



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

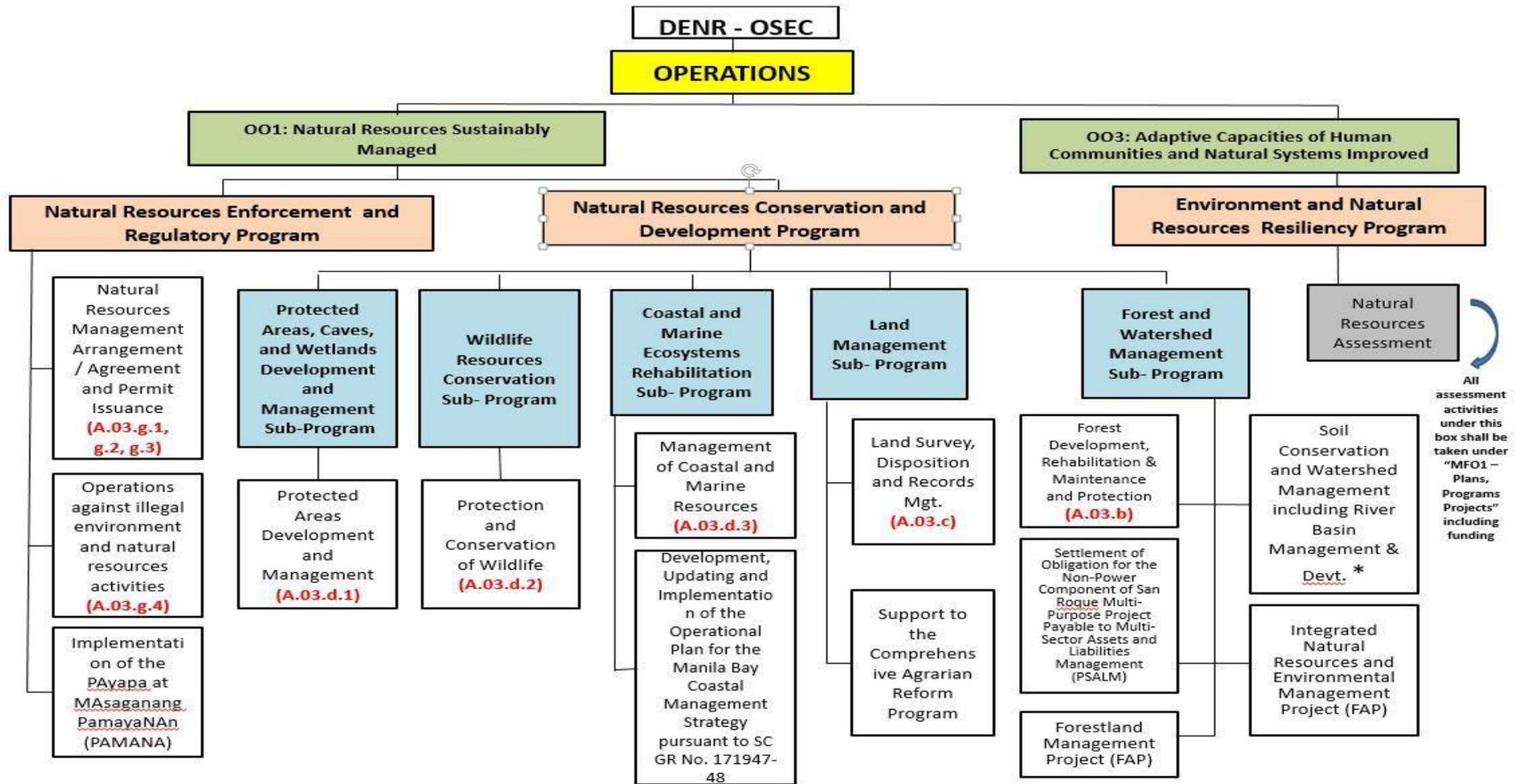
DENR envisions "a nation enjoying and sustaining its natural resources and clean and healthy environment."

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. Cimatu | 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. Cagaanan | ISA III | eacagaanan@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 | wgquirit@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)

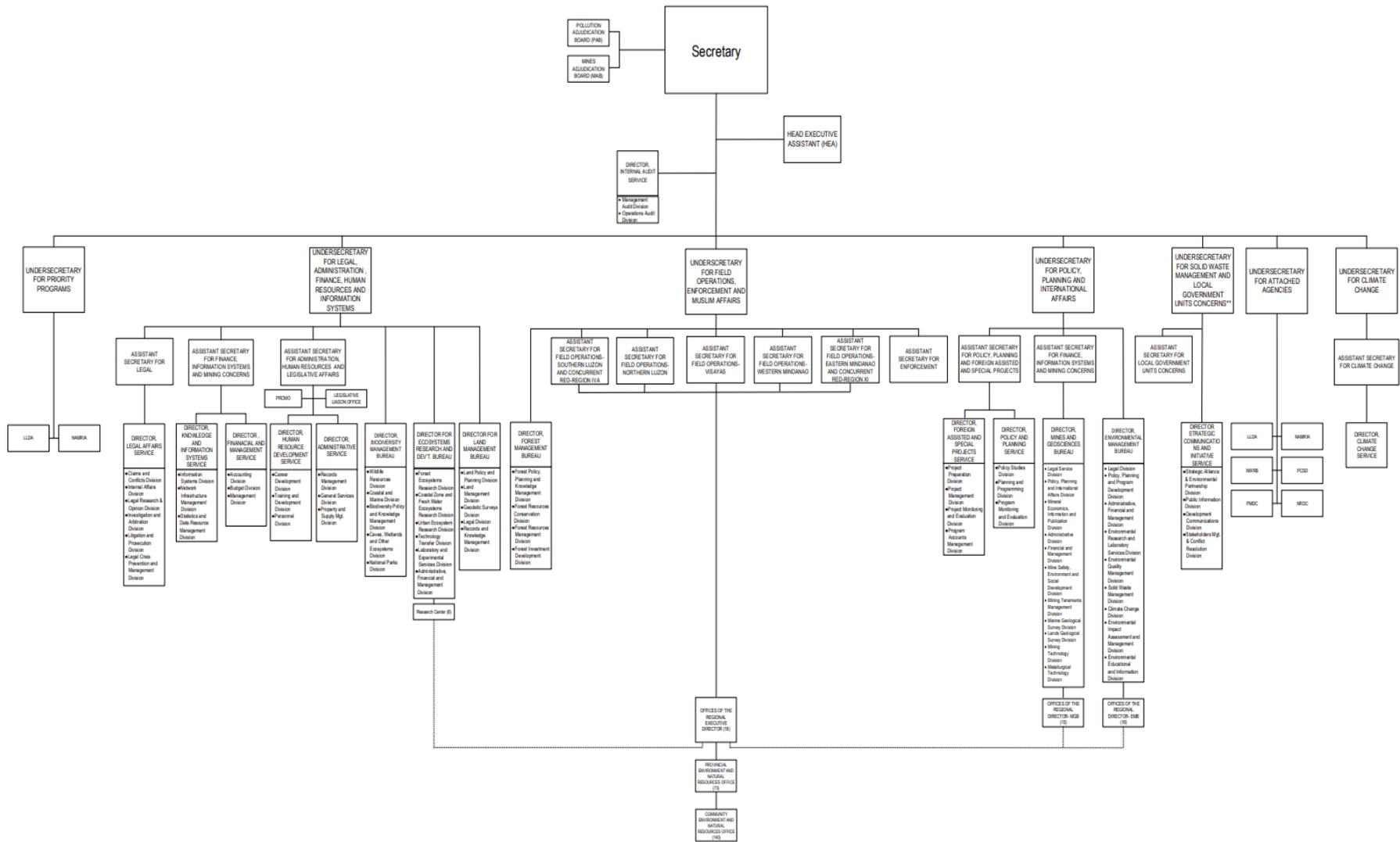
76 PENROs

Number of Community Environment and Natural Resources Office-CENRO)

142 CENROs



B.4. Organizational Functional Chart



*Supported by Task Force (Environmental Protection and Enforcement Task Force, IP, Taps and Railways)
 **Equipment National Solid Waste Management Commission Secretariat (NSMCS) 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, statues, 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 OECMs; 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.



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) | <p>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</p> | 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 |
|---|--|-------------|----------|

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 (FLU AIS) | 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> | <p>Watershed Characterization, Vulnerability Assessment and Formulation of Integrated Watershed Management Plan</p> | <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. |



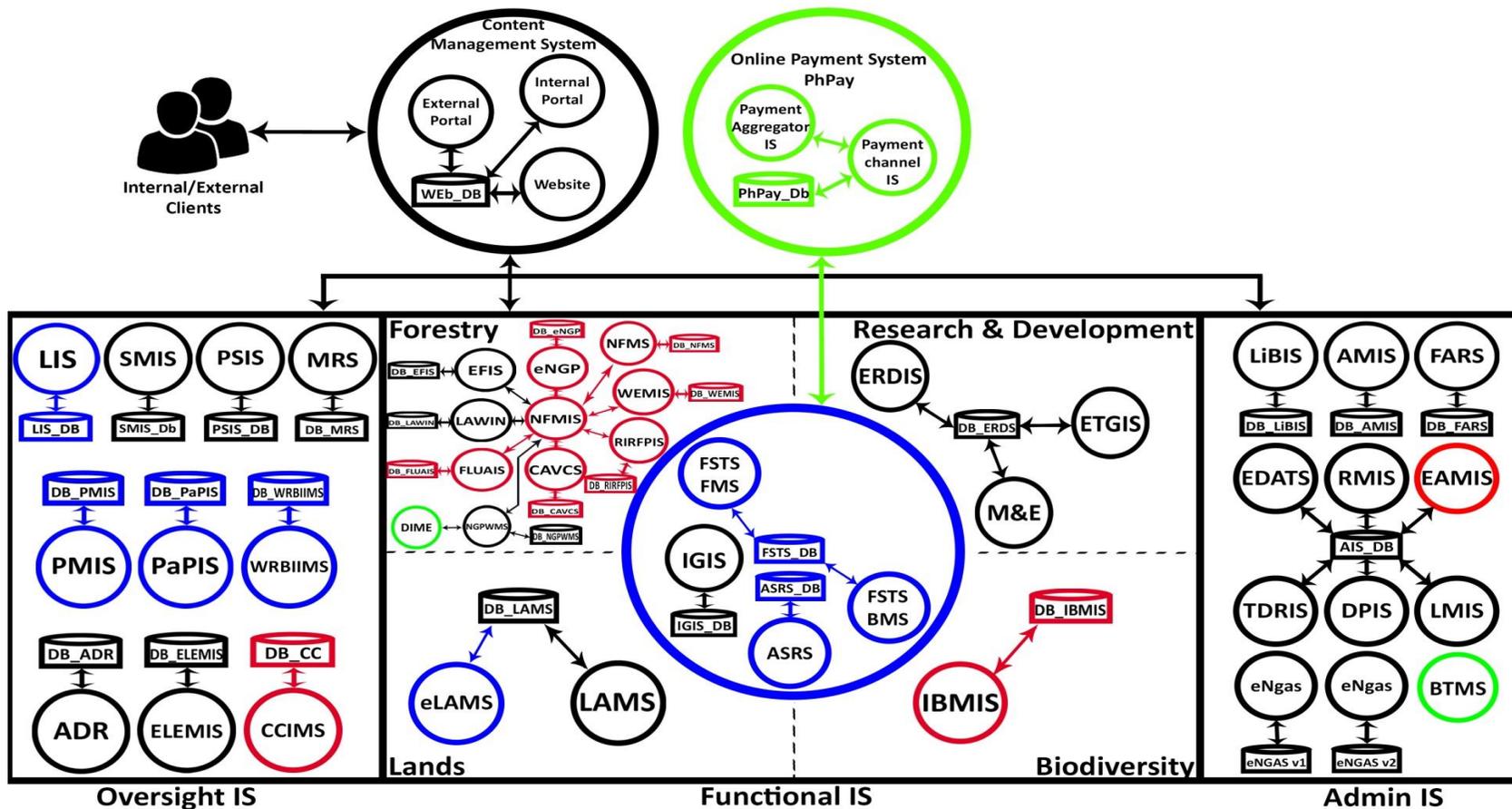
| | | | |
|--|---|---|--|
| | | to lack of a system that would systematically store data | |
| | Carbon Accounting, Verification and Certification | <ul style="list-style-type: none"> • Lack of an information system to track client applications, facilitating of reviews and verification, recognizing protection 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. |
|--|---|---|---|

PART II. INFORMATION SYSTEMS STRATEGY

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



Legend:
 Operational & Continuing For Development / Build up
 For Enhancement / Migration iGovPhil & other cross-agency ICT service



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 |
|--------------|--------------------------|

| | |
|--|--|
| 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 |
| | 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 |
| | 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; |



| | | |
|-----------------------------|-----------------|--|
| | | <ol style="list-style-type: none"> 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 |

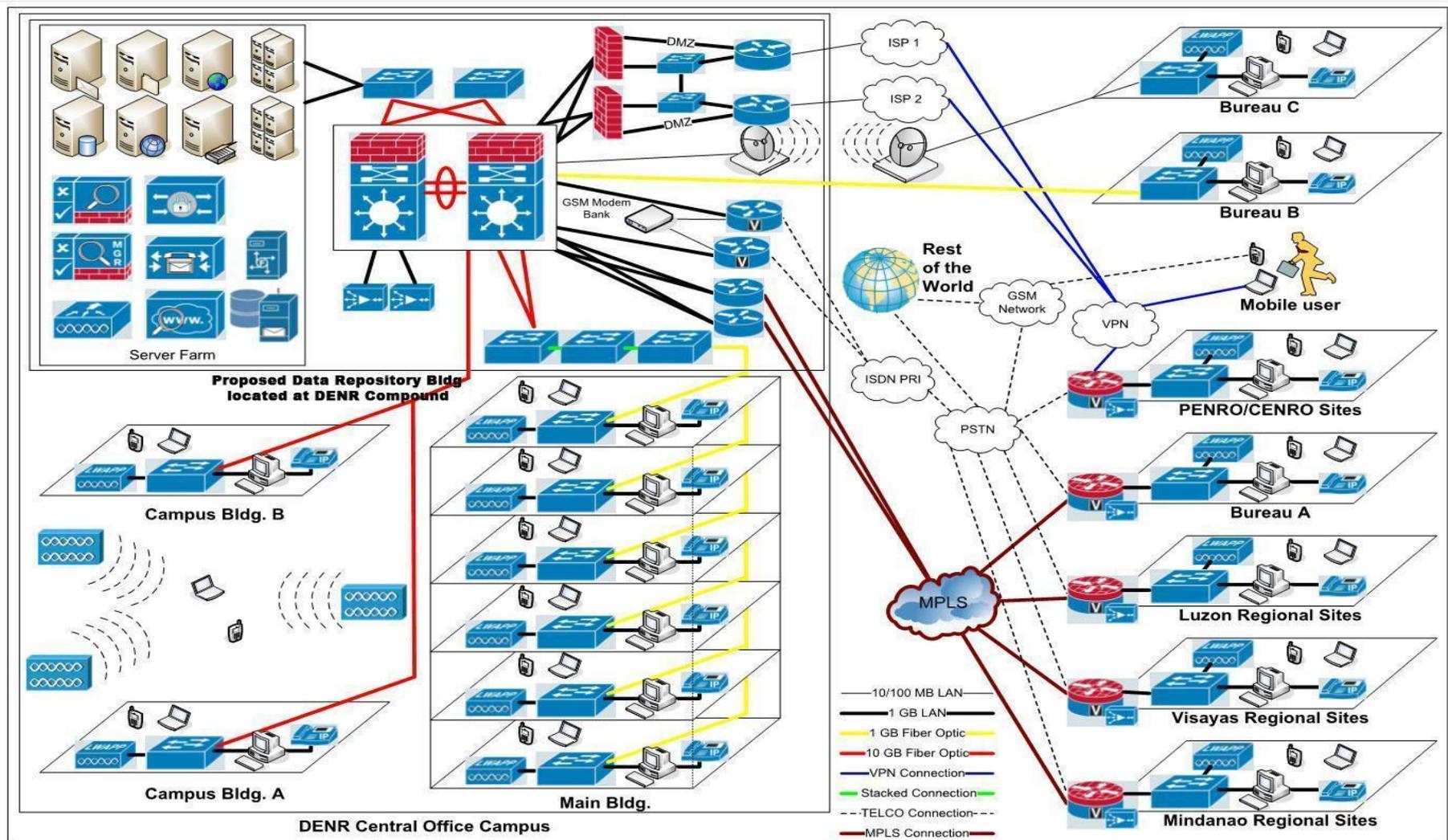


| | | |
|-------------------------------------|---|--|
| INFORMATION SYSTEMS SERVED | eLAMS | |
| DATA ARCHIVING/STORAGE MEDIA | Storage Area Network, Cloud-based storage | |
| USERS | INTERNAL | DENR OFFICES (CENTRAL OFFICE, LMB, REGIONAL OFFICES, PENROS, CENROS) |
| | EXTERNAL | PRIVATE AND PUBLIC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

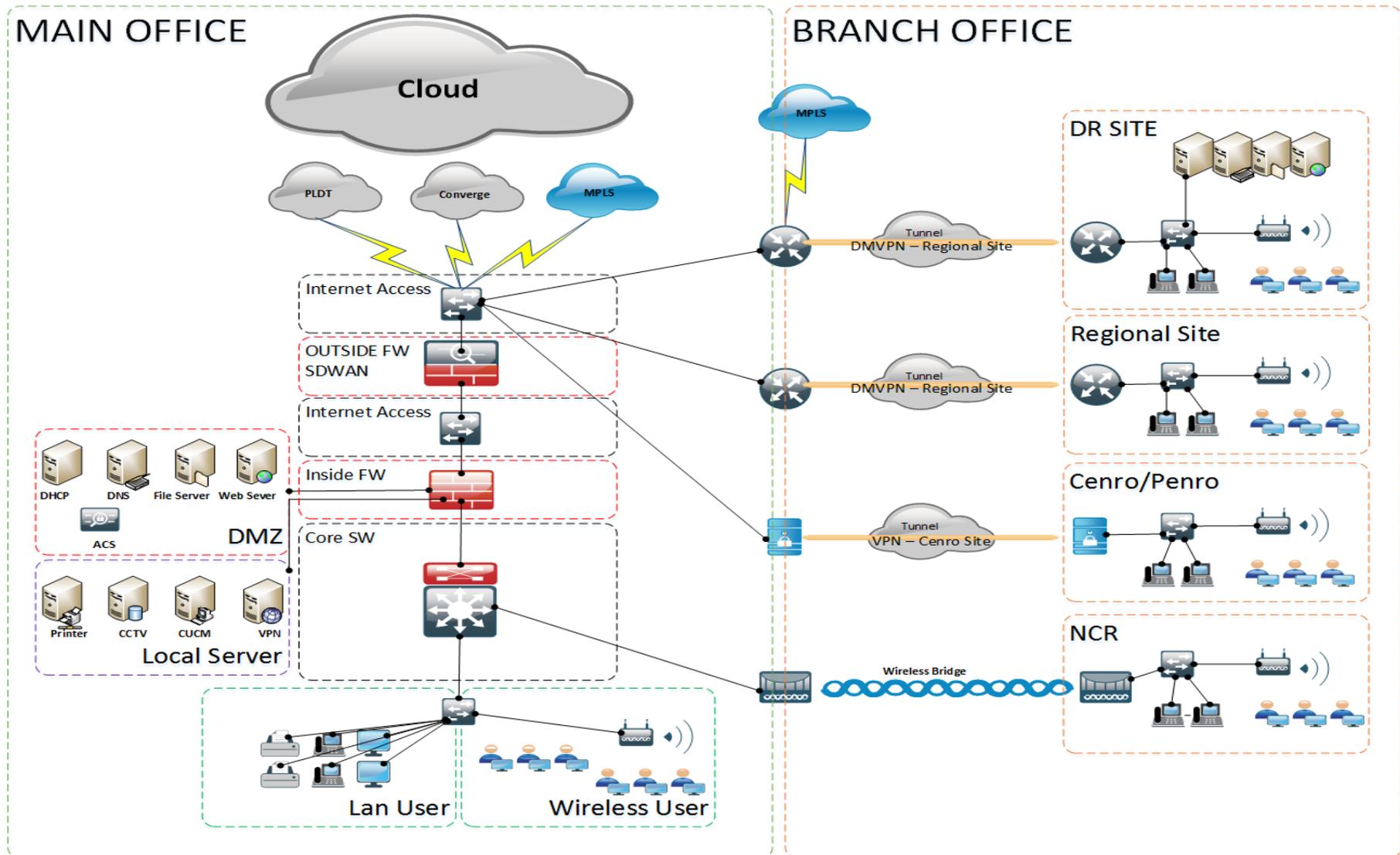


D. NETWORK LAYOUT

Existing network layout

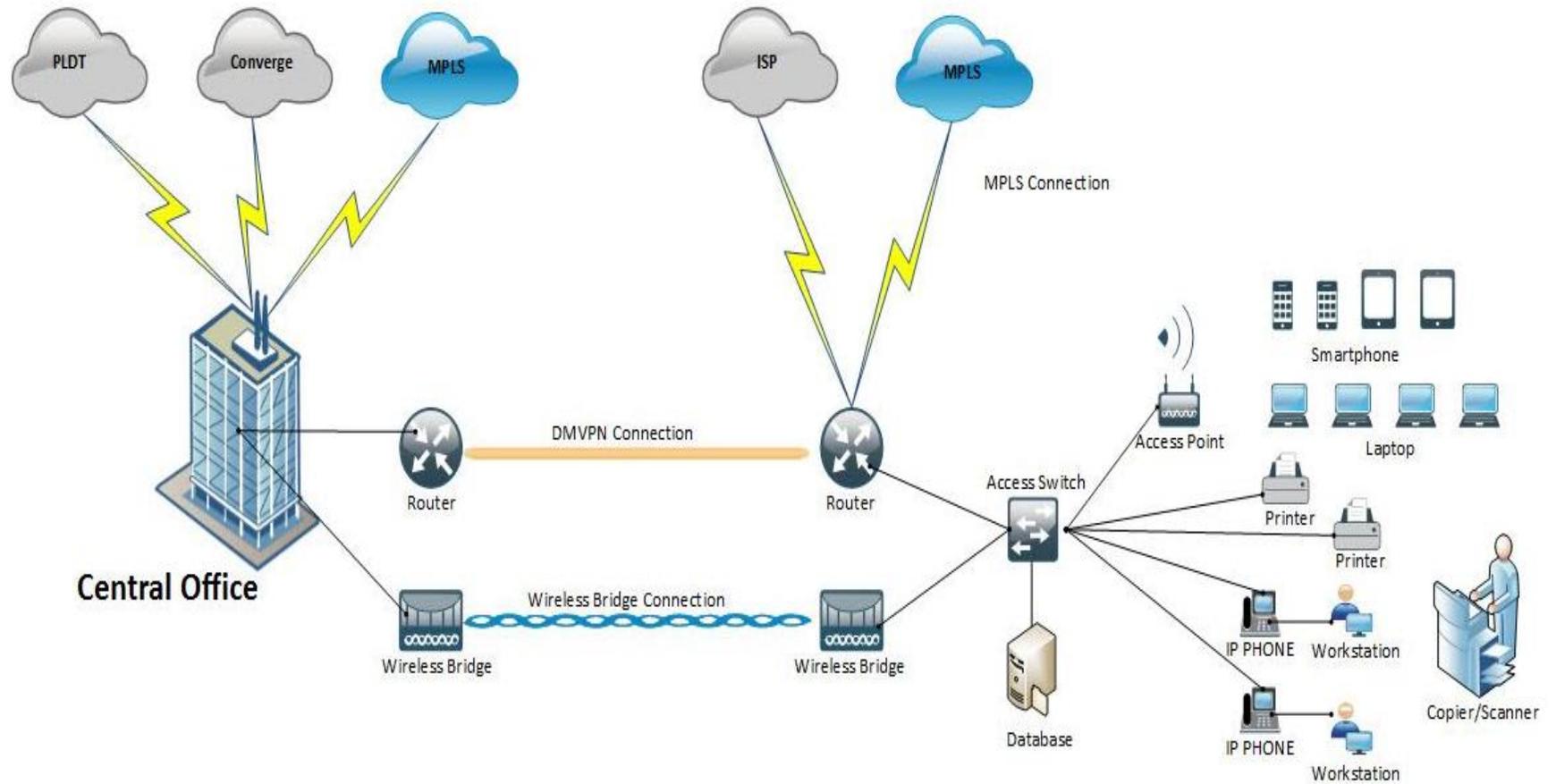


Proposed network layout





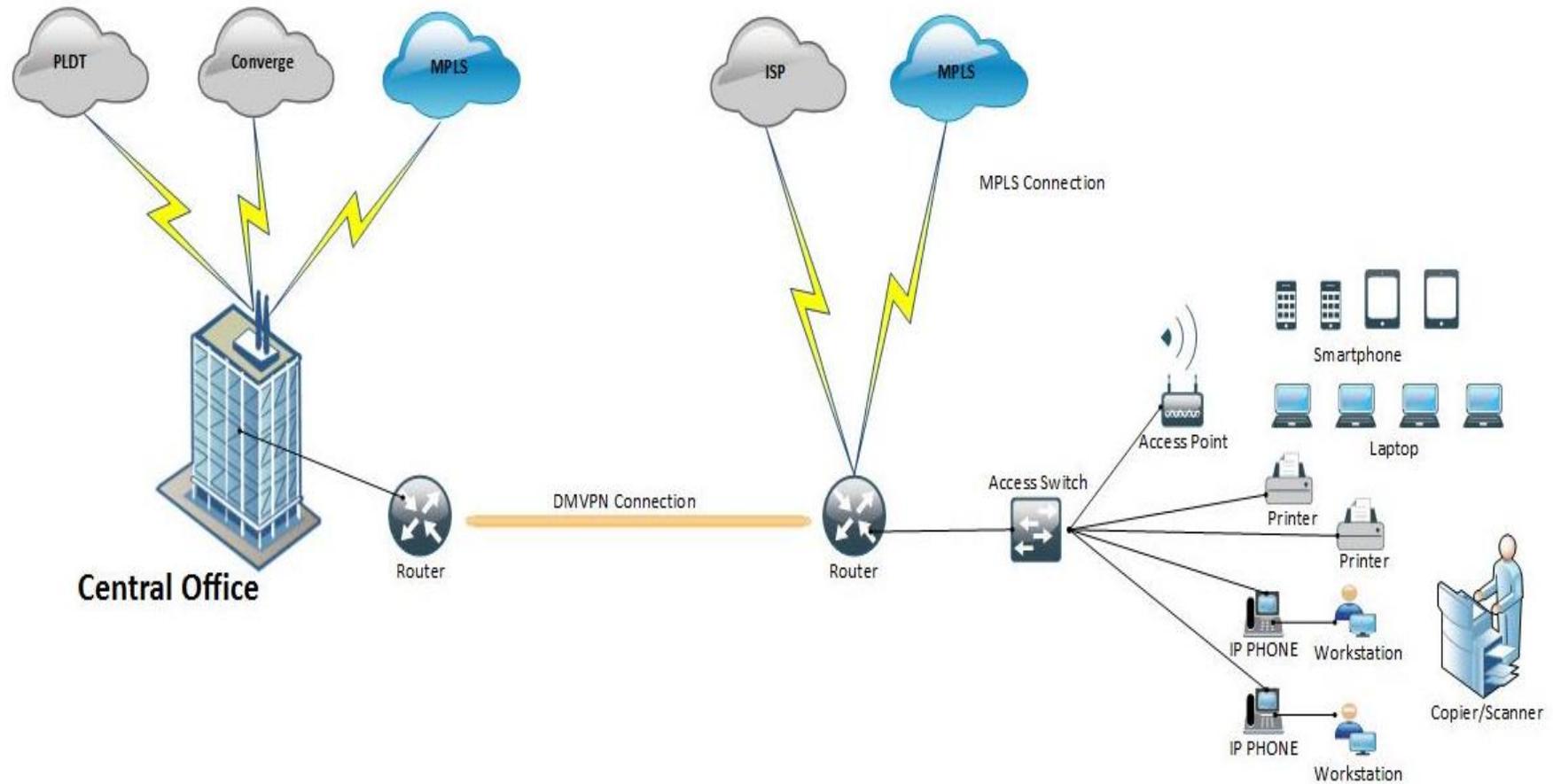
BUREAU SETUP



BUREAU SETUP



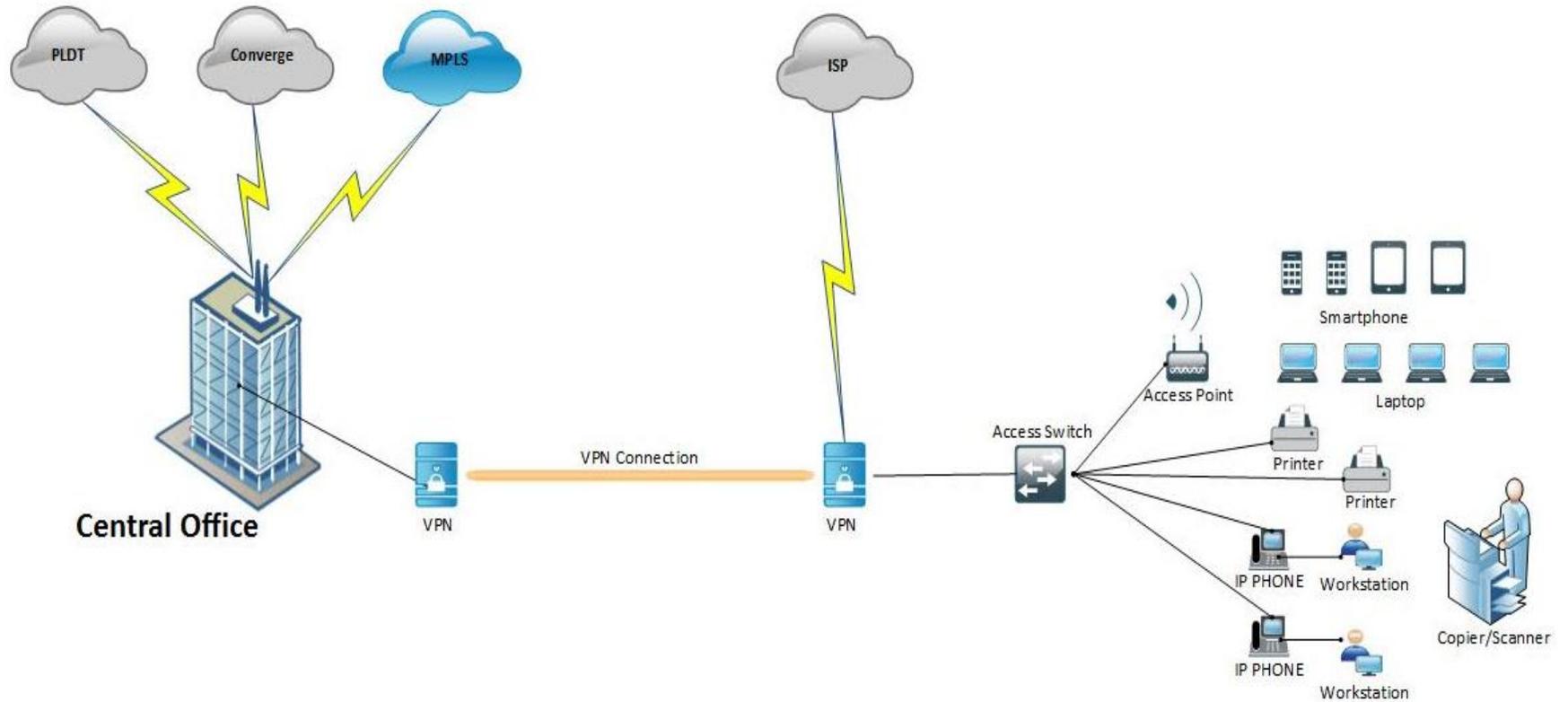
REGIONAL SETUP



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/P ENROs |



| | | | | | |
|---|----------------|---|---|-------------------------------------|--------------------------------|
| 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. | | |
|--|--|--|---|--|--|

3. eLAMS

| Hierarchy of targeted results | Objectively verifiable indicators (OVI) | Baseline data | Targets | Data collection methods | Responsibility to collect data |
|--|--|--|---|--------------------------|--------------------------------|
| <p>Intermediate outcome: Easy access to land related information</p> | 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 |
| <p>Improve data security of LAMS</p> | 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 |
| <p>Immediate Outcome: Faster processing of Land related transactions such as IVAS and PLA</p> | Decrease in processing time | Current average of processing time | 50% decrease in processing time | Monitoring and reporting | LMB |
| <p>Linkage to LGUs for land data exchange</p> | 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 |
|-------------------------------|---|---------------|---------|-------------------------|--------------------------------|
|-------------------------------|---|---------------|---------|-------------------------|--------------------------------|



| | | | | | |
|---|---|---|--|------------------|-----|
| 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 |
| 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 |
| 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 |



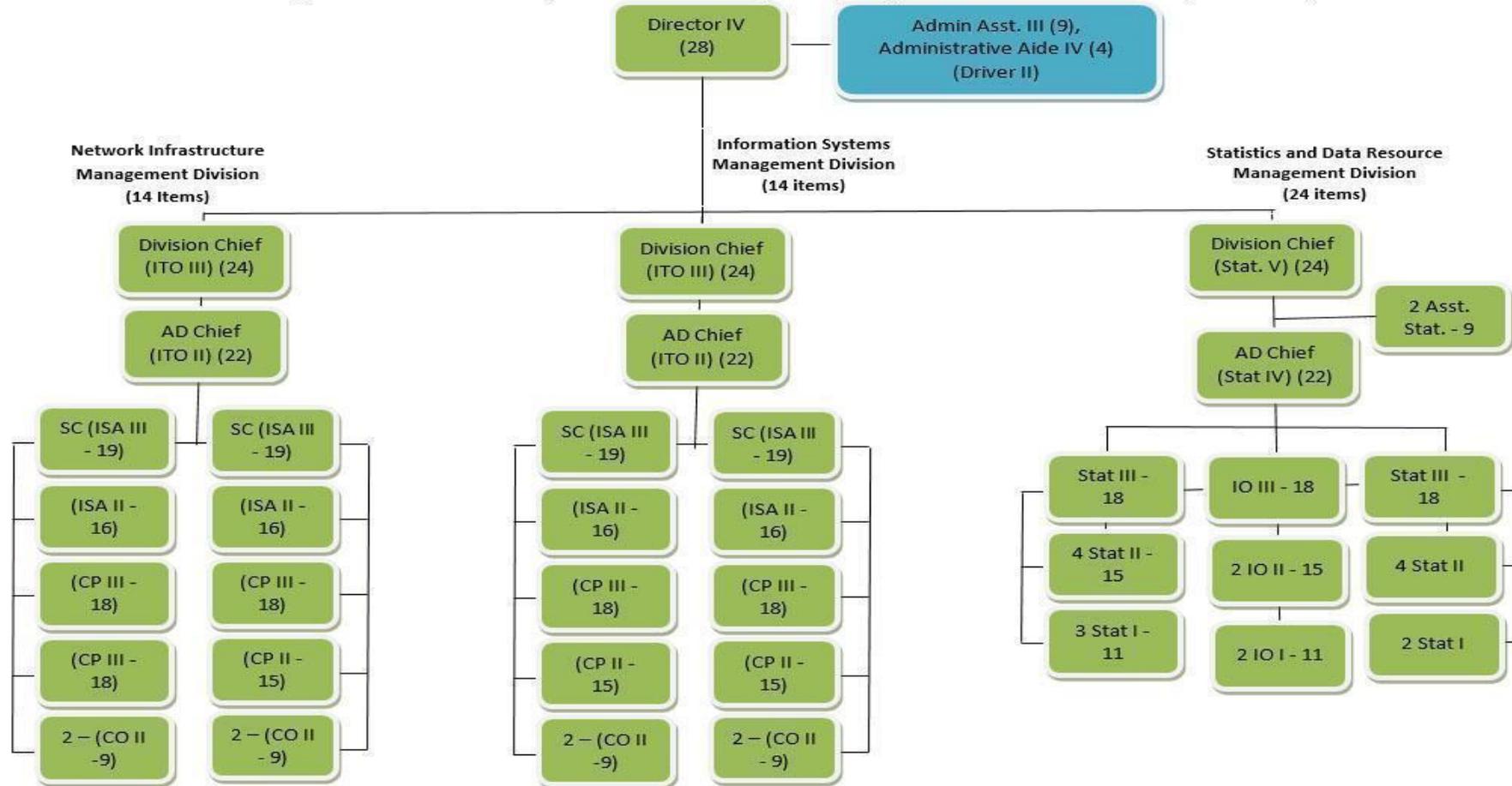
| BUDGET ITEM / ACCOUNT | NAME OF OFFICE/ ORGANIZATIONAL UNITS | PROPOSED NUMBER OF UNITS | | |
|--|---|--------------------------|------|------|
| | | 2021 | 2022 | 2023 |
| Cloud Application Subscription | | | | |
| Gsuite Basic | Central Office | 1370 | 1370 | 1370 |
| Gsuite Business | Central Office | 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)

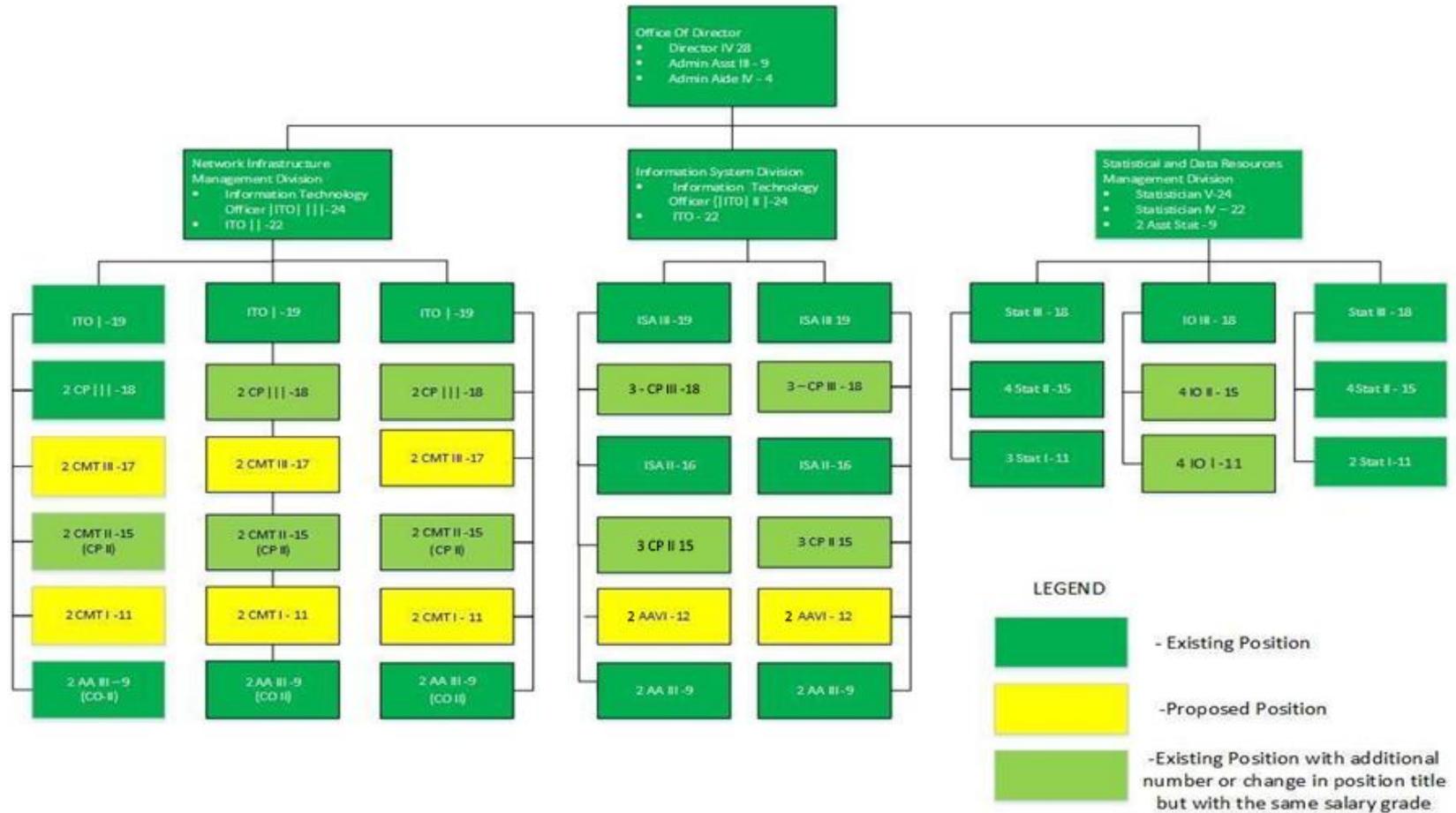
The additional plantilla positions that are needed to develop the requirements and specifications for systems and applications whose functions commonly performed include use of case development, business process mapping & design, and system modeling (UML, SysML, etc.). There are:

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

Community Environment and Natural Resources (CENRO)

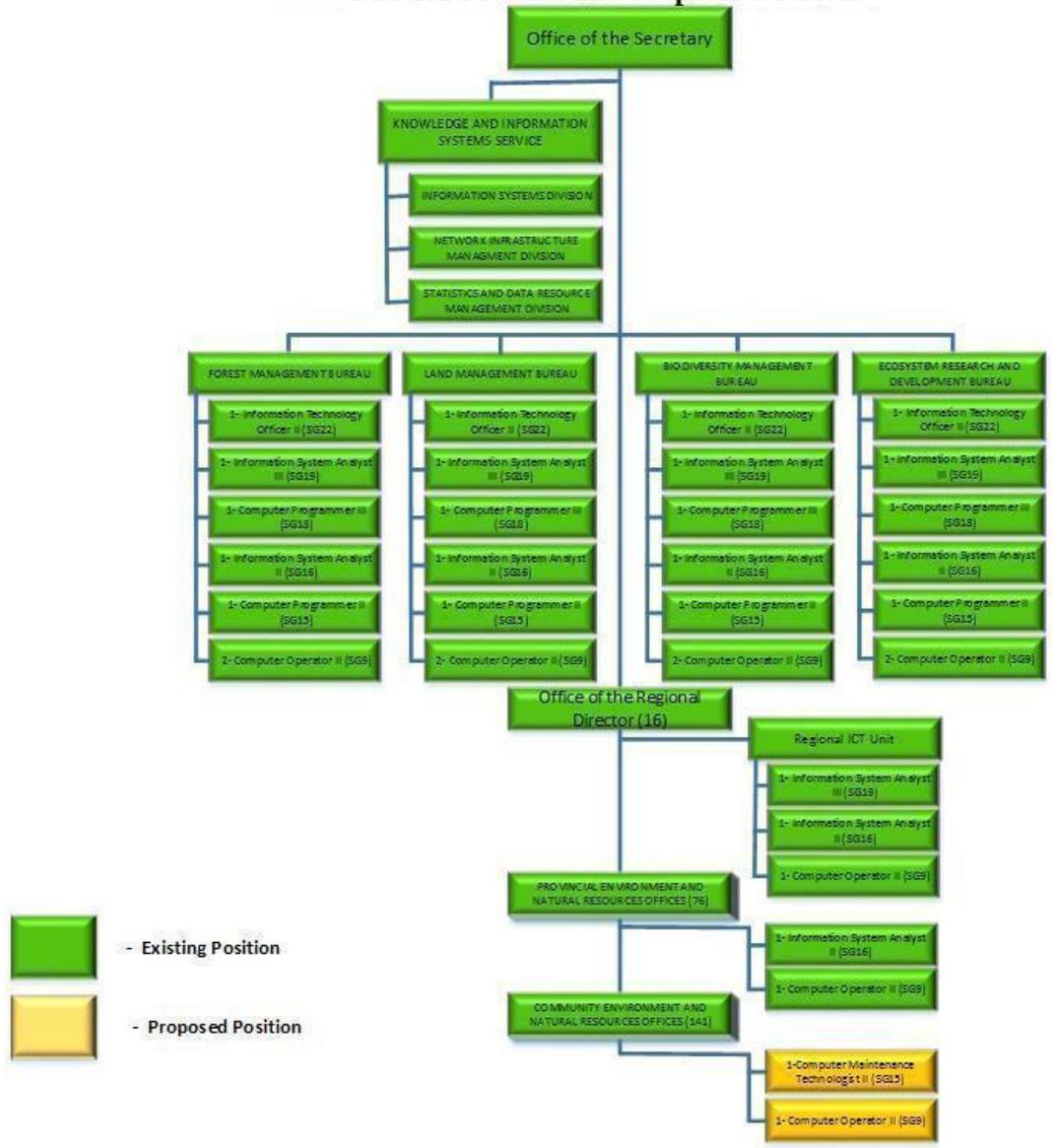
As the frontline service delivery unit of all DENR transactions to its stakeholders, support of ICT personnel is needed in the implementation of the automation of processes. The proposal of additional one **Computer Maintenance Technologist II (SG 15) and one Computer Operator II (SG 9)** will help the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





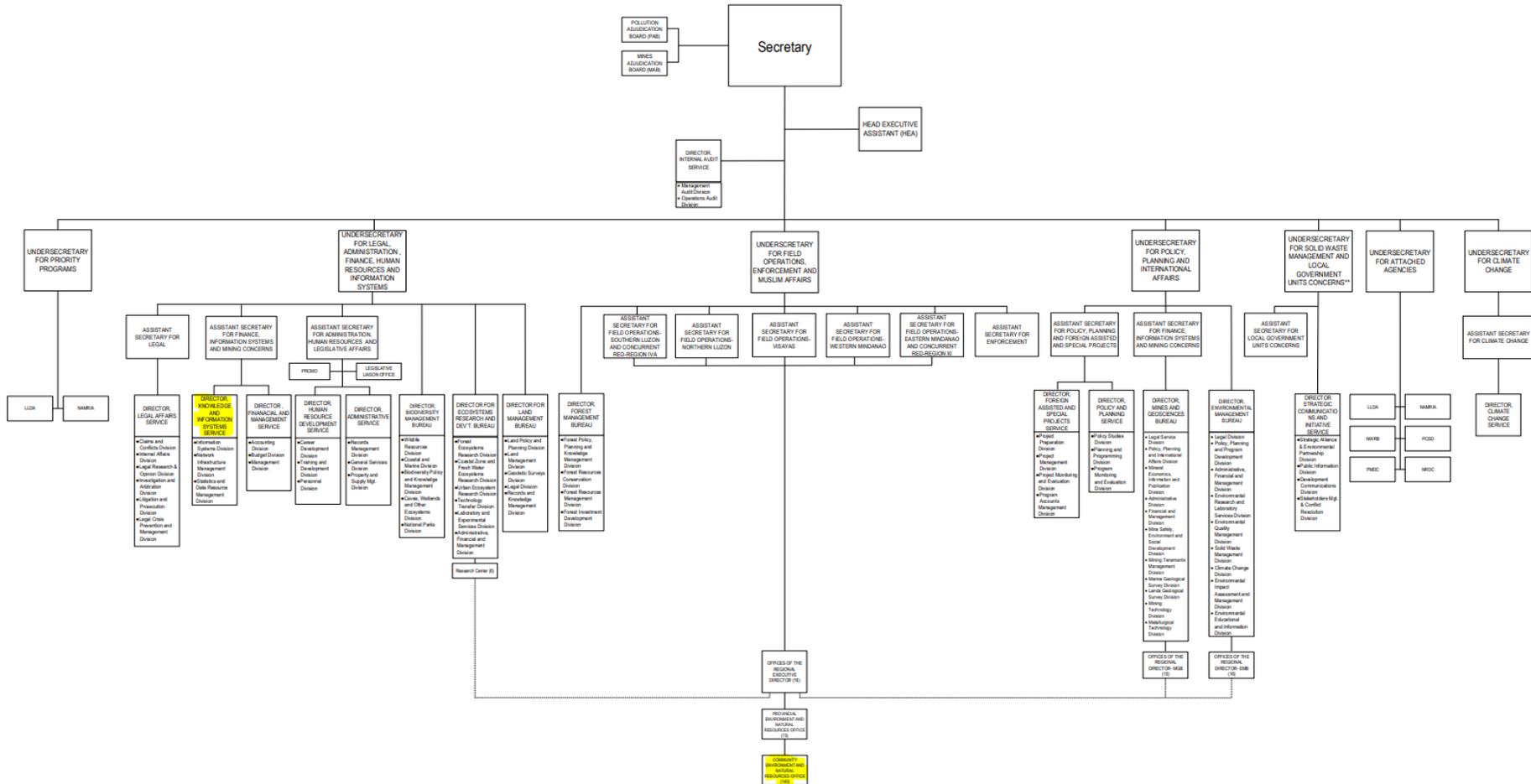
DENR ICT Units and Proposed Positions





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

DENR Organizational Structure



¹Supervisor of Task Forces (Environmental Protection and Enforcement Task Force, IP Task and Assistance)
²Supervisor National Solid Waste Management Commission Secretariat (NSWMC) and Solid Waste Management Division



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 | 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 |