maintenance of the WEMIS Policy on adaption of Watershed Ecosystem Management Information System Characterization and Vulnerability assessment of Priority Critical Watershed.

1. Name/Title	Carbon Accounting, Verification, and Certification System (CAVCS)
2. Objectives	To establish a system that shall account, verify and certify the increase or decrease of carbon stock on forest protection projects, reforestation, and other forest restoration activities.
3. Duration	2021-2022
4. Deliverables	Carbon Accounting, Verification, and Certification System (CAVCS), Carbon Accounting, Verification, and Certification Database Training on the use and maintenance of the CAVCS Policy on adaption of CAVCS Carbon Accounting, Verification, and Certification Registry of Forest Carbon projects.

1. Name/Title	Registry of Investment-Ready Plantation Registry within Tenured and Untenured Areas (RIRFPIS)
2. Objectives	To establish a system that shall determine and monitor the investment feasibility and readiness of plantations established under tenured and untenured areas.
3. Duration	2021-2022
4. Deliverables	Investment-Ready Plantation Registry within Tenured and Untenured Areas System and Database, Registry of Investment-Ready Forest Plantations Information System (RIRFPIS) Training on the use and maintenance of the RIRFPIS Policy on adaption of RIRFIS Registry of Potential Investment Ready Plantation within tenured and untenured areas.



1. Name/Title	National Forest Monitoring System (NFMS)
2. Objectives	To establish a web-based system that shall provide information on the monitoring and Measurement, Reporting and Verification (MRV) of the forestry and other land uses sector
3. Duration	2021-2022
4. Deliverables	National Forest Management Information System (NFMIS), Forest Cover and Measurement, Reporting, and Verification System Status Database Training on the use and maintenance of the NFMS Policy on adaption of NFMS Registry of time-series forest cover and change maps, greenhouse gas inventory reports, forest reference emission level, and REDD+ activities.

1. Name/Title	National Forest Management Information System (NFMIS)
2. Objectives	To establish a GIS-based online system that shall provide current information on forest condition, biodiversity, socio-economic and environmental functions of forests and other related legal frameworks to support policy formulation and decision-making
3. Duration	2022-2023
4. Deliverables	National Forest Management Information System (NFMIS), Forest Condition Database Training on the use and maintenance of the NFMIS Policy on adaption of NFMIS Repository of Forestry One Control Map.

1. Name/Title	eLAMS
2. Objectives	Integration of existing Regional and Field Offices LAMS databases, includes the (1) Survey Information; (2) Public Land Information; (3) Projection and Cadastral Maps; (4) Thematic Maps; (5) Reports; (6) Land Classification Maps; (7) Spatial; (8) Survey documents; (9) Public land documents, and (10) Survey Plans



3. Duration	2021-2023
4. Deliverables	Online Land Administration and Management System for automated and monitoring of land related transactions and land records management. It also includes data and spatial analysis It also includes linkages to LRA and LGUs available land data
5. Lead Agency	Land Management Bureau
6. Implementing Agencies	DENR Regional Offices, PENROs and CENROs

B. PERFORMANCE MEASUREMENT FRAMEWORK

1. Caves and Wetlands Information System (CWIS)

Hierarchy of targeted results	Objectively verifiable indicators (OVI)	Baseline data	Targets	Data collection methods	Responsibility to collect data
Intermediate Outcome Improved formulation of policies, plans and programs on the sustainable use of caves and inland wetlands	% of policies, strategies, plans and programs formulated based on Caves and Wetlands data/statistics	Existing information from compilation of policies	By 2022, 30% of the proposed applicable policies formulated based on Caves and Wetlands data/statistics	Progress Reports/Accomplishment Reports	Biodiversity Management Bureau
Immediate Outcome Caves and Wetlands data/statistics made available for use in planning, policy and decision-making	% of available Caves and Wetlands data/statistics accessible to different stakeholders	Atlas of Philippine Inland Wetlands and Classified Caves First Edition 2016	By 2022, 90% of Caves and Wetlands data/ statistics are validated and available	Caves and Wetland Assessment and Classification Reports	Biodiversity Management Bureau/CENROs/PENROs



Outputs					
Development of Caves and Wetlands Information System (CWIS)	CWIS developed	Existing Caves and Wetlands Information	By 2020, scoping for the CWIS conducted. By 2021, CWIS developed.	Scoping Report Requirement Analysis	Biodiversity Management Bureau

2. Integration of Biodiversity Monitoring System (BMS) with LAWIN

Hierarchy of targeted results	Objectively verifiable indicators (OVI)	Baseline data	Targets	Data collection methods	Responsibility to collect data
Intermediate Outcome					
Improved formulation of policies, plans and programs on the effective forest and biodiversity protection and conservation	% of policies, strategies, plans and programs for biodiversity conservation formulated based on BMS-LAWIN integrated system data/statistics	Existing policies related to Forest and Biodiversity Protection	By 2021, 30% of the applicable policies formulated based on reports generated by the LAWIN-BMS data/statistics.	Accomplishment Reports	Biodiversity Management Bureau
Immediate Outcome					
BMS data/statistics integrated with LAWIN System available for use in planning, policy and decision-making	% of available BMS-LAWIN data/statistics accessible to different stakeholders	BMS Reports / Existing BAMS Reports	By 2021, accurate BMS data/statistics can be generated from the LAWIN-BMS Integrated System and available for stakeholders	LAWIN-BMS periodic Reports	Biodiversity Management Bureau
Outputs					
Integration of BMS with LAWIN System	LAWIN with Integrated BMS Information System developed	Existing LAWIN information system	By 2020, scoping for the BMS-LAWIN integrated information system conducted.	Scoping Report Progress Reports	Biodiversity Management Bureau/Forest Management Bureau



			By 2021, BMS-LAWIN integrated information system developed.		
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3. eLAMS

Hierarchy of targeted results	Objectively verifiable indicators (OVI)	Baseline data	Targets	Data collection methods	Responsibility to collect data
Intermediate outcome: Easy access to land related information	Number of PENROs and CENROs accessing land information in the Region	Current number of PENROs and CENROs accessing land information in the Region	80% of PENROs and CENRO can access land information in the Region	Monitoring and Reporting	LMB
Improve data security of LAMS	Security implemented	Current number of PENROs and CENROs accessing land information in the Region	80% of PENROs and CENRO with security implemented	Monitoring and Reporting	LMB
Immediate Outcome: Faster processing of Land related transactions such as IVAS and PLA	Decrease in processing time	Current average of processing time	50% decrease in processing time	Monitoring and reporting	LMB
Linkage to LGUs for land data exchange	Number of LGUs connected to LAMS	Number of LGUs	25% of number of LGUs to be connected	Monitoring and reporting	LMB



4. Watershed Ecosystem Management Information System (WEMIS)

Hierarchy of targeted results	Objectively verifiable indicators (OVI)	Baseline data	Targets	Data collection methods	Responsibility to collect data
Intermediate Outcome Improved on formulation of Integrated Watershed Management Plan	% of plans formulated based on Watershed Ecosystem Information Management system	No available data	By 2023, 30% of the applicable plans formulated based on Watershed Ecosystem Information Management system	Progress Reports	FMB
Immediate Outcome Watershed Characterization and Vulnerability Assessment and other related information made available for planning and decision making	% of available Watershed Characterization and Vulnerability Assessment and other related information accessible to different stakeholders.	No available data	By 2023, 30% of Watershed Characterization and Vulnerability Assessment and other related information accessible to different stakeholders.	Progress Reports	FMB
Outputs Development of Watershed Ecosystem Management Information System (WEMIS)	WEMIS developed	No available data	By 2023, WEMIS developed.	Progress Reports	FMB



5. Carbon Accounting, Verification, And Certification System (CAVCS)

Hierarchy of targeted results	Objectively verifiable indicators (OVI)	Baseline data	Targets	Data collection methods	Responsibility to collect data
Intermediate Outcome Improved management of forest carbon projects certifications	% of certification properly managed and reviewed.	Existing no. of certification reviewed and manage	By 2023, 30% of certifications reviewed and managed	Progress Reports	FMB
Immediate Outcome Carbon accounting, verification and certification related information available for planning and decision making.	% of available carbon accounting, verification and certification related information accessible to different stakeholders	No available data	By 2023, 30% of available carbon accounting, verification and certification related information accessible to different stakeholders	Progress Reports	FMB
Outputs Development of Carbon Accounting, Verification, and Certification System (CAVCS)	CAVCS developed	No available data	By 2023, CAVCS developed.	Progress Reports	FMB

6. Registry of Investment-Ready Forest Plantations Information System (RIRFPIS)

Hierarchy of targeted results	Objectively verifiable indicators (OVI)	Baseline data	Targets	Data collection methods	Responsibility to collect data
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Intermediate Outcome Improved management of potential investment area	% of priority investment area properly managed and reviewed.	Existing no. of investment plan reviewed and manage	By 2023, 30% of investment plan reviewed and managed	Progress Reports	FMB
Immediate Outcome Investment Plan available for planning and decision making.	% of available investment plan and related information accessible to different stakeholders	No available data	By 2023, 30% of available investment plan and related information accessible to different stakeholders	Progress Reports	FMB
Outputs Development of Registry of Investment-Ready Forest Plantations Information System (RIRFPIS)	RIRFPIS developed	No available data	By 2023, RIRFPIS developed.	Progress Reports	FMB

7. National Forest Monitoring System (NFMS)

Hierarchy of targeted results	Objectively verifiable indicators (OVI)	Baseline data	Targets	Data collection methods	Responsibility to collect data
Intermediate Outcome Generation of Forest Reference Emission Level (FREL)	Forest Reference Emission Level (FREL)	Existing no. of forest related information reviewed and manage	By 2023, 30% of forest related information managed and reviewed.	Progress Reports	FMB



Immediate Outcome Registry of time-series forest cover and change	% of forest cover change	No available data	By 2023, 30% of available forest related information accessible to different stakeholders	Progress Reports	FMB
Outputs Development of National Forest Monitoring System (NFMS)	NFMS developed	No available data	By 2020, NFMS developed.	Progress Reports	FMB



PART IV. RESOURCE REQUIREMENTS

A. DEPLOYMENT OF ICT EQUIPMENT AND SERVICES

BUDGET ITEM / ACCOUNT	NAME OF OFFICE/ ORGANIZATIONAL UNITS	PROPOSED NUMBER OF UNITS		
		2021	2022	2023
1. Office Productivity				
A. Capital Outlay (CO)				
Desktop Computer	Central Office	100	100	100
	BMB	10	10	10
	ERDB	10	10	10
	FMB	10	10	10
	LMB	10	10	10
	<i>Total</i>	40	40	40
	Region 1	28	28	28
	Region 2	28	28	28
	Region 3	28	28	28
	Region 4A	28	28	28
	Region 4B	28	28	28
	Region 5	28	28	28
	Region 6	28	28	28
	Region 7	28	28	28
	Region 8	28	28	28
	Region 9	28	28	28
	Region 10	28	28	28
	Region 11	28	28	28
	Region 12	28	28	28



BUDGET ITEM / ACCOUNT	NAME OF OFFICE/ ORGANIZATIONAL UNITS	PROPOSED NUMBER OF UNITS		
		2021	2022	2023
	Region 13	28	28	28
	Region CAR	28	28	28
	Region NCR	28	28	28
	<i>Total</i>	448	448	448
	PENROs (76)	456	456	456
	CENROs (142)	852	852	852
	<i>Total</i>	1308	1308	1308
Laptops	Central Office	75	75	75
	BMB	3	3	3
	ERDB	3	3	3
	FMB	3	3	3
	LMB	3	3	3
	<i>Total</i>	12	12	12
	Region 1	10	10	10
	Region 2	10	10	10
	Region 3	10	10	10
	Region 4A	10	10	10
	Region 4B	10	10	10
	Region 5	10	10	10
	Region 6	10	10	10
	Region 7	10	10	10
	Region 8	10	10	10
	Region 9	10	10	10
	Region 10	10	10	10



BUDGET ITEM / ACCOUNT	NAME OF OFFICE/ ORGANIZATIONAL UNITS	PROPOSED NUMBER OF UNITS		
		2021	2022	2023
	Region 11	10	10	10
	Region 12	10	10	10
	Region 13	10	10	10
	Region CAR	10	10	10
	Region NCR	10	10	10
	<i>Total</i>	160	160	160
	PENROs (76)	304	304	304
	CENROs (142)	705	705	705
	<i>Total</i>	1009	1009	1009
Multimedia Projector	Central Office	68	0	0
B. Maintenance and Other Operating Expenses (MOOE)				
Adobe Creative Cloud Subscription (All Apps)		19	19	19
Lease Network Printer		89	89	89
Trainings				
GIS Training	Central Office	1	0	0
ICT Training	Central Office	1	1	1
2. Internal ICT Projects				
A. Capital Outlay (CO)				
WEMIS	Central Office	1	0	0
CAVCS	Central Office	1	0	0
RIRFPIS	Central Office	0	1	0



BUDGET ITEM / ACCOUNT	NAME OF OFFICE/ ORGANIZATIONAL UNITS	PROPOSED NUMBER OF UNITS		
		2021	2022	2023
NFMIS	Central Office	0	0	1
CWIS	Central Office	1	0	0
IBMS with LAWIN	Central Office	0	1	0
DENR SPMS M&E IS	Central Office	0	0	1
PMIS	Central Office	1	0	0
eLAMS	Central Office	1	1	1
IT IS	Central Office	0	1	0
4. Continuing Expenses for Existing Systems				
A. Capital Outlay (CO)				
Voice Routers	Central Office	0	2	0
	Region 1		1	
	Region 2		1	
	Region 3		1	
	Region 4A		1	
	Region 4B		1	
	Region 5		1	
	Region 6		1	
	Region 7		1	
	Region 8		1	
	Region 9		1	
	Region 10		1	
	Region 11		1	
	Region 12		1	
	Region 13		1	



BUDGET ITEM / ACCOUNT	NAME OF OFFICE/ ORGANIZATIONAL UNITS	PROPOSED NUMBER OF UNITS		
		2021	2022	2023
	Region CAR		1	
	Region NCR		1	
	<i>Total</i>	0	16	0
	ERDB		1	
	LMB		1	0
	<i>Total</i>	0	2	0
Wireless LAN Controller	Central Office	0	2	0
IP Phone	Central Office	30	30	30
	BMB	10		
	ERDB	10		
	FMB	10		
	LMB	10		
	<i>Total</i>	40	0	0
	Region 1	10	1	1
	Region 2	10	1	1
	Region 3	10	1	1
	Region 4A	10	1	1
	Region 4B	10	1	1
	Region 5	10	1	1
	Region 6	10	1	1
	Region 7	10	1	1
	Region 8	10	1	1
	Region 9	10	1	1
	Region 10	10	1	1
	Region 11	10	1	1



BUDGET ITEM / ACCOUNT	NAME OF OFFICE/ ORGANIZATIONAL UNITS	PROPOSED NUMBER OF UNITS		
		2021	2022	2023
	Region 12	10	1	1
	Region 13	10	1	1
	Region CAR	10	1	1
	Region NCR	10	1	1
	<i>Total</i>	160	16	16
	PENROs (76)	76		
	CENROs (142)	142		
	<i>Total</i>	218	0	0
Access Point	Central Office	20	4	40
	BMB			15
	ERDB			15
	FMB			15
	LMB			15
	<i>Total</i>	0	0	60
	Region 1			32
	Region 2			32
	Region 3			32
	Region 4A			32
	Region 4B			32
	Region 5			32
	Region 6			32
	Region 7			32
	Region 8			32
	Region 9			32
	Region 10			32



BUDGET ITEM / ACCOUNT	NAME OF OFFICE/ ORGANIZATIONAL UNITS	PROPOSED NUMBER OF UNITS		
		2021	2022	2023
	Region 11			32
	Region 12			32
	Region 13			32
	Region CAR			32
	Region NCR			32
	<i>Total</i>	0	0	512
	PENROs (76)			532
	CENROs (142)			710
	<i>Total</i>	0	0	1242
Network Switch	Central Office	20	4	0
	BMB	2	1	0
	ERDB	2	1	
	FMB	2	1	
	LMB	2	1	
	<i>Total</i>	8	4	0
	Region 1	2	2	
	Region 2	2	2	
	Region 3	2	2	
	Region 4A	2	2	
	Region 4B	2	2	
	Region 5	2	2	
	Region 6	2	2	
	Region 7	2	2	
	Region 8	2	2	
	Region 9	2	2	



BUDGET ITEM / ACCOUNT	NAME OF OFFICE/ ORGANIZATIONAL UNITS	PROPOSED NUMBER OF UNITS		
		2021	2022	2023
	Region 10	2	2	
	Region 11	2	2	
	Region 12	2	2	
	Region 13	2	2	
	Region CAR	2	2	
	Region NCR	2	2	
	<i>Total</i>	32	32	0
	PENROs (76)	76		
	CENROs (142)	142		
	<i>Total</i>	218	0	0
Enterprise Backup Software	Central Office	1	0	0
Storage Area Network (GIS System)	Central Office	2	0	0
Storage Area Network (Disaster Recovery Site)	Region 11	0	0	2
UPS & Battery Pack	Central Office	0	1	0
PACU InRow Cooling	Central Office	0	1	0
Server for Firewall	Central Office	2	0	0
Windows Server Standard Operating System	Central Office	8	0	0
Windows Server Data Center Operating System	Central Office	4	0	0
Windows Server User CAL	Central Office	5000	0	0
B. Maintenance and Other Operating Expenses (MOOE)				



BUDGET ITEM / ACCOUNT	NAME OF OFFICE/ ORGANIZATIONAL UNITS	PROPOSED NUMBER OF UNITS		
		2021	2022	2023
GIS Maintenance	Central Office	1	1	1
Internet Subscription	Central Office	2	2	2
Internet Subscription	Regional Office (16)	16	16	16
Internet Subscription	PENROs (76) and CENROs (142)	218	218	218
Internet Subscription	ERDB (6)	6	6	6
Internet Subscription	ENR Academy	1	1	1
MPLS Subscription	Central Office	1	1	1
Sip Trunk Subscription	Central Office	1	1	1
Network Monitoring Software Subscription	Central Office	1	1	1
Managed Security Services	Central Office	1	1	1
Next Generation Firewall Subscription	Central Office	2	2	2
Power and Cooling Maintenance	Central Office	1	0	0
Network Security Appliance Maintenance	Regional Office (16)	16	16	16
	Bureaus (ERDB and LMB)	2	2	2
	PENROs (76)	76	76	76
	CENROs (142)	142	142	142
	<i>Total</i>	236	236	236
Anti-DDoS	Central Office	20	20	20
SSL Certificates	Central Office	1	1	1
Web Application Firewall	Central Office	1	1	1
Endpoint Protection	Central Office	1000	1000	1000
Fire Suppression	Central Office	1	1	1
Access Control	Central Office	3	3	3
Cloud Infrastructure Subscription	Central Office	1	1	1



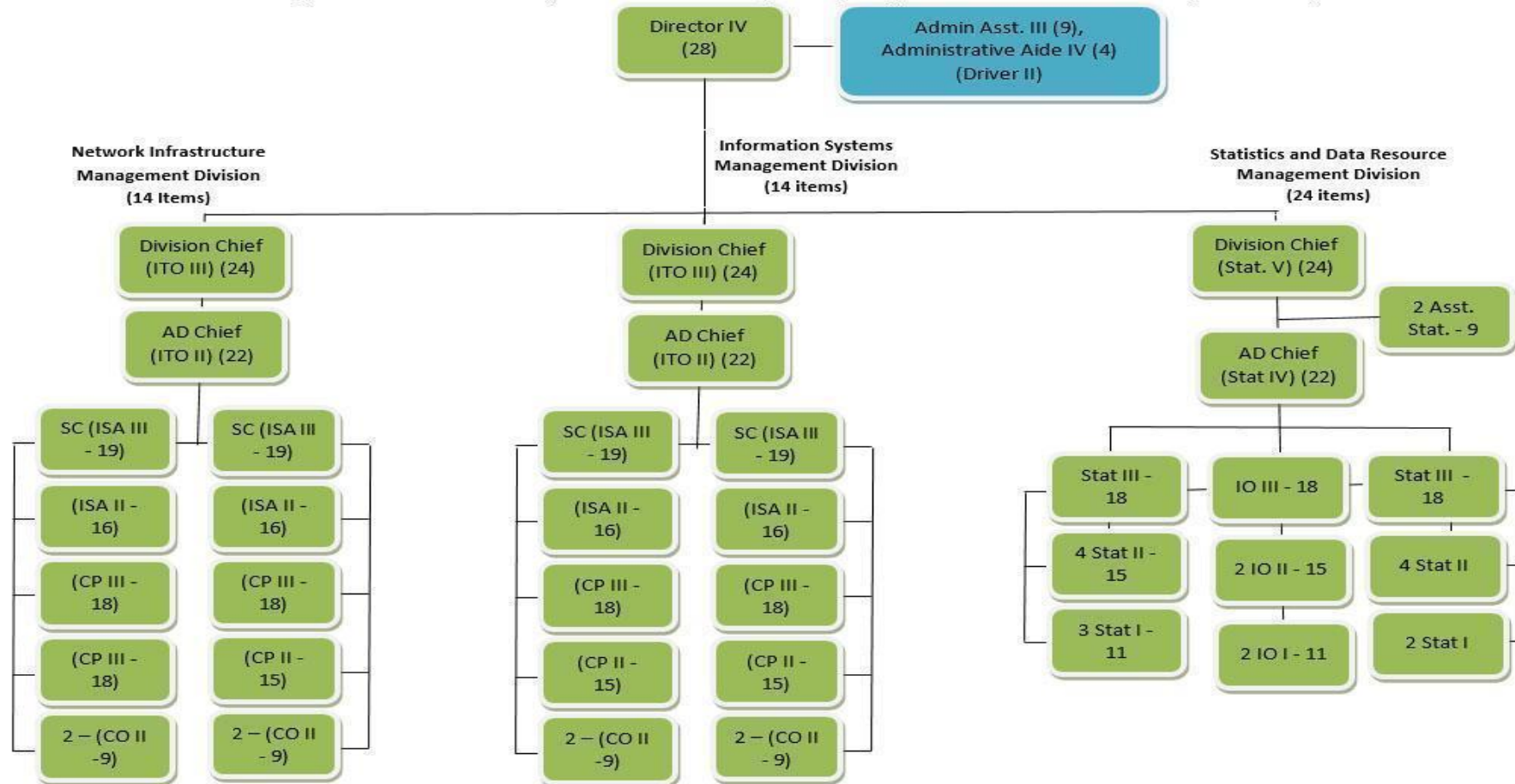
BUDGET ITEM / ACCOUNT	NAME OF OFFICE/ ORGANIZATIONAL UNITS	PROPOSED NUMBER OF UNITS		
		2021	2022	2023
Cloud Application Subscription				
Gsuite Basic	Central Office	1370	1370	1370
Gsuite Business	Central Office	350	350	350
	<i>Total</i>	1720	1720	1720
Active Directory Management and Helpdesk System Subscription	Central Office	1	1	1
Helpdesk System Subscription		1	1	1
Active Directory Management Subscription		1	1	1
Active Directory Audit Subscription		1	1	1
Active Directory Self Service Password Subscription		1	1	1



B. ICT ORGANIZATIONAL STRUCTURE

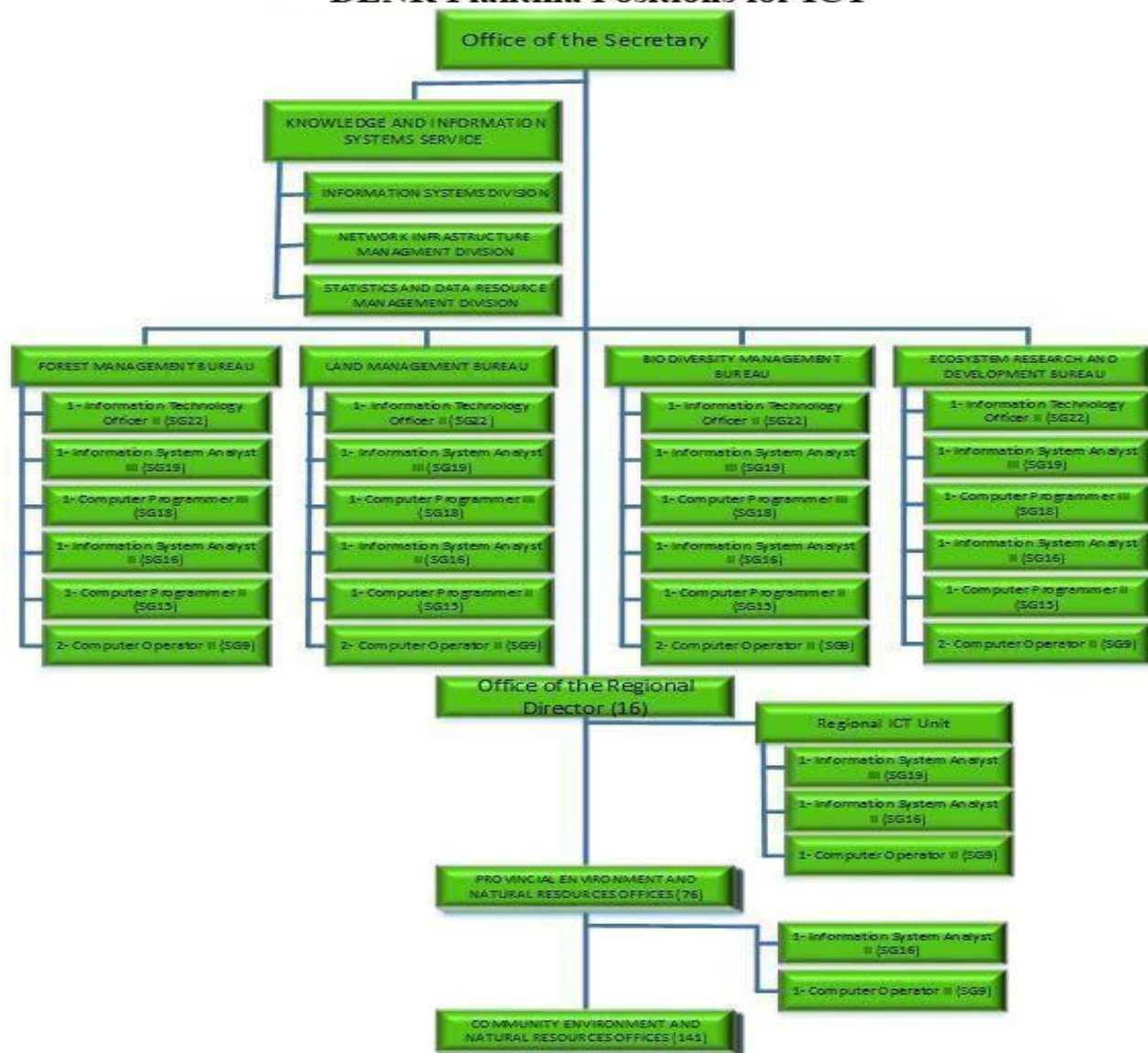
B.1 EXISTING ICT ORGANIZATIONAL STRUCTURE

Knowledge & Information Systems Service (KISS) Organizational Structure (55 items)





DENR Plantilla Positions for ICT





B.2 PROPOSED ICT ORGANIZATIONAL STRUCTURE

Network Infrastructure Management Division (NIMD)

The suggested sections and the plantilla positions under the NIMD, as indicated in the KISS organizational structure, reflect the current need of the DENR. The Division provides services to the DENR Central Office, Bureaus and the field offices to maintain DENR network infrastructure to support implementation of the various information systems and improve office processes. The following are the needed additional plantilla positions:

- Information Technology Officer I (from Information Systems Analyst III SG 19) - 2
- Computer Programmer III (SG 18) - 3
- Computer Maintenance Technologist III (SG 17) - 6
- Computer Maintenance Technologist II (SG 15) – 5 (2 reclassified from Computer Programmer II)
- Computer Maintenance Technologist I (SG 11) - 6

Information Systems Division (ISD)

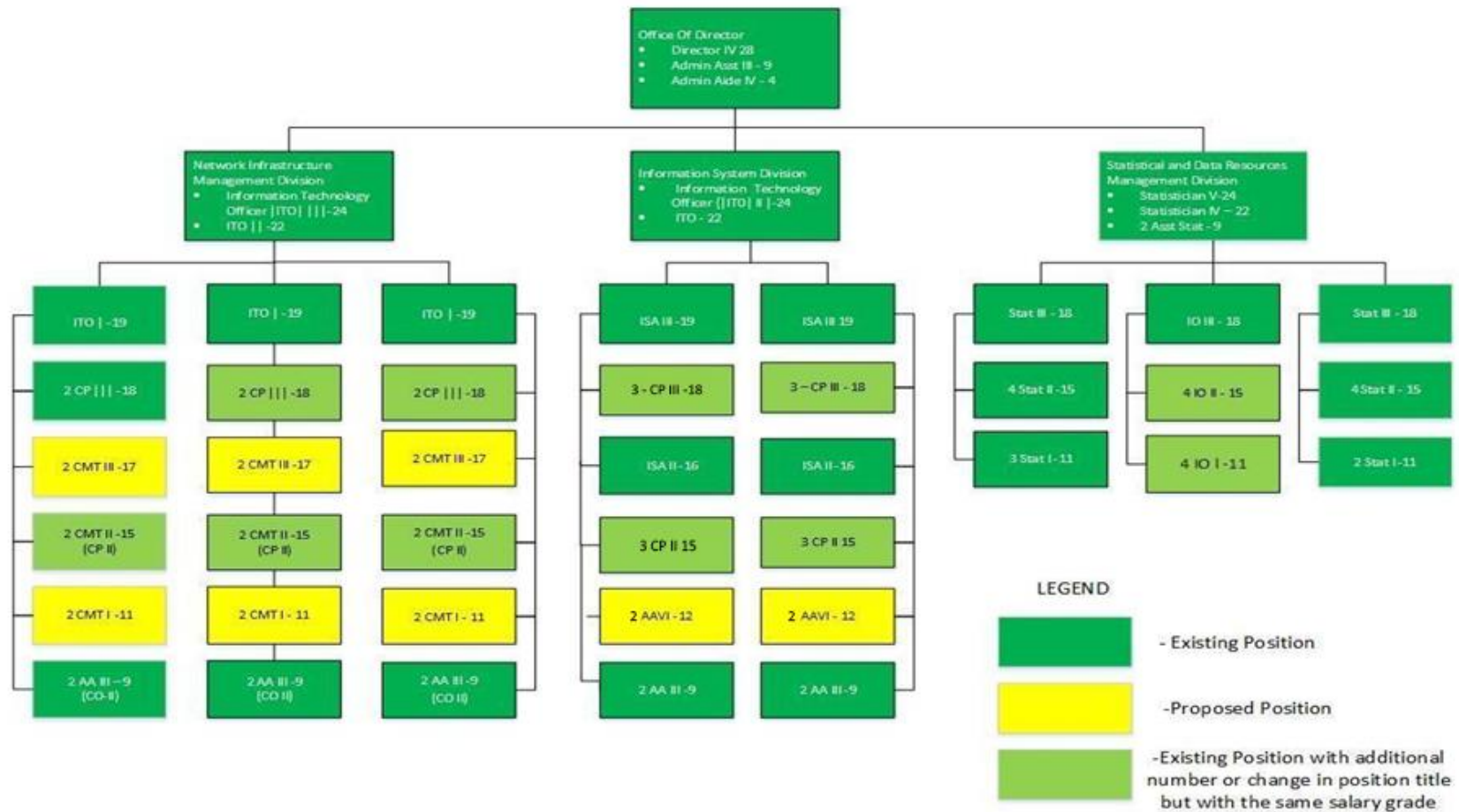
The additional plantilla positions that are needed to develop the requirements and specifications for systems and applications whose functions commonly performed include use of case development, business process mapping & design, and system modeling (UML, SysML, etc.). There are:

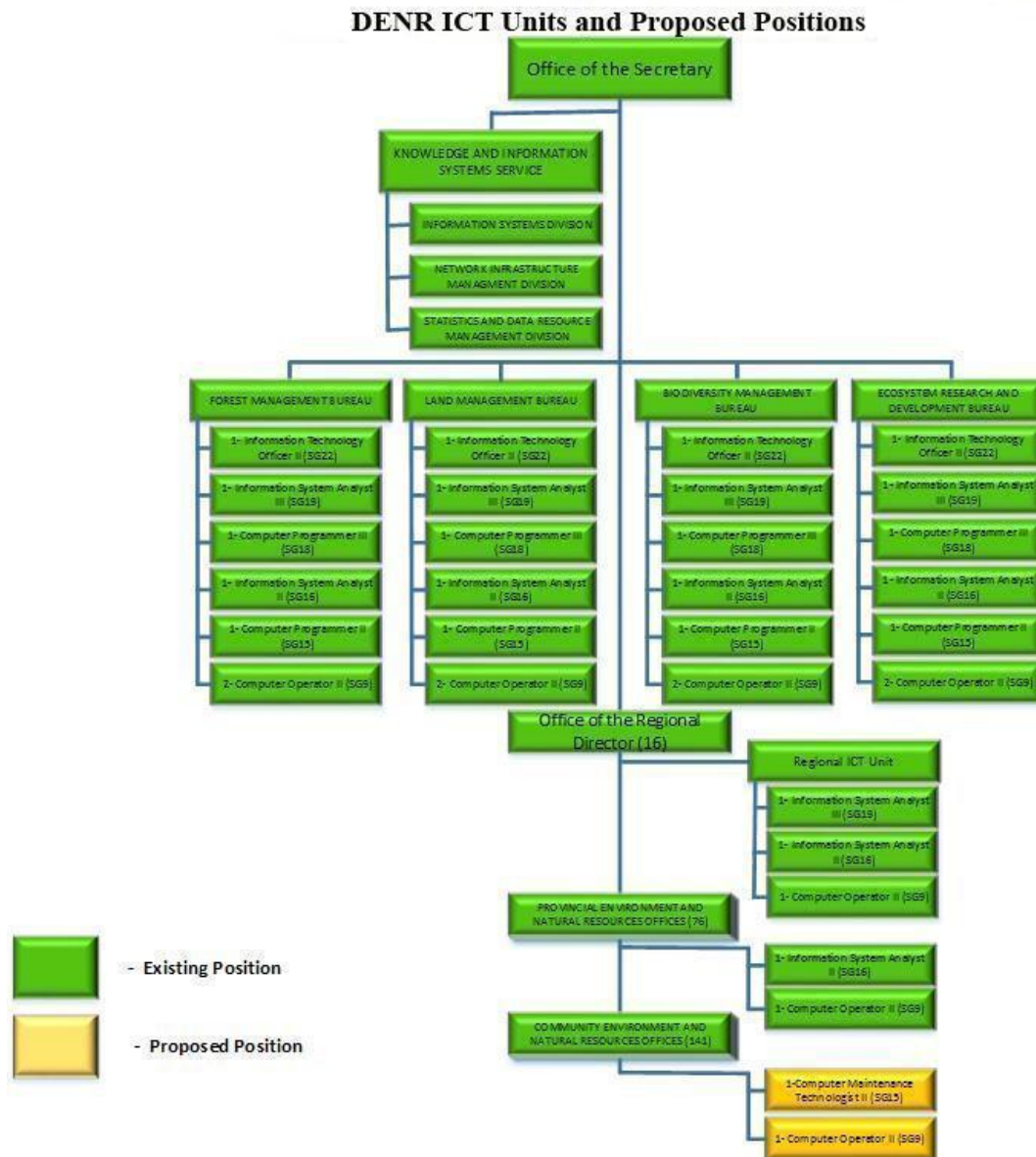
- Computer Programmer III (SG 18) – 4
- Computer Programmer II (SG 15) – 4
- Administrative Assistant VI (SG 12) – 4

Community Environment and Natural Resources (CENRO)

As the frontline service delivery unit of all DENR transactions to its stakeholders, support of ICT personnel is needed in the implementation of the automation of processes. The proposal of additional one **Computer Maintenance Technologist II (SG 15)** and one **Computer Operator II (SG 9)** will help the CENROs achieve their mandates and bring the services needed to the DENR stakeholders.

Currently, the Department hires contractual (job orders) to perform the tasks of the plantilla positions required in each offices.

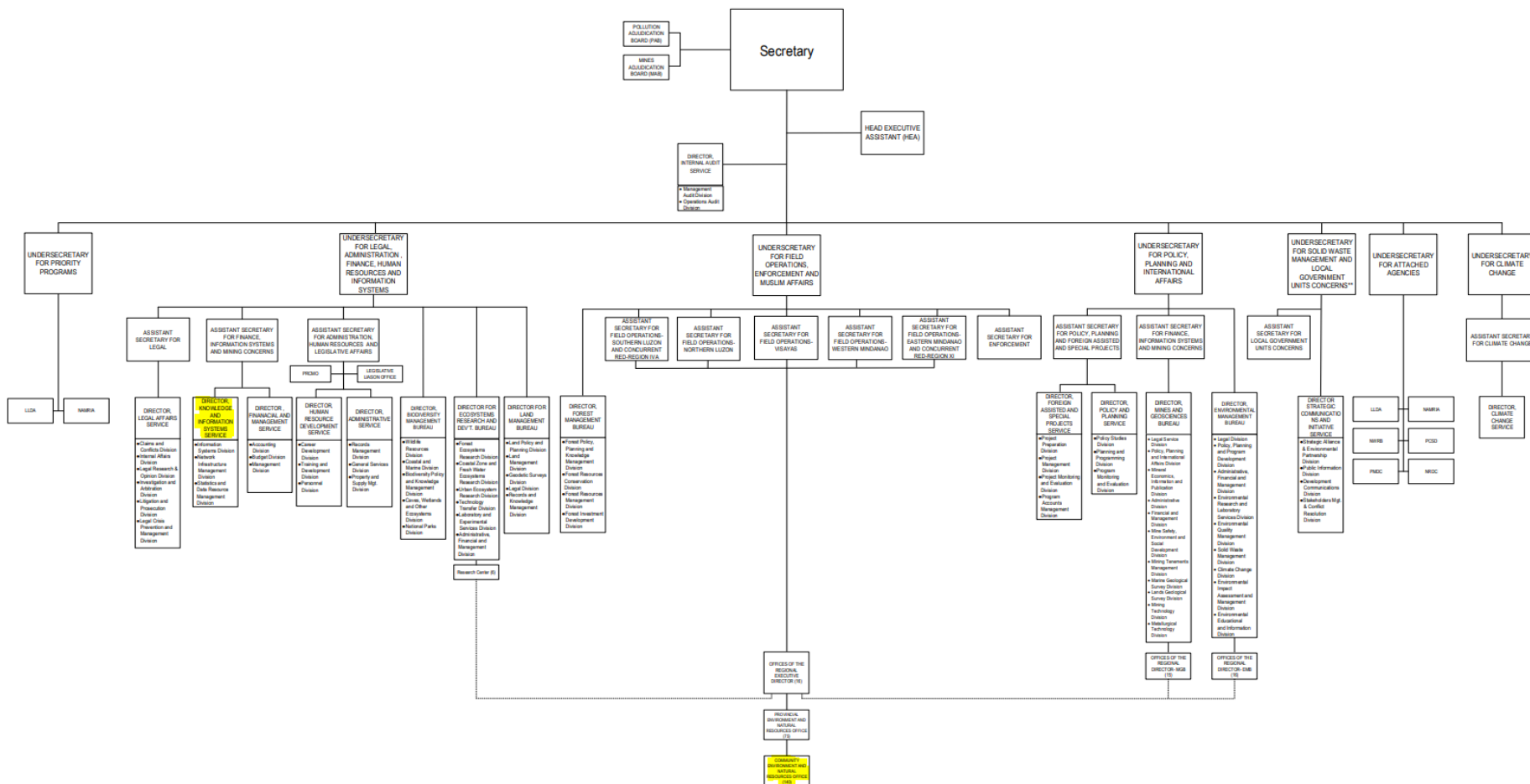






B.3 PLACEMENT OF THE PROPOSED ICT ORGANIZATIONAL STRUCTURE IN THE AGENCY ORGANIZATIONAL CHART

DENR Organizational Structure



*Supervised by the Task Force (Environmental Protection and Enforcement Task Force)
**Supervised by the Task Force (Solid Waste Management and Local Government Units Task Force)



PART V. DEVELOPMENT AND INVESTMENT PROGRAM

A. ICT PROJECTS IMPLEMENTATION SCHEDULE

1. WATERSHED ECOSYSTEM MANAGEMENT INFORMATION SYSTEM (WEMIS)

Activity	2021												2022											
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
<i>Inception report</i>	■																							
<i>System requirement gathering</i>		■	■	■																				
<i>Design and Architecture</i>			■	■	■																			
<i>Framework and POC</i>				■	■	■	■																	
<i>IS Development</i>							■	■	■	■	■	■												
<i>Documentation</i>												■												
<i>Training</i>													■	■	■	■								
<i>Production and Deployment</i>																■	■	■	■	■	■	■	■	■
<i>Warranty period</i>																	■	■	■	■	■	■	■	■
<i>Final Report</i>																								

2. CARBON ACCOUNTING, VERIFICATION, AND CERTIFICATION SYSTEM (CAVCS)

Activity	2021												2022											
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
<i>Inception report</i>	■																							
<i>System requirement gathering</i>		■	■	■																				
<i>Design and Architecture</i>			■	■	■																			
<i>Framework and POC</i>				■	■	■	■																	
<i>IS Development</i>							■	■	■	■	■	■												
<i>Documentation</i>												■												
<i>Training</i>													■	■	■	■								



Activity	2021												2022											
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
<i>Production and Deployment</i>																								
<i>Warranty period</i>																								
<i>Final Report</i>																								

3. REGISTRY OF INVESTMENT-READY FOREST PLANTATIONS INFORMATION SYSTEM (RIRFPIS)

Activity	2021												2022											
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
<i>Inception report</i>																								
<i>System requirement gathering</i>																								
<i>Design and Architecture</i>																								
<i>Framework and POC</i>																								
<i>IS Development</i>																								
<i>Documentation</i>																								
<i>Training</i>																								
<i>Production and Deployment</i>																								
<i>Warranty period</i>																								
<i>Final Report</i>																								

4. NATIONAL FOREST MONITORING SYSTEM (NFMS)

Activity	2021												2022											
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
<i>Inception report</i>																								
<i>System requirement gathering</i>																								
<i>Design and Architecture</i>																								
<i>Framework and POC</i>																								
<i>IS Development</i>																								



Activity	2021												2022											
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
Documentation																								
Training																								
Production and Deployment																								
Warranty period																								
Final Report																								

5. NATIONAL FOREST MANAGEMENT INFORMATION SYSTEM (NFMIS)

Activity	2022												2023											
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
Inception report																								
System requirement gathering																								
Design and Architecture																								
Framework and POC																								
IS Development																								
Documentation																								
Training																								
Production and Deployment																								
Warranty period																								
Final Report																								

B. INFORMATION SYSTEM (IS) IMPLEMENTATION SCHEDULE

NAME OF ICT PROJECT/S	YEAR	YEAR	YEAR
	2021	2022	2023
WATERSHED ECOSYSTEM MANAGEMENT INFORMATION SYSTEM (WEMIS)			
CARBON ACCOUNTING, VERIFICATION, AND CERTIFICATION SYSTEM (CAVCS)			



NAME OF ICT PROJECT/S	YEAR	YEAR	YEAR
	2021	2022	2023
REGISTRY OF INVESTMENT-READY FOREST PLANTATIONS INFORMATION SYSTEM (RIRFPIS)			
NATIONAL FOREST MONITORING SYSTEM (NFMS)			
NATIONAL FOREST MANAGEMENT INFORMATION SYSTEM (NFMIS)			

C. SUMMARY OF INVESTMENT

BUDGET ITEM / ACCOUNT	2021		2022		2023		TOTAL
	PHYSICAL TARGETS	COST	PHYSICAL TARGETS	COST	PHYSICAL TARGETS	COST	
1. Office Productivity							
A. Capital Outlay (CO)							
Desktop Computer (Central Office)	100	7,000,000	100	7,000,000	100	7,000,000	21,000,000
Laptops (Central Office)	75	5,625,000	75	5,625,000	75	5,625,000	16,875,000
Desktop Computer (Staff Bureaus)	40	2,800,000	40	2,800,000	40	2,800,000	8,400,000
Laptops (Staff Bureaus)	12	900,000	12	900,000	12	900,000	2,700,000
Desktop Computer (Regional Office)	448	31,360,000	448	31,360,000	448	31,360,000	94,080,000
Laptops (Regional Office)	160	12,000,000	160	12,000,000	160	12,000,000	36,000,000
Desktop Computer (PENROs)	456	31,920,000	456	31,920,000	456	31,920,000	95,760,000
Laptops (PENROs)	304	22,800,000	304	22,800,000	304	22,800,000	68,400,000
Desktop Computer (CENROs)	852	59,640,000	852	59,640,000	852	59,640,000	178,920,000
Laptops (CENROs)	705	52,875,000	705	52,875,000	705	52,875,000	158,625,000
DLP Multimedia Projector (Central Office)	68	5,440,000	0	0	0	0	5,440,000
Sub Total CO		232,360,000		226,920,000		226,920,000	686,200,000



BUDGET ITEM / ACCOUNT	2021		2022		2023		TOTAL
	PHYSICAL TARGETS	COST	PHYSICAL TARGETS	COST	PHYSICAL TARGETS	COST	
B. Maintenance and Other Operating Expenses (MOOE)							
Adobe Creative Cloud Subscription (All Apps)	19	1,273,000	19	1,273,000	19	1,273,000	3,819,000
Lease Network Printer	89	15,000,000	89	15,000,000	89	15,000,000	45,000,000
Trainings							
GIS Training	1	29,000,000	0	0	0	0	29,000,000
ICT Training	1	15,000,000	1	15,000,000	1	15,000,000	45,000,000
Sub Total MOOE		60,273,000		31,273,000		31,273,000	122,819,000
Total Cost for Office Productivity		292,633,000		258,193,000		258,193,000	809,019,000
2. Internal ICT Projects							
A. Capital Outlay (CO)							
WEMIS	1	10,000,000	0	0	0	0	10,000,000
CAVCS	1	10,000,000	0	0	0	0	10,000,000
RIRFPIS	0	0	1	10,000,000	0	0	10,000,000
NFMIS	0	0	0	0	1	10,000,000	10,000,000
CWIS	1	10,000,000	0	0	0	0	10,000,000
IBMS with LAWIN	0	0	1	10,000,000	0	0	10,000,000
DENR SPMS M&E IS	0	0	0	0	1	10,000,000	10,000,000
PMIS	1	5,000,000	0	0	0	0	5,000,000
eLAMS	1	90,000,000	1	100,000,000	1	100,000,000	290,000,000
IT IS	0	0	1	20,000,000	0	0	20,000,000
Total CO		125,000,000		140,000,000		120,000,000	385,000,000



BUDGET ITEM / ACCOUNT	2021		2022		2023		TOTAL
	PHYSICAL TARGETS	COST	PHYSICAL TARGETS	COST	PHYSICAL TARGETS	COST	
4. Continuing Expenses for Existing Systems							
A. Capital Outlay (CO)							
Voice Routers (Central Office)	0	0	2	3,659,500	0	0	3,659,500
Voice Routers (Regional Office)	0	0	16	19,200,000	0	0	19,200,000
Voice Routers (Staff Bureaus)	0	0	2	2,400,000	0	0	2,400,000
Wireless LAN Controller (Central Office)	0	0	2	2,940,702	0	0	2,940,702
IP Phone (Central Office)	30	450,000	30	450,000	30	450,000	1,350,000
IP Phone (Staff Bureaus)	40	600,000	0	0	0	0	600,000
IP Phone (Regional Office)	160	2,400,000	16	240,000	16	240,000	2,880,000
IP Phone (PENROs)	76	1,140,000	0	0	0	0	1,140,000
IP Phone (CENROs)	142	2,130,000	0		0	0	2,130,000
Access Point (Central Office)	20	1,400,000	4	280,000	40	2,800,000	4,480,000
Access Point (Staff Bureaus)	0	0	0	0	60	720,000	720,000
Access Point (Regional Office)	0	0	0	0	512	6,144,000	6,144,000
Access Point (PENROs)	0	0	0	0	532	6,384,000	6,384,000
Access Point (CENROs)	0	0	0	0	710	8,520,000	8,520,000
Network Switch (Central Office)	20	15,200,000	4	4,080,000	0	0	19,280,000
Network Switch (Staff Bureaus)	8	6,400,000	4	3,200,000	0	0	9,600,000
Network Switch (Regional Office)	32	3,200,000	32	3,200,000	0	0	6,400,000
Network Switch (PENROs)	76	7,600,000	0	0	0	0	7,600,000
Network Switch (CENROs)	142	14,200,000	0	0	0	0	14,200,000
Enterprise Backup Software	1	6,790,000	0	0	0	0	6,790,000
Storage Area Network (GIS System)	2	18,000,000	0	0	0	0	18,000,000



BUDGET ITEM / ACCOUNT	2021		2022		2023		TOTAL
	PHYSICAL TARGETS	COST	PHYSICAL TARGETS	COST	PHYSICAL TARGETS	COST	
Storage Area Network (Disaster Recovery Site)	0	0	0	0	2	18,000,000	18,000,000
UPS & Battery Pack (Server Room Central Office)	0	0	1	13,600,000	0	0	13,600,000
PACU InRow Cooling (Server Room Central Office)	0	0	1	9,800,000	0	0	9,800,000
Server for Firewall (Central Office)	2	1,140,000	0	0	0	0	1,140,000
Windows Server Standard Operating System (Central Office)	8	520,000	0	0	0	0	520,000
Windows Server Data Center Operating System (Central Office)	4	1,628,000	0	0	0	0	1,628,000
Windows Server User CAL	5000	9,500,000	0	0	0	0	9,500,000
Sub Total CO		92,298,000		63,050,202		43,258,000	198,606,202
B. Maintenance and Other Operating Expenses (MOOE)							
GIS Maintenance	1	50,000,000	1	50,000,000	1	50,000,000	150,000,000
Internet Subscription (Central Office)	2	12,000,000	2	12,000,000	2	12,000,000	36,000,000
Internet Subscription (Regional Offices)	16	12,000,000	16	12,000,000	16	12,000,000	36,000,000
Internet Subscription (PENROs and CENROs)	218	12,000,000	218	12,000,000	218	12,000,000	36,000,000
Internet Subscription (ERDB Research Centers)	6	3,400,000	6	3,400,000	6	3,400,000	10,200,000
Internet Subscription (ENR Academy)	1	2,100,000	1	2,100,000	1	2,100,000	6,300,000
MPLS Subscription (Central Office / DR Site)	1	4,000,000	1	4,000,000	1	4,000,000	12,000,000
Sip Trunk Subscription (Central Office)	1	1,500,000	1	1,500,000	1	1,500,000	4,500,000



BUDGET ITEM / ACCOUNT	2021		2022		2023		TOTAL
	PHYSICAL TARGETS	COST	PHYSICAL TARGETS	COST	PHYSICAL TARGETS	COST	
Network Monitoring Software Subscription	1	550,000	1	550,000	1	550,000	1,650,000
Managed Security Services	1	20,000,000	1	20,000,000	1	20,000,000	60,000,000
Next Generation Firewall Subscription	2	6,400,000	2	6,400,000	2	6,400,000	19,200,000
Power and Cooling Maintenance (Server Room Central Office)	1	773,000	0	0	0	0	773,000
Network Security Appliance Maintenance (RO, PENROs, Bureau)	94	5,076,000	94	5,076,000	76	4,104,000	14,256,000
Network Security Appliance Maintenance (CENROs)	142	7,668,000	142	7,668,000	142	7,668,000	23,004,000
Anti-DDoS	20	1,200,000	20	1,200,000	20	1,200,000	3,600,000
SSL Certificates	1	479,000	1	479,000	1	479,000	1,437,000
Web Application Firewall (Central Office)	1	989,000	1	989,000	1	989,000	2,967,000
Endpoint Protection	1000	974,000	1000	974,000	1000	974,000	2,922,000
Fire Suppression (Server Room Central Office)	1	1,000,000	1	1,000,000	1	1,000,000	3,000,000
Access Control (Server Room Central Office)	3	501,000	3	501,000	3	501,000	1,503,000
Cloud Infrastructure Subscription	1	7,500,000	1	7,500,000	1	7,500,000	22,500,000
Cloud Application Subscription	1720	5,974,000	1720	5,974,000	1720	5,974,000	17,922,000
Gsuite Basic	1370		1370	0	1370	0	0
Gsuite Business	350	0	350	0	350	0	0
Active Directory Management and Helpdesk System Subscription	1	1,500,800	1	1,500,800	1	1,500,800	4,502,400
Helpdesk System Subscription	1	0	1	0	1	0	0
Active Directory Management Subscription	1	0	1	0	1	0	0



BUDGET ITEM / ACCOUNT	2021		2022		2023		TOTAL
	PHYSICAL TARGETS	COST	PHYSICAL TARGETS	COST	PHYSICAL TARGETS	COST	
Active Directory Audit Subscription	1	0	1	0	1	0	0
Active Directory Self Service Password Subscription	1	0	1	0	1	0	0
Sub Total MOOE		157,584,800		156,811,800		155,839,800	470,236,400
Sub Total Continuing Expenses		269,882,800		219,862,002		199,097,800	668,842,602
Total CO		449,658,000		429,970,202		390,178,000	1,269,806,202
Total MOOE		217,857,800		188,084,800		187,112,800	593,055,400
Total Per Year		667,515,800		618,055,002		577,290,800	
Grand Total							1,862,861,602

A. 2021 COST BREAKDOWN

DETAILED COST ITEMS		OFFICE PRODUCTIVITY	CONTINUING COST	TOTAL
1. OFFICE EQUIPMENT				
Capital Outlay				
	Desktop Computer	132,720,000		132,720,000
	Laptop Computer	94,200,000		94,200,000
	Network Switch	46,600,000		46,600,000
	IP Phone	6,720,000		6,720,000
	Access Point	1,400,000		1,400,000
	DLP Multimedia Projector (Central Office)	5,440,000		5,440,000
	Enterprise Backup Software	6,790,000		6,790,000
	Storage Area Network (GIS)	18,000,000		18,000,000



DETAILED COST ITEMS		OFFICE PRODUCTIVITY	CONTINUING COST	TOTAL
	Server for Firewall (Central Office)	1,140,000		1,140,000
	Windows Server Standard Operating System (Central Office)	520,000		520,000
	Windows Server Data Center Operating System (Central Office)	1,628,000		1,628,000
	Windows Server User CAL	9,500,000		9,500,000
2. Software (Capital Outlay)				
	WEMIS	10,000,000		10,000,000
	CAVCS	10,000,000		10,000,000
	CWIS	10,000,000		10,000,000
	PMIS	5,000,000		5,000,000
	eLAMS	90,000,000		90,000,000
3. Professional Services				
	a. Systems Development			
	b. Maintenance and Other Services			
	Next Generation Firewall Subscription (Central Office)		6,400,000	6,400,000
	Power and Cooling Maintenance (Server Room Central Office)		773,000	773,000
	Network Security Appliance Maintenance (RO, PENROs, Bureau)		5,076,000	5,076,000
	Network Security Appliance (CENROs)		7,668,000	7,668,000
	Anti-DDoS		1,200,000	1,200,000
	SSL Certificates		479,000	479,000
	Web Application Firewall (Central Office)		989,000	989,000
	Endpoint Protection		974,000	974,000
	Managed Security Service		20,000,000	20,000,000



DETAILED COST ITEMS		OFFICE PRODUCTIVITY	CONTINUING COST	TOTAL
	Fire Suppression (Server Room Central Office)		1,000,000	1,000,000
	Access Control (Server Room Central Office)		501,000	501,000
	Lease Network Printer		15,000,000	15,000,000
	Adobe Creative Cloud Subscription (All Apps)		1,273,000	1,273,000
	Active Directory Management and Helpdesk System Subscription		1,500,800	1,500,800
	GIS Maintenance		50,000,000	50,000,000
	GIS Training		29,000,000	29,000,000
	ICT Training		15000000	15,000,000
4. Communication				
	Internet Subscription (Central Office)		12,000,000	12,000,000
	Internet Subscription (Regional Office)		12,000,000	12,000,000
	Internet Subscription (PENRO & CENRO)		12,000,000	12,000,000
	Internet Subscription (ERDB Research Centers)		3,400,000	3,400,000
	Internet Subscription (ENR Academy)		2,100,000	2,100,000
	MPLS Subscription (Central Office)		4,000,000	4,000,000
	Sip Trunk Subscription		1,500,000	1,500,000
	Cloud Infrastructure Subscription		7,500,000	7,500,000
	Cloud Application Subscription		5,974,000	5,974,000
	Network Monitoring Software Subscription		550,000	550,000
	TOTAL CO	449,658,000		
	TOTAL MOOE		217,857,800	
	GRAND TOTAL			667,515,800



B. 2022 COST BREAKDOWN

DETAILED COST ITEMS		OFFICE PRODUCTIVITY	CONTINUING COST	TOTAL
1. OFFICE EQUIPMENT				
	Desktop Computer	132,720,000		132,720,000
	Laptop Computer	94,200,000		94,200,000
	Network Switch	10,480,000		10,480,000
	IP Phone	690,000		690,000
	Access Point	280,000		280,000
	Voice Router (Central Office)	3,659,500		3,659,500
	Voice Router (Regional Office)	19,200,000		19,200,000
	Voice Routers (Staff Bureaus)	2,400,000		2,400,000
	Wireless LAN Controller (Central Office)	2,940,702		2,940,702
	UPS & Battery Pack (Server Room Central Office)	13,600,000		13,600,000
	PACU InRow Cooling (Server Room Central Office)	9,800,000		9,800,000
2. Software				
	RIRFPIS	10,000,000		10,000,000
	IBMS with LAWIN	10,000,000		10,000,000
	eLAMS	100,000,000		100,000,000
	Other IS	20,000,000		20,000,000
3. Professional Services				
	a. Systems Development			0



DETAILED COST ITEMS		OFFICE PRODUCTIVITY	CONTINUING COST	TOTAL
	b. Maintenance and Other Services			
	Next Generation Firewall Subscription (Central Office)		6,400,000	6,400,000
	Network Security Appliance Maintenance (RO, PENROs, Bureau)		5,076,000	5,076,000
	Network Security Appliance (CENROs)		7,668,000	7,668,000
	Anti-DDoS		1,200,000	1,200,000
	SSL Certificates		479,000	479,000
	Web Application Firewall (Central Office)		989,000	989,000
	Endpoint Protection		974,000	974,000
	Managed Security Service		20,000,000	20,000,000
	Fire Suppression (Server Room Central Office)		1,000,000	1,000,000
	Access Control (Server Room Central Office)		501,000	501,000
	Lease Network Printer		15,000,000	15,000,000
	Adobe Creative Cloud Subscription (All Apps)		1,273,000	1,273,000
	Active Directory Management and Helpdesk System Subscription		1,500,800	1,500,800
	GIS Maintenance		50,000,000	50,000,000
	ICT Training		15000000	15,000,000
4. Communication				
	Internet Subscription (Central Office)		12,000,000	12,000,000
	Internet Subscription (Regional Office)		12,000,000	12,000,000
	Internet Subscription (PENRO & CENRO)		12,000,000	12,000,000
	Internet Subscription (ERDB Research Centers)		3,400,000	3,400,000



DETAILED COST ITEMS		OFFICE PRODUCTIVITY	CONTINUING COST	TOTAL
	Internet Subscription (ENR Academy)		2,100,000	2,100,000
	MPLS Subscription (Central Office)		4,000,000	4,000,000
	Sip Trunk Subscription		1,500,000	1,500,000
	Cloud Infrastructure Subscription		7,500,000	7,500,000
	Cloud Application Subscription		5,974,000	5,974,000
	Network Monitoring Software Subscription		550,000	550,000
	TOTAL CO	429,970,202		
	TOTAL MOOE		188,084,800	
	GRAND TOTAL			618,055,002

C. 2023 COST BREAKDOWN

DETAILED COST ITEMS		OFFICE PRODUCTIVITY	CONTINUING COST	TOTAL
1. OFFICE EQUIPMENT				
	Desktop Computer	132,720,000		132,720,000
	Laptop Computer	94,200,000		94,200,000
	IP Phone	690,000		690,000
	Access Point	24,568,000		24,568,000
	Storage Area Network (Disaster Recovery Site)	18,000,000		18,000,000



DETAILED COST ITEMS		OFFICE PRODUCTIVITY	CONTINUING COST	TOTAL
2. Software				
	NFMIS	10,000,000		10,000,000
	DENR SPMS M&E IS	10,000,000		10,000,000
	eLAMS	100,000,000		100,000,000
3. Professional Services				
	a. Systems Development			
	b. Maintenance and Other Services			
	Next Generation Firewall Subscription (Central Office)		6,400,000	6,400,000
	Network Security Appliance Maintenance (RO, PENROs, Bureau)		4,104,000	4,104,000
	Network Security Appliance (CENROs)		7,668,000	7,668,000
	Anti-DDoS		1,200,000	1,200,000
	SSL Certificates		479,000	479,000
	Web Application Firewall (Central Office)		989,000	989,000
	Endpoint Protection		974,000	974,000
	Managed Security Service		20,000,000	20,000,000
	Fire Suppression (Server Room Central Office)		1,000,000	1,000,000
	Access Control (Server Room Central Office)		501,000	501,000
	Lease Network Printer		15,000,000	15,000,000
	Adobe Creative Cloud Subscription (All Apps)		1,273,000	1,273,000
	Active Directory Management and Helpdesk System Subscription		1,500,800	1,500,800
	GIS Maintenance		50,000,000	50,000,000
	ICT Training		15000000	15,000,000



DETAILED COST ITEMS		OFFICE PRODUCTIVITY	CONTINUING COST	TOTAL
4. Communication				
	Internet Subscription (Central Office)		12,000,000	12,000,000
	Internet Subscription (Regional Office)		12,000,000	12,000,000
	Internet Subscription (PENRO & CENRO)		12,000,000	12,000,000
	Internet Subscription (ERDB Research Centers)		3,400,000	3,400,000
	Internet Subscription (ENR Academy)		2,100,000	2,100,000
	MPLS Subscription (Central Office)		4,000,000	4,000,000
	Sip Trunk Subscription		1,500,000	1,500,000
	Cloud Infrastructure Subscription		7,500,000	7,500,000
	Cloud Application Subscription		5,974,000	5,974,000
	Network Monitoring Software Subscription		550,000	550,000
	TOTAL CO	390,178,000		
	TOTAL MOOE		187,112,800	
	GRAND TOTAL	577,290,800		